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July 2024

2024 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR GERMANY

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2024 Article IV consultation with Germany, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its July 15, 2024 consideration of the staff report that concluded the Article IV consultation with Germany.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on July 15, 2024, following discussions that ended on May 28, 2024, with the officials of Germany on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on June 28, 2024.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for Germany.

The documents listed below have been or will be separately released.

Selected Issues

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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PRESS RELEASE

PR24/280

IMF Executive Board Concludes 2024 Article IV Consultation with Germany

FOR IMMEDIATE RELEASE

Washington, DC – July 18, 2024: On July 15, 2024, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Germany.

The German economy has begun to recover from the energy-price shock. High energy prices arising from the shut-off of Russian gas contributed to surging inflation during 2022–23, which in turn weighed on economic activity. The impact of this shock was, however, greatly mitigated by a strong policy response, including the provision of income support while preserving incentives to conserve energy. Conservation efforts, together with steps to secure new energy supplies, have helped return wholesale gas prices to more normal levels. Lower energy prices have in turn, together with monetary tightening, spurred rapid disinflation. Real wages are now growing, and the economy expanded in the first quarter of 2024.

Gradual economic recovery is expected to continue this year. With wage growth now exceeding inflation, private consumption is expected to drive recovery during 2024. A return to growth is, in turn, expected to reinforce confidence, which, alongside a gradual easing of monetary policy, should further bolster consumption and investment next year. Inflation is expected to slowly ease further as lower energy prices continue to pass through to retail prices, with core inflation remaining somewhat above headline inflation due to robust wage growth. Over the medium term, however, rapid population aging is expected to slow GDP growth to below 1 percent, absent significant increases in productivity or much higher-than-expected immigration. Rapid population aging is also expected to significantly increase pension and healthcare costs.

Risks to the outlook are broadly balanced. Upside risks include the possibility that positive economic news could spur a faster-than-expected recovery in consumption and investment. Key downside risks include the potential for accelerating geoeconomic fragmentation, worsening global conflicts, and intensifying stress in global commercial real estate (CRE) markets. Uncertainty about the pace of disinflation poses risks in both directions.

Executive Board Assessment[2]

Executive Directors commended the authorities for their strong economic fundamentals and policy response to the energy-price shock, which greatly mitigated its impact. Directors welcomed the gradual economic recovery underway, with broadly balanced risks, and the decline of inflation toward target levels. Noting persistent structural challenges, they

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[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

encouraged additional reforms to strengthen potential growth by boosting investment, productivity, and labor supply.

Directors commended the authorities' plans to fully use the flexibility provided within the fiscal rules to avoid an overly tight fiscal stance in the near term. Welcoming increased public investment in recent years, they emphasized that further increases are needed to help upgrade infrastructure in transport, energy, communications, and other critical areas. Higher public investment would also help with external rebalancing, raise productivity and potential growth, and support the green and digital transitions.

To accommodate this investment and given rising spending pressures related to aging and defense, Directors noted that further fiscal room could be generated by pension reforms, reducing environmentally harmful subsidies, and other revenue and expenditure measures. Improving public investment execution is also needed.

Noting that the debt brake has served Germany well, most Directors concurred that a moderate easing could create additional fiscal room without endangering debt sustainability. However, some Directors noted that the debt brake rule is constitutionally binding and any changes need to be carefully considered.

To further boost potential growth, Directors urged the authorities to continue efforts to cut red tape, promote digitalization and innovation, and deepen the European single market, including by progressing towards a Capital Markets Union. They also encouraged continued efforts to strengthen labor supply, including by enhancing the integration of immigrants and further promoting women's full-time labor market participation. In that context, they welcomed ongoing efforts to expand access to childcare and eldercare services and reduce the effective marginal tax rate on second earners.

Directors positively noted that Germany's banking and insurance systems remain resilient, with strong capital and liquidity positions. However, they encouraged continued vigilance in monitoring and addressing the elevated risks in banks' commercial real estate exposures. Directors welcomed efforts to strengthen the AML/CFT framework, including by establishing a new federal financial crime agency and improving data quality in the beneficial ownership transparency registry. They encouraged continued progress in implementing the 2022 FSAP recommendations.

Directors commended Germany for its leading role in the climate agenda and welcomed recent measures to streamline approval processes for solar and onshore wind projects. They underscored that additional efforts are needed to meet Germany's ambitious climate targets, including in the deployment of renewable power.

Directors commended the authorities for Germany's leadership in multilateral cooperation and strong support for free trade policies and the multilateral rules-based trading system. They looked forward to its continued leadership in addressing global challenges.

Germany: Selected Economic Indicators, 2023–25[1]

	2023	*Projections* 2024	2025
Output			
Real GDP growth (%)	-0.2	0.2	1.3
Total domestic demand growth (%)	-1.1	0.2	1.2
Output gap (% of potential GDP)	-0.3	-1.0	-0.7
Employment			
Unemployment rate (%, ILO)	3.0	3.3	3.1
Employment growth (%)	1.1	0.0	0.2
Prices			
Inflation (%, headline, period avg.)	6.0	2.5	2.2
Inflation (%, core, period avg.)	6.3	3.0	2.3
General Government Finances			
Fiscal balance (% of GDP)	-2.4	-1.7	-1.3
Revenue (% of GDP)	46.2	46.3	46.8
Expenditure (% of GDP)	48.6	48.0	48.1
Cyclically adjusted balance (% of GDP)	-2.3	-1.2	-0.9
Public debt (% of GDP)	63.6	63.8	62.4
Money and Credit			
Broad money (M3) (end of year, % change)[2]	0.4	…	…
Credit to private sector (% change)	1.1	…	…
10-year government bond yield (%)	2.6	…	…
Balance of Payments			
Current account balance (% of GDP)	6.3	6.3	6.3
Trade balance (% of GDP)	4.3	4.4	4.2
Exports of goods (% of GDP)	38.0	36.9	36.3
Volume (% change)	-1.1	2.4	3.2
Imports of goods (% of GDP)	32.1	31.0	30.8
Volume (% change)	-5.0	1.2	3.1
Service trade balance (% of GDP)	-1.5	-1.5	-1.3
FDI balance (% of GDP)	1.4	2.2	2.2
Reserves minus gold (billions of US$)	100.4	…	…
External Debt (% of GDP)	148.1	…	…
Exchange Rate			
REER (% change)	3.3	…	…
NEER (% change)	3.4	…	…
Real effective rate (2010=100)[3]	96.7	…	…
Nominal effective rate (2010=100)[4]	105.9	…	…

Sources: Deutsche Bundesbank, Eurostat, Federal Statistical Office, Haver Analytics, and IMF staff calculations.

1/ GDP and its components are unadjusted for working days.
2/ Reflects Germany's contribution to M3 of the euro area.
3/ Real effective exchange rate, CPI based, all countries.
4/ Nominal effective exchange rate, all countries.

INTERNATIONAL MONETARY FUND

GERMANY

STAFF REPORT FOR THE 2024 ARTICLE IV CONSULTATION

June 28, 2024

KEY ISSUES

Context. The economy contracted in 2023 due to high energy prices and interest rates. Headline inflation has fallen sharply as end-user energy prices have stabilized, but core inflation remains somewhat stickier, driven by services. Falling inflation and tight labor markets have turned real wage growth positive. High interest rates have boosted bank profitability, but part of this increase is likely temporary. High interest rates have exposed vulnerabilities in banks' financing of commercial real estate activity.

Outlook and risks. Staff expect a gradual recovery, driven by private consumption, to start this year and gain momentum in 2025. Risks to growth are broadly balanced, with both positive and negative surprises to consumer and investor sentiment possible. Inflation is expected to slowly fall to around 2 percent as lower wholesale energy prices continue to pass through supply chains and to end-users. Fiscal policy is tight, putting the debt-to-GDP ratio on a downward path, although public investment is also relatively low. Over the medium term, rapid population aging is expected to increase pension and healthcare costs and to slow economic growth by reducing labor supply.

Policies. Staff's main policy recommendations are as follows:

- ***Fiscal.*** In the near term, the authorities should, as planned, make full use of flexibility within the fiscal rules to avoid an overly tight fiscal stance. Over the medium term, Germany faces rising spending pressures related to aging and defense, as well as needed public investment in the green transition, digitalization, and other critical infrastructure. To accommodate these spending needs, the authorities should consider reforming the national fiscal rule (the "debt brake"), which could be moderately eased without endangering debt sustainability, and undertaking well-designed spending and revenue reforms to generate additional fiscal room for key priorities. Options for the latter include cutting environmentally harmful subsidies, raising taxes on goods and services and/or real estate as this market recovers, closing loopholes in inheritance taxes, modernizing procurement, and/or stabilizing the finances of the social security system by, for example, linking annual pension increases to inflation instead of wage growth.

- ***Financial.*** German financial institutions, especially some specialized lenders, are exposed to CRE risks. Staff nevertheless expect these risks to be manageable for the overall financial system, thanks to reasonable capital and liquidity positions. Banks' asset quality remains high overall, despite increasing NPLs in the CRE segment in recent months. The authorities should ensure that CRE exposures are carefully assessed and adequately provisioned, close data gaps, preserve macroprudential buffers, and add income-based measures to the toolkit. Financial safety net arrangements, including for prompt corrective action for problem banks, should be tested. Medium-term priorities, as recommended in the 2022 FSAP, include strengthening system safeguards by unifying deposit insurance schemes and providing a public backstop, as well as making further progress toward EU-wide Banking Union.

- ***Structural.*** To stabilize labor supply, the authorities should make it easier for women to work full time. This means expanding access to reliable child- and eldercare services and exploring ways to reduce the effective marginal tax rate on second earners in married couples. Removing cliff effects when transitioning out of benefits and marginal employment (so-called mini-jobs) would improve incentives to increase working hours. To boost productivity and entrepreneurship, the government should continue its efforts to cut red tape, which would also support the energy transition, and expand fiber optic networks. There may be scope to expand institutional investment in venture capital, which, combined with further progress toward EU-wide Capital Markets Union, would provide more financing for startups and innovation. Industrial policies should be pursued cautiously and coordinated closely at the EU level, with a view to maintaining a level playing field across firms and sectors, avoiding trade distortions, and limiting state intervention to those measures essential to address market failures.

Approved By
Oya Celasun (EUR) and Martin Sommer (SPR)

The mission took place in Frankfurt and Berlin during May 15–28, 2024. The team comprised Mr. Fletcher (head) and Messrs. Kemp, Saiyid, and Sher (all EUR). The mission met with officials from the Ministries of Finance, Economy and Climate Action, Labor, and Digital and Transport; the Bundesbank; BaFin; the Federal Employment Agency; the ECB; and EIOPA; as well as representatives from trade unions, employers' and startups' associations, the chamber of commerce, credit rating agencies, think tanks, and the banking, auto, chemical, and real estate sectors. Members of the Germany Executive Director's office joined the meetings. Ms. Jung and Mr. Previde (all EUR) assisted in preparing the report.

CONTENTS

RECENT DEVELOPMENTS 5

OUTLOOK AND RISKS 9

FUTURE-ORIENTED POLICIES 14
A. Fiscal Policy 14
B. Safeguarding Financial Stability 18
C. Lifting Productivity via Entrepreneurship, Innovation, Digitalization, and Upskilling 24
D. Stabilizing the Labor Force 27
E. Tackling Climate Change and Enhancing Energy Security 29
F. Voluntary Assessment of Transnational Aspects of Corruption and Strengthening AML/CFT 32

STAFF APPRAISAL 34

BOX
1. Combatting Transnational Corruption 33

FIGURES
1. Real Activity 37
2. Prices and Labor Market 38
3. Fiscal Developments and Outlook 39
4. Balance of Payments 40
5. Credit Conditions and Asset Prices 41
6. Real Estate Developments 42
7. Banking Sector Developments 43

TABLES

1. Selected Economic Indicators, 2022–26 ____ 44
2. General Government Operations, 2019–29 ____ 46
3. Medium Term Projections, 2019–29 ____ 47
4. Balance of Payments, 2019–29 ____ 48
5. International Investment Position, 2015–23 ____ 49
6. Core Financial Soundness Indicators for Banks, 2018–23 ____ 50
7. Depository Corporations Survey, 2019–23 ____ 51

ANNEXES

I. External Sector Assessment ____ 52
II. Potential Growth ____ 53
III. Risk Assessment Matrix ____ 59
IV. Downside Scenario ____ 64
V. Sovereign Risk and Debt Sustainability Analysis ____ 66
VI. Authorities' Response to Past IMF Policy Recommendations ____ 74
VII. 2022 FSAP Key Recommendations—Implementation Status ____ 76
VIII. Data Issues ____ 79

RECENT DEVELOPMENTS

1. Economic activity contracted by 0.2 percent in 2023 due mainly to high energy prices and tighter monetary policy.

- *Energy prices* spiked in the second half of 2022 following the shut-off of Russian gas supplies. Higher energy prices helped fuel inflation, cutting into real wages and consumption and depressing production in energy-intensive industries. The impact of the energy shock was, however, greatly mitigated by a strong policy response. In particular, the authorities provided income support to cushion the impact of higher energy prices while maintaining price signals that incentivized energy conservation. Such conservation, together with steps to secure access to new energy supplies, helped return wholesale gas prices to more normal levels by mid-2023.

- *Tighter monetary policy*, which was needed to reduce inflation, also weighed on consumption and investment, especially in construction and other interest-sensitive sectors. By increasing the opportunity cost of consumption through higher term deposit rates, tighter monetary policy helped to maintain a household savings rate of 11.4 percent of disposable income in 2023, which is above the pre-pandemic average.

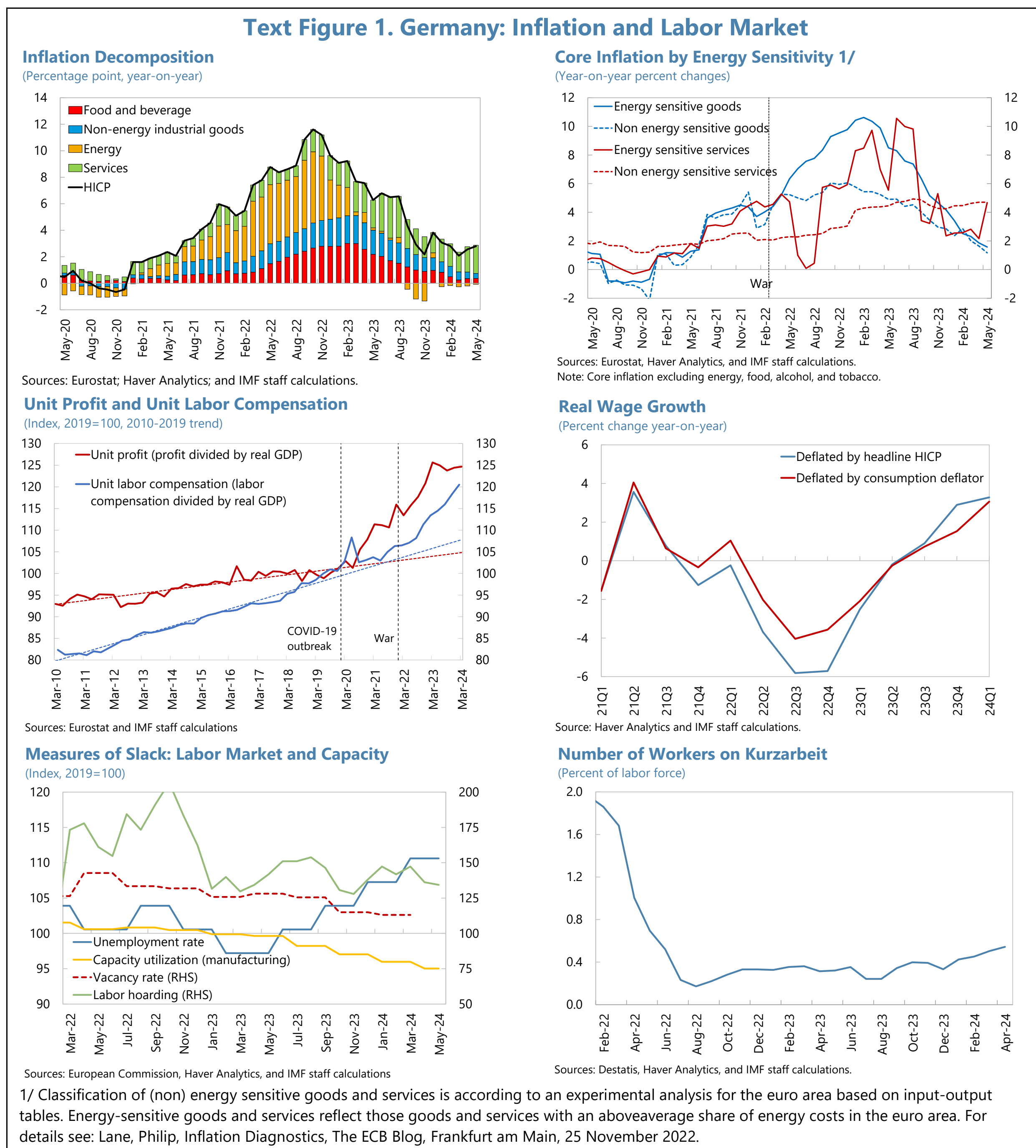
- *Other factors* affecting activity include a modest fiscal tightening (as measured by the change in the cyclically-adjusted primary balance) of 0.7 percentage points of GDP, which helped support disinflation. International trade buffered the domestic downturn due to substantial import compression.

2. Headline inflation has fallen as energy prices have stabilized, but core inflation remains somewhat stickier. Consumer energy prices have stabilized and therefore no longer contribute to inflation (Figure 2, middle left). Weak domestic demand and tight monetary policy accelerated disinflation in the second half of 2023. While the expiry of various temporary tax relief measures in early 2024 slowed this process,[1] headline HICP inflation has nonetheless dropped to 2.8 percent as of May, down from a peak of 11.6 percent in October 2022 (Text Figure 1, top left). Core inflation (inflation excluding energy and unprocessed foods) peaked later (March 2023) due to delayed pass-through of energy prices to core inflation. Core inflation has also been somewhat stickier, possibly reflecting strong wage growth in a tight labor market, such that core inflation is above headline at 3.3 percent as of May. Disinflation has been broad-based, except for core services, for which inflation remains sticky (Text Figure 1, top right).

3. Labor markets remain tight. The unemployment rate remains at close to multi-decade lows, while nominal wage growth averaged 6.3 percent in 2023 and 6 percent in 2024Q1, up from 4.4 percent in 2022. Falling inflation and elevated nominal wage growth resulted in real wage

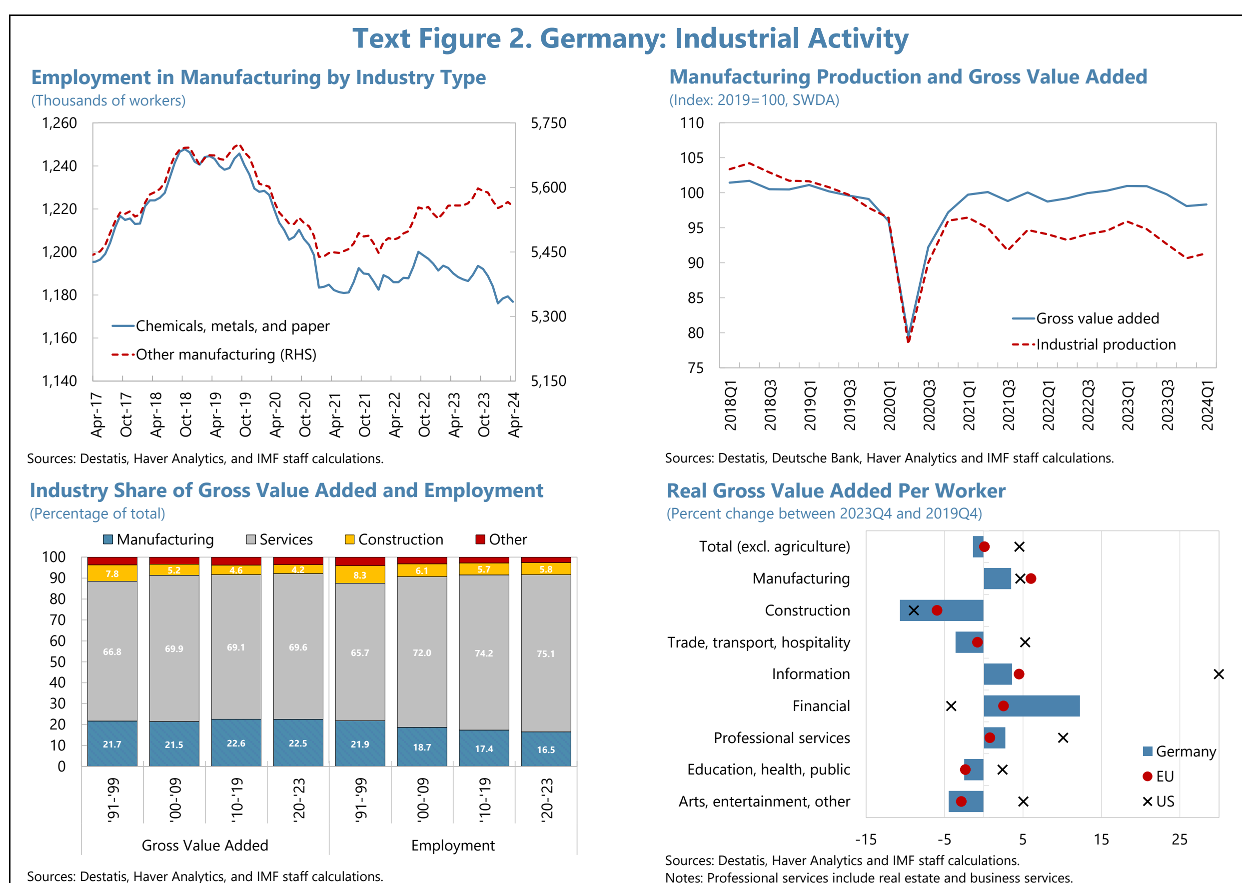
[1] Measures included raising the VAT on restaurant meals and gas and district heating back to 19 percent after temporary reductions to 7 percent; a 50 percent increase in the domestic price of CO_2, from €30/ton to €45/ton; abolishing subsidies for network charges for electricity; an increase and expansion of the lorry toll on motorways; increased taxes on domestic flights; and discontinuation of gas and electricity "price brakes".

growth turning positive in the second half of 2023 (Text Figure 1, middle right). However, there are signs that labor markets may be loosening slightly, with fewer vacancies, marginally higher unemployment, and more applications for short-time work (Text Figure 1, bottom left and right). With capacity utilization also falling somewhat, staff estimate a small negative output gap (-0.3 percent) in 2023.



4. Recent weakness in industrial production reflects both conjunctural factors and a structural trend of changing business models. Elevated energy prices following the energy-price

crisis raised costs for energy-intensive industries, such as chemicals, metals, and paper, and reduced their output and employment more than other sectors (Figure 1 and Text Figure 2, top left). The energy shock thus exacerbated a trend decline in industrial output that was already apparent even before the pandemic and energy-price crisis (Text Figure 2, top right). However, energy-intensive industries account for only 4 percent of the German economy, and manufacturers in general point to demand as the factor most commonly holding back production (Figure 1, middle right). Furthermore, the trend decline in industrial output has not been accompanied by a decline in value added, suggesting that German manufacturers have been shifting into higher value-added products and using fewer intermediate inputs (Text Figure 2, top right).[2,3] Manufacturing's share of total employment has, however, long been on a declining trend (Text Figure 2, bottom left) due to faster productivity growth in the manufacturing sector (Text Figure 2, bottom right). Population aging is likely to reinforce this trend, given the increased need for employment in healthcare and related services.



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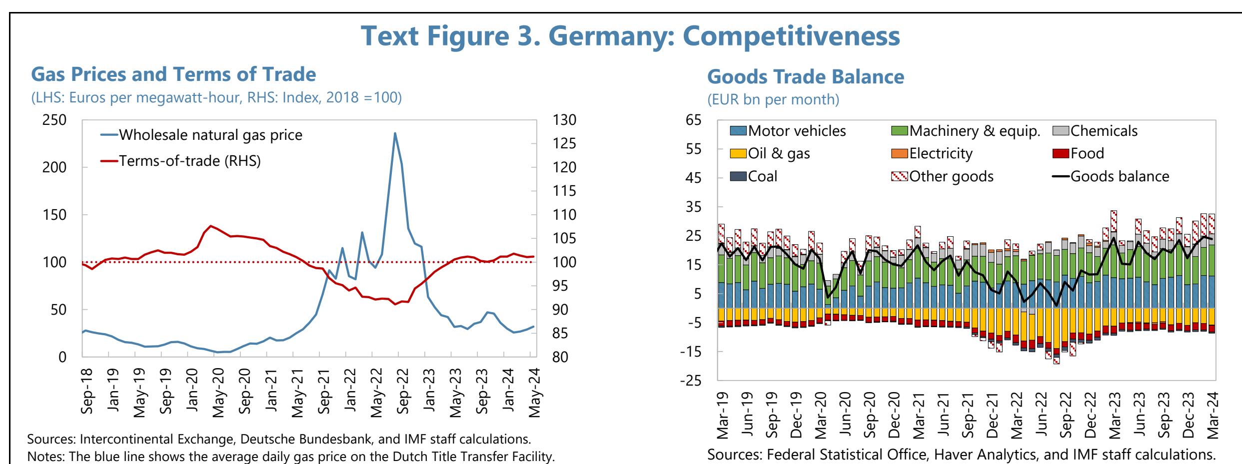
[2] Other technical factors might also account for the difference between industrial output and manufacturing value added. These include, among others, differences in deflators used to deflate nominal values and differences in industry weights. Additionally, gross value added is revised more comprehensively over time using annual company data, whereas monthly production data are after a while used mainly to inform the intra-year changes in value added as opposed to being used to estimate the level of value added.

[3] See, for example: Fuzesi, Greg, 2024, "Germany: GVA Mitigates Industrial Sector Weakness," Europe Economic Research, J.P. Morgan. March 8.

5. The competitiveness of the overall economy has mostly recovered on lower energy import prices, as reflected in a strong goods trade surplus. Wholesale gas prices have continued to normalize, reverting to 2018 levels by early 2024, and a broader measure of competitiveness—the terms-of-trade—returned to 2021 levels (Text Figure 3, left). The current account surplus strengthened in 2023 to 6.3 percent of GDP from 4.2 percent of GDP in 2022 due to a stronger goods trade balance, with a sharp increase in the trade surplus with non-EA countries and a decline in imports from Asia, notably China. The external position in 2023 is assessed to be stronger than warranted by fundamentals and desirable policy settings, with the current account gap estimated at 2.7 percent of GDP (Annex I).



6. High interest rates have boosted bank profitability (at least temporarily) but weighed on real estate prices and activity. Financial conditions eased somewhat during 2023 but remain tight (Text Figure 4, left). Banks' lending to households and corporates continues to contract in real terms, with the Basel credit gap at zero in 2023Q3. Past policy rate hikes boosted banks' interest margins and profitability in 2023 as lending rates rose faster than short-term deposit rates. At the same time, however, higher interest rates—together with structural changes in demand for urban offices and physical retail space accelerated by the pandemic—have weighed on prices. Real prices of offices and retail properties fell 19 and 15 percent, respectively, in the four quarters to 2023Q4.[4] Falling prices, along with higher borrowing and construction costs, are straining the finances of firms operating in the CRE sector, including building owners and developers.[5] Recent price declines have brought house prices back into line with historical price-to-income ratios, but housing remains around 23 percent overvalued relative to historical price-to-rent ratios. Overall, systemic financial risks remain broadly unchanged in 2024, with rising CRE-related risks broadly offsetting a reduction in risks associated with the energy-price shock.

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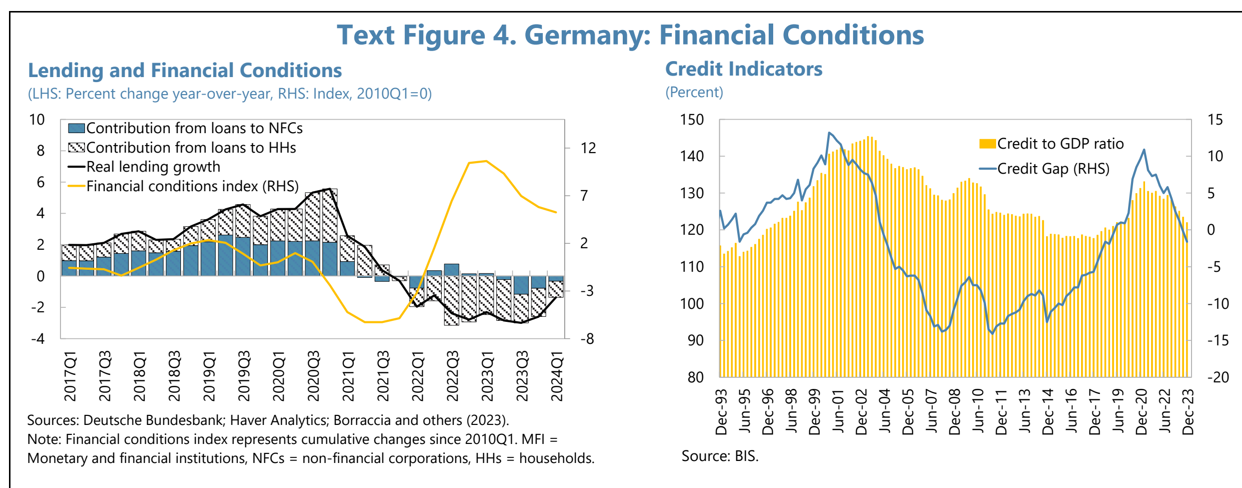
[4] Falling house prices reduced real housing wealth by 8½ percent in the year to 2023Q4. Nevertheless, the effects on consumption are expected to be small. Low homeownership rates mean that the marginal propensity to consume out of housing wealth is low in Germany (Bondt and others 2019; ECB 2020).

[5] In October 2023 for example, Galeria Kaufhof, one of Germany's largest department stores owned by Austria's Signa real estate company, filed for insolvency protection from creditors.



Text Figure 4. Germany: Financial Conditions

Sources: Deutsche Bundesbank; Haver Analytics; Borraccia and others (2023).
Note: Financial conditions index represents cumulative changes since 2010Q1. MFI = Monetary and financial institutions, NFCs = non-financial corporations, HHs = households.

Source: BIS.

7. The expiry of temporary relief measures and high inflation reduced fiscal deficits and the debt ratio in 2023. The overall fiscal deficit remained at 2.4 percent of GDP in 2023, similar to the year before, as the expiry of pandemic relief measures of 1.5 percent of GDP was offset by increased energy relief measures, of which the gas and electricity price brakes accounted for about 1 percentage point, and higher interest costs. The government issued a supplementary federal budget and activated the escape clause of the "debt brake" fiscal rule after the constitutional court ruling in November 2023, which clarified when borrowing by some extrabudgetary funds is counted towards the rule.[6] The debt-to-GDP ratio fell by 2.5 percentage points to 63.6 percent, driven by strong nominal GDP growth, and debt sustainability risks are assessed to be low (Annex V).

8. Germany's first tri-party government at the federal level remains in place. In December 2021, Germany swore in a coalition between the Social Democrats, Greens, and Free Democrats. The coalition treaty aims to promote green investment, digitalization, and skilled immigration, among other priorities. Following Russia's invasion of Ukraine, the government has also focused on improving energy security, supporting Ukraine, and increasing defense spending. Federal elections are required by October 2025.

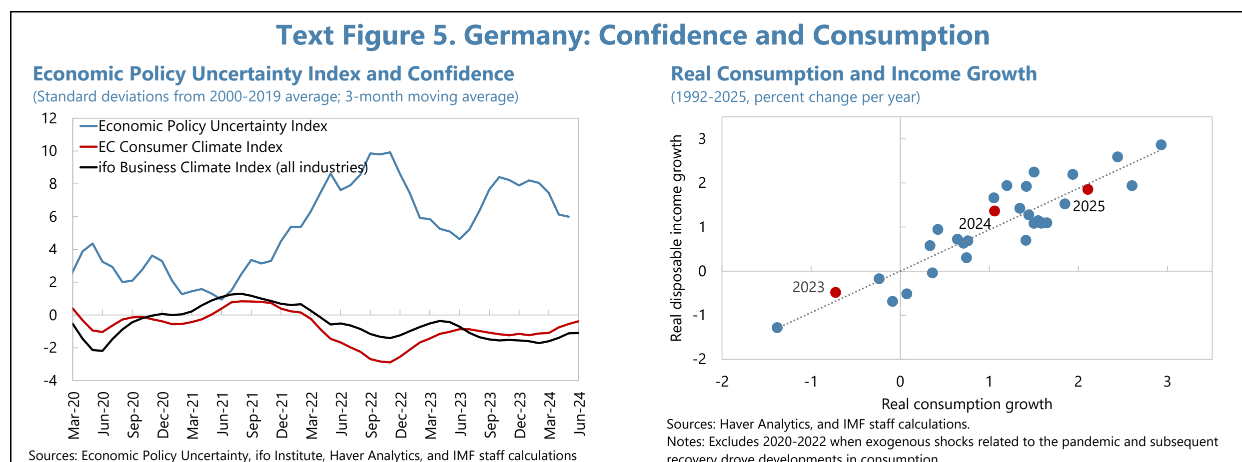
OUTLOOK AND RISKS

9. Staff expect a gradual recovery to start this year, driven primarily by private consumption, and gain momentum in 2025.

- Despite positive real wage growth, consumption remained weak in 2024Q1. Consumer sentiment was weighed down (Text Figure 5, left), possibly due to public concern about Germany's low growth in 2023, as well as uncertainty about the impact of the phase-out of the gas and electricity price brakes at end-2023. More generally, economic policy uncertainty has been elevated since the start of the energy-price shock, perhaps reflecting uncertainty about how the shock will affect the economy and related implications for policy. Regional political

[6] The debt brake limits structural net borrowing to 0.35 percent of GDP per year at the federal level and to zero at the Länder (state) level. The debt-brake provisions are in Article 109 and 115 of the Basic Law and Article 115 Act.

uncertainty also rose in early summer following EU parliamentary elections and election announcements in major European countries. The latter developments have had a fairly limited impact on financial markets in Germany so far, with German bond yields falling somewhat following the announcement of elections in France.



- As wage growth continues to exceed inflation, private consumption is expected to start driving a gradual recovery (Text Table 1), strengthening in 2025, in line with the strong historical relationship between consumption and disposable income (Text Figure 5, right). A return to growth is expected to reinforce confidence and help ease uncertainty. Private investment is also expected to add to recovery momentum in 2025 on the back of lower uncertainty, the improved demand outlook, recent and expected monetary easing, and modest corporate debt burdens compared to other countries (Text Figure 6, bottom left). External demand is expected to continue supporting the recovery in 2024, before turning broadly neutral in subsequent years. Subdued economic growth for 2024 as a whole is expected to widen the output gap from -0.3 percent of GDP in 2023 to -1 percent in 2024, after which it is expected to close gradually over the medium term as GDP growth picks up and potential growth slows.

Text Table 1. Germany: Macroeconomic Projections, 2023–25

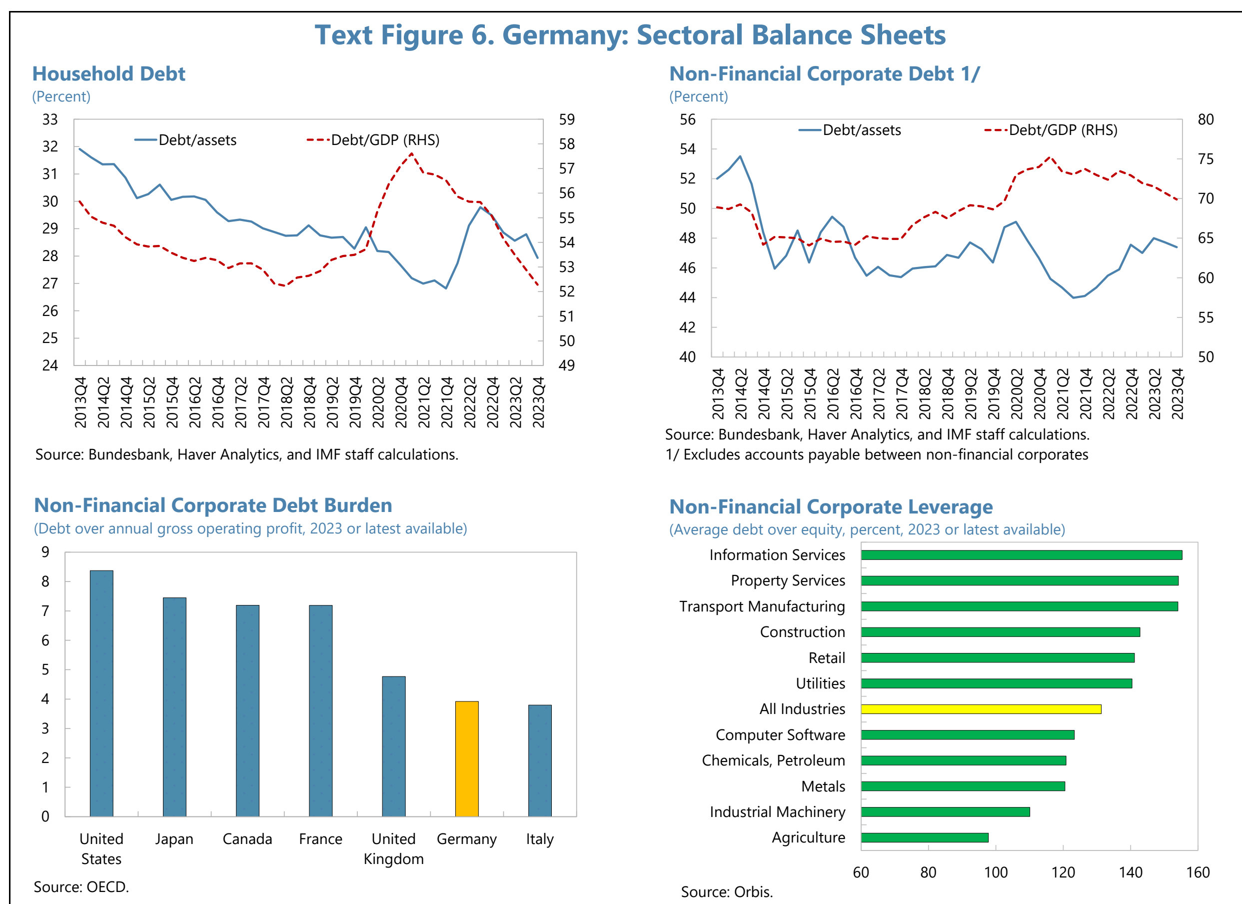
	GDP growth			Inflation			Core inflation		
	2023	2024	2025	2023	2024	2025	2023	2024	2025
Staff projections (June 2024)	-0.2	0.2	1.3	6.0	2.5	2.2	6.3	3.0	2.3
Bundesbank (June 2024) 1/	-0.2	0.2	1.0	6.0	2.8	2.7	5.1	3.1	2.5
Federal Government (Apr 2024) 2/	-0.3	0.3	1.0	5.9	2.4	1.8	...	...	...
European Commission (May 2024)	-0.3	0.1	1.0	6.0	2.4	2.0	...	...	...
Consensus forecasts (June 2024) 3/	-0.2	0.2	1.2	6.0	2.4	2.1	...	...	...

Sources: BMWK; Bundesbank; Consensus forecasts; European Commission; and IMF staff projections.

1/ Bundesbank core inflation shows consumer price excluding energy and food.

2/ Federal Government inflation is based on the national CPI.

3/ Continuous Consensus Forecasts: moving average of latest changed forecasts.



10. Over the medium term, growth is expected to slow due to a substantial drag from population aging. Over the last decade, Germany's working-age population has been buoyed by migrants fleeing regional conflicts. As this migrant wave subsides and baby boomers retire over the next five years, the growth rate of Germany's labor force is projected to drop by more than in any other G7 country (Text Figure 7, right). Eurostat expects the working age population to decline by an average of around 0.5 percent a year over the next five years under baseline immigration assumptions.[7] This decline, together with subdued productivity growth, is projected to reduce medium-term potential growth to 0.7 percent a year (Text Figure 7, left) and per capita real GDP growth to 0.6 percent per year, around 0.7 percentage points lower than the pre-pandemic average.[8]

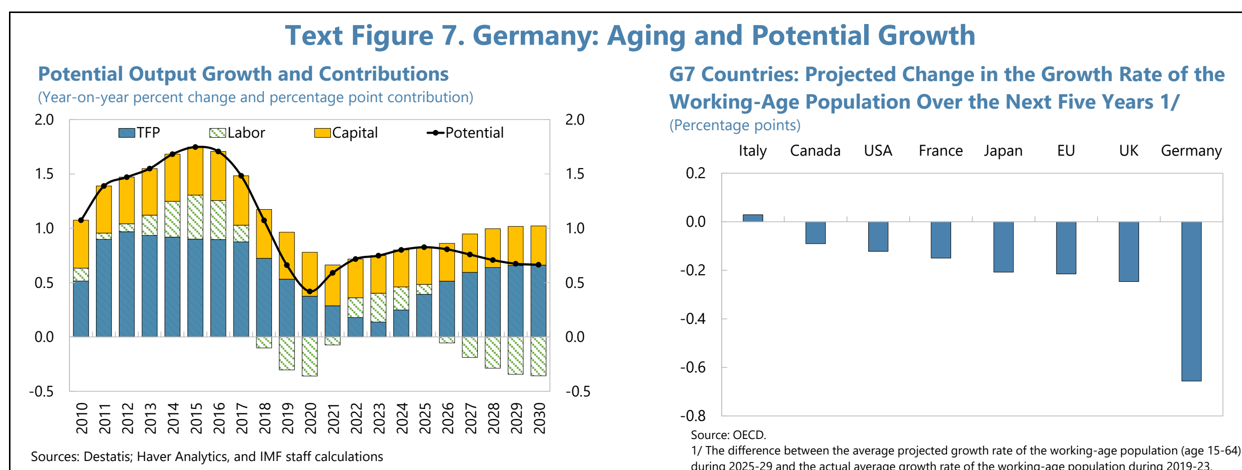
11. Inflation is expected to slow in 2024 as wholesale energy prices continue to pass through to end-users. Headline inflation is projected to slow to an average of 2.5 percent in 2024 due to a widening output gap and lower imported energy and food prices. Core inflation is also expected to slow, while remaining above headline inflation as robust nominal wage growth contributes to somewhat sticky services inflation. However, these pressures are also projected to

[7] This is broadly in line with other forecasts, including the OECD, the UN, the European Commission, and Destatis.

[8] See Annex II for details on the calculations of potential growth.

slowly ease, as nominal wage growth decelerates from around 5½ percent in 2024 to 3½ percent in 2025 in response to labor market cooling.

Text Figure 7. Germany: Aging and Potential Growth



12. The current account surplus is expected to expand further before tapering slightly. The current account balance is expected to benefit in the near term from the improved terms-of-trade and continued fulfilment of order backlogs, peaking at 6.1 percent of GDP in 2024. Subsequently, the current account balance is expected to decline slightly over the medium term, as higher wage growth in Germany helps normalize the external imbalance. The expected gradual slowdown in China over the medium term is expected to have a modest effect on the German economy, because Chinese demand only accounts for around 3 percent of German value added, according to the Bundesbank.

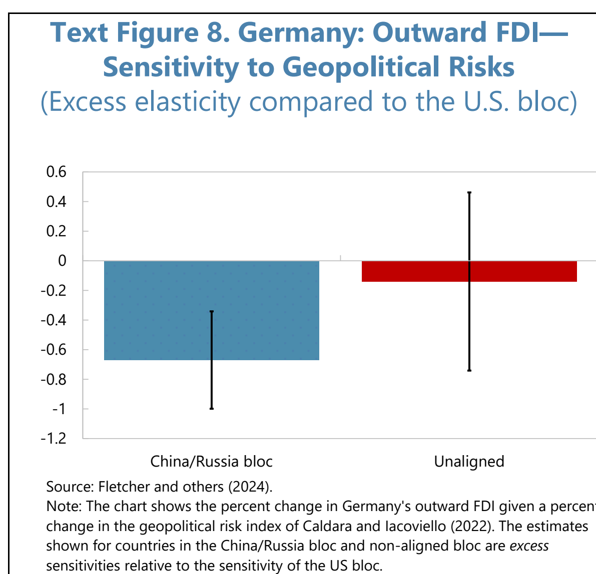
13. The fiscal stance is expected to tighten in 2024. Substantial tightening is required in 2024 to comply with the debt brake. The overall deficit is expected to shrink to 1.7 percent of GDP,[9] with a tightening of 1.2 percentage points of GDP in the cyclically-adjusted primary balance, driven by the end of the gas and electricity price brakes. For energy consumers, lost price subsidies will be buffered by lower pre-subsidy energy prices, such that the net effect on activity is expected to be modest. Nevertheless, if the debt brake were less restrictive, then a moderately smaller consolidation would have been appropriate, given weak domestic demand, with the additional space used to boost public investment, which has a relatively high multiplier and also increases potential growth.

14. Risks to economic growth and inflation are broadly balanced (Annex III).

[9] In the near term, reserves are assumed to be drawn down to allow the structural deficit to be higher than the debt-brake's limit on net borrowing. The exemption for below-the-line loan transactions is also expected to allow borrowing of €10 billion to finance the capitalization of a fund to help stabilize the pension system. Under the plan, called *Generationenkapital*, similar amounts will be contributed in each future budget. The assets of the fund are to be invested in a globally diversified portfolio, which can be expected to earn higher returns than the rate of borrowing on federal government debt. The government expects the fund to generate net returns of €10 billion a year from the mid-2030s, which can be used to supplement contributions to the social security pension system.

- *Domestic consumption* poses both upside and downside risks to the recovery, with the potential for persistent negative sentiment to delay the recovery,[10] while positive news developments and reduced uncertainty could spur a quicker rebound in consumption and investment. Staff's baseline assumes that the household savings rate remains around its current level—it could instead fall back to its pre-pandemic level, boosting near-term growth.
- *Inflation-related risks.* Inflation risks are two-sided: on one hand, inflation could undershoot if the observed decrease in energy import prices passes through quicker-than-expected. On the other hand, inflation could increase again if German wages grow faster-than-expected or in the event of further disruptions to energy supply caused by a shut-off of Russia's remaining energy supply to Europe or escalations of the Ukraine or Middle East conflicts. Risks of monetary policy miscalibration by major central banks also exist in both directions.
- *Stress in the global CRE markets* could lead to losses on the portfolios of exposed German financial institutions (including nonbank financial institutions) and increase their funding costs. This in turn could reduce the availability of credit to non-financial firms, depressing real activity and creating adverse macro-financial loops that could be further exacerbated by fire sales of CRE assets.
- *Immigration.* Medium-term growth could be higher or lower than expected if immigration flows differ significantly from baseline assumptions.
- *Geoeconomic fragmentation.* Germany's openness to trade also exposes it to risks of spillovers from an abrupt global slowdown or an intensification of geoeconomic fragmentation.[11] In this regard, recent research finds that Germany's outward FDI to a China-Russia-bloc is more sensitive to geopolitical developments than is its outward FDI to other countries (Text Figure 8).
- *Public investment shortfalls.* Money budgeted for public investment has been routinely underspent in the past. If this tendency persists, it could dampen growth prospects in 2024 and over the medium term.

Text Figure 8. Germany: Outward FDI—Sensitivity to Geopolitical Risks
(Excess elasticity compared to the U.S. bloc)



Source: Fletcher and others (2024).
Note: The chart shows the percent change in Germany's outward FDI given a percent change in the geopolitical risk index of Caldara and Iacoviello (2022). The estimates shown for countries in the China/Russia bloc and non-aligned bloc are *excess* sensitivities relative to the sensitivity of the US bloc.

Authorities' Views

15. The authorities broadly agreed with staff's assessment of the outlook and key risks. Like staff, the authorities expect growth to be modest in 2024 and strengthen in 2025–26. They also

[10] Annex IV presents a delayed-recovery scenario in more detail and discusses the appropriate policy response.

[11] Baba and others (2023) estimate that a deep fragmentation scenario, in which the world splits into four blocks, could reduce economic output in the EU by 9 percent and by 11–12 percent in a subgroup of EU member states that includes Germany. See the Staff Report for the 2023 Germany Article IV Consultation for a detailed discussion of Germany's foreign trade and financial exposures and fragmentation risks.

expect potential growth to fall well below 1 percent over the medium term, mostly due to population aging. They expected inflation to continue to gradually decline and saw key risks to growth as being similar to those of staff.

FUTURE-ORIENTED POLICIES

Policies need to focus on lifting medium-term potential growth, which means boosting public investment, especially in the green transition and digitalization; cutting red tape; enhancing the environment for innovation; and limiting the aging-related decline in the labor force. In addition, policy certainty can be enhanced by providing credible medium-term fiscal plans to meet rising spending pressures. Continued prudent financial sector policies are also needed to contain risks.

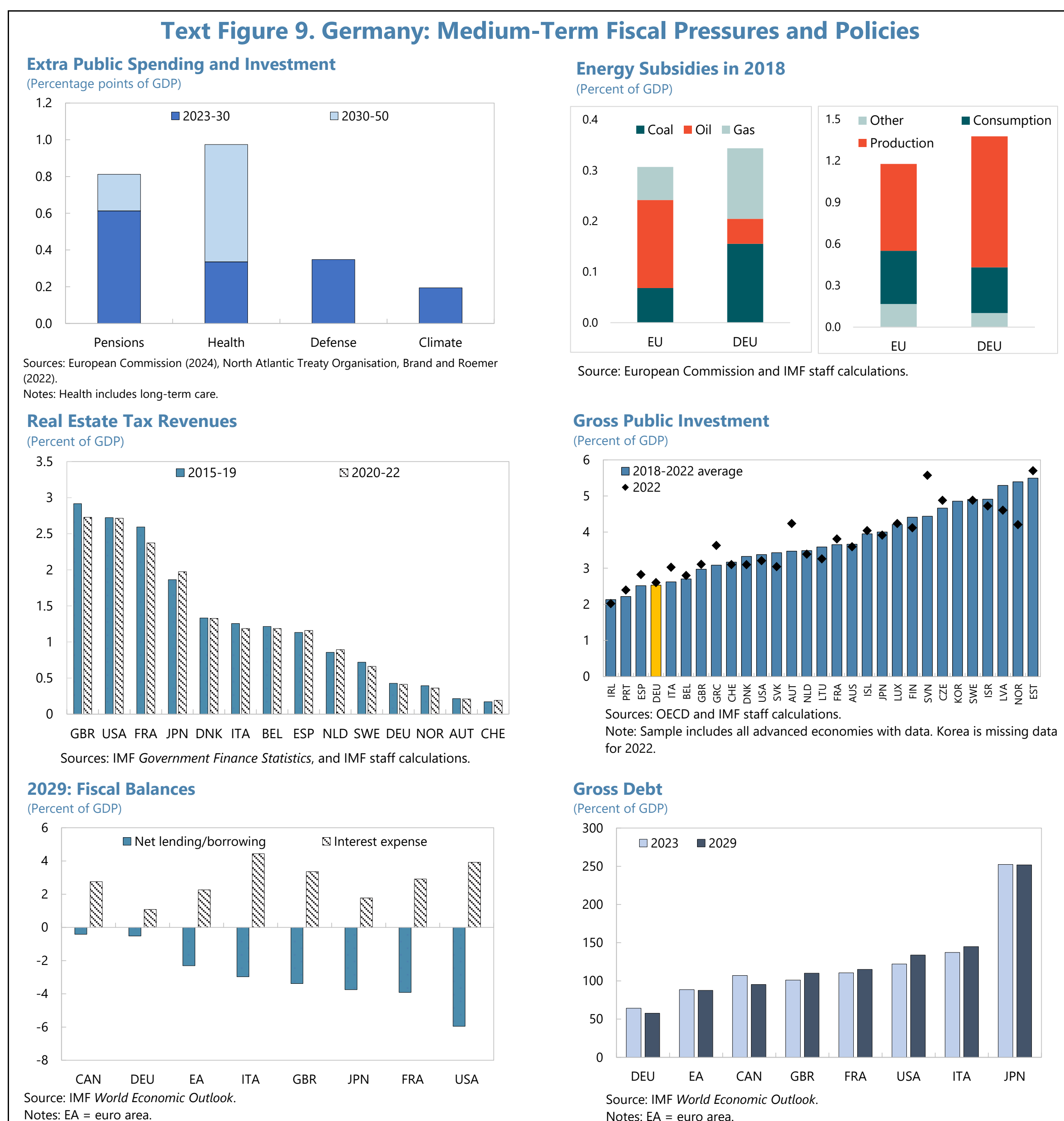
A. Fiscal Policy

16. The authorities should make full use of any flexibility within the fiscal rule to avoid an overly tight fiscal stance in 2024. The debt brake is specified in cyclically adjusted terms, which allows some countercyclical flexibility in response to the weaker outlook for 2024. Given weak domestic demand, the government should use this flexibility to the fullest, as planned, including by ensuring full implementation of the capital spending budget (¶20). In a moderately adverse scenario involving a mild recession in which inflation risks remain contained (Annex IV), the authorities should let automatic stabilizers operate fully and make full use of flexibility in the fiscal rules to provide countercyclical support to aggregate demand. Activation of the debt-brake's escape clause could also be considered, especially if the downturn becomes more severe.

17. Over the medium term, Germany faces rising spending pressures from aging and defense, as well as a need to expand public investment in the green transition and other areas.

- The European Commission's Aging Report 2024 estimates that Germany's public pension and health expenditures will increase by 0.6 and 0.3 percentage points of GDP, respectively, over the next five years (Text Figure 9, top left) and by 0.9 and 0.7 percentage points by 2040. Both contribution rates and federal transfers to the pension system increase quasi-automatically when cash reserves in the system are expected to fall below a minimum threshold. Federal transfers to the pension system are therefore projected to increase by €32 billion by 2030 according to the government's Pensions Insurance Report 2023, or 0.3 percentage points of GDP using staff's GDP projections.
- To meet its NATO targets, Germany's defense spending will also likely rise by 0.3 percentage points of GDP in the near term. While the special fund for defense will finance some of this, two-thirds of the fund are projected to be committed by end-2024, and the fund itself will expire in 2027.
- Furthermore, yearly public investment needs to increase by at least 0.2 percent of GDP to meet Germany's climate-change mitigation targets (Brand and Römer 2022). Substantial additional investment is also needed to upgrade infrastructure in transportation and other areas. Despite

public investment having increased from 2.3 percent of GDP in 2018 to 2.6 percent in 2023, Germany still ranks near the bottom of advanced economies in this area (Text Figure 9, middle right). Public investment would have to increase by around 1.2 percent of GDP to bring Germany up to the median of advanced economies, although differences in the scope of general government can make such cross-country comparisons uncertain.[12]



[12] Germany's national railway company (*Deutsche Bahn*), for example, is not included in Germany's general government statistics. It has invested around 0.4 percent of GDP in recent years.

18. To make room for these spending needs, Germany should consider adjusting its debt-brake rule. Germany has substantial fiscal space (Text Figure 9, bottom charts) but essentially no room remaining under the debt-brake rule. A well-designed fiscal rule is helpful to promote fiscal discipline. However, the debt brake's current calibration results in an unnecessarily fast pace of debt reduction, especially when debt sustainability risks are low. Moreover, the debt brake requires excessive adjustment in years like 2024, when the escape clause is not activated for the first time. The authorities should thus consider increasing somewhat the annual deficit limit, perhaps by 1 percentage points of GDP.[13] This would allow more room for much-needed public investment while still keeping the debt ratio on a downward trajectory.[14] Reforming the debt brake to avoid excessively tight fiscal policy would also help reduce external imbalances (Annex I).

19. To further address rising spending pressures, Germany also needs to undertake some mix of revenue and spending reforms. Adjusting the debt brake, as proposed above, would significantly ease fiscal consolidation pressures but not fully address them. Credible medium-term fiscal plans and deficit-reducing reforms are therefore needed to address these pressures and reduce policy uncertainty. Medium-term plans, for example, assume that pension contribution rates will increase substantially.[15] Such increases could exacerbate labor market distortions, especially as health insurance contributions increase in parallel. In the context of a fuller investigation, the following options could be explored (see accompanying *Selected Issues* paper for more detail):

- ***On the revenue side.*** The government recently cut an environmentally harmful tax exemption on diesel fuel in agriculture and forestry. A total of 1.2 percent of GDP could be raised with further progress in cutting environmentally harmful tax expenditures. Tax expenditures and other subsidies for fossil fuels alone amount to 0.4 percent of GDP, based on the latest available data (Text Figure 9, top right). Taxes on goods and services and real estate generate revenues that are 1.8 and 0.4 percentage points of GDP, respectively, below the median advanced economy (Text Figure 9, middle left). Germany could also close loopholes in inheritance taxes. For example, recipients facing liquidity difficulties could be allowed to pay tax on inherited business assets (possibly above a threshold value) in instalments over many years, as in Denmark, to prevent liquidation, instead of the current practice of fully exempting them (*Verschonungsbedarfspruefung*).

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[13] Similarly, the German Council of Economic Experts (GCEE) and the Bundesbank have proposed easing the debt-brake's net borrowing limit. The GCEE proposed setting the limit to 1 percentage point of GDP when debt is below 60 percent of GDP and to 0.5 percentage points when debt is between 60 and 90 percent of GDP. The GCEE has also proposed reforms to ease transitions out of the escape clause. The Bundesbank's proposals include a capped golden rule, under which the debt brake's net borrowing limit could somewhat exceed 0.35 percent of GDP if certain levels of investment (net of depreciation) are reached.

[14] If medium-term real GDP growth and inflation are 0.7 percent and 2.0 percent, respectively, then an overall deficit of 1.6 percent of GDP will stabilize debt at 60 percent of GDP; easing the annual structural deficit limit by 1 percentage point of GDP would still keep the overall deficit below 1.35 percent of GDP.

[15] Pension contribution rates are expected to increase from 18.6 to 20.6 percent by 2030 and 21.1 percent by 2037, assuming that benefit replacement rates are allowed to rise after 2025 in line with the pension system's sustainability mechanisms, according to the government's Pensions Insurance Report 2023. Recent plans to instead keep replacement rates constant until 2039 could put further upward pressure on contribution rates.

- ***On the expenditure side.*** Germany's public expenses are higher as a share of GDP than those of advanced economies, which mainly reflects spending on social benefits and, to a lesser extent, healthcare. Even before the pandemic, Germany spent 0.9 percentage points of GDP more than the median peer country in medical products, appliances, and equipment, and 0.6 percentage points more in outpatient services. On social benefits,[16] these are 8.5 percentage points of GDP higher in Germany than in the median advanced economy. Health, old age, and survivors' benefit expenditures are around 2, 1.5, and 1.2 percentage points of GDP higher than those of the median advanced OECD economy. Social benefits are not fully financed by social security contributions, which are only 5.9 percentage points of GDP higher than peers, leading to large and growing federal transfers to the social security system. Sustainability of the pension system under its current parameters is in question, with the pension system's reserves of 1 percent of GDP expected to be used up by 2028.[17] The government's plan to build up the scheme's assets, which would earn the spread between capital markets and those on German government bonds (*Generationenkapital)*, is welcome and could generate supplementary funding of 0.2 percent of GDP a year from the mid-2030s. To put social security on a sounder footing, further reforms are needed, which could include finding new sources of contributions (see mini-jobs below) and conducting an expenditure review. Annual increases in pensions, for example, could be linked to inflation rather than wages.[18] Linking retirement ages to life expectancy, as recommended in the 2019 Article IV consultation, could also help in the longer term, though retirement ages are already set to increase to 67 by 2031.

20. Public investment could also be facilitated through more centralized provision of investment planning services and more use of joint procurement. Money that has been budgeted for investment is routinely underspent (e.g., the public investment under execution rate was about 25 percent in 2023), often because of staff shortages in municipalities. The provision of centralized investment planning capacity services at the federal or Laender level, like *Partnerschaft Deutschland*, are therefore useful. Expanding the use of joint procurement and digitalizing procurement processes could also speed up public investment.[19]

21. The new EU fiscal framework may also have implications for German fiscal policy. While the precise implications for Germany are still to be seen, early indications suggest that it may be preferable to pursue a more gradual adjustment period (7 years rather than 4 years) considering

[16] Social benefits expenditures include sickness, unemployment, retirement, housing, education, and family benefits, as defined in the Government Finance Statistics Manual.

[17] According to the government's Pensions Insurance Report 2023.

[18] See German Council of Economic Experts, 2023, "Population Aging Surge and Pension Reforms," Chapter 5, Annual Report 2023/24.

[19] See OECD, 2019, "Public Procurement in Germany: Strategic Dimensions for Well-being and Growth," OECD Public Governance Reviews.

the need to create fiscal room for public investment.[20] Given that Germany's debt-to-GDP ratio is expected to fall below the 60 percent Maastricht threshold in 2028, the framework's adjustment path would not be binding after that.

Authorities' Views

22. As the competent authority, the Ministry of Finance (MoF) did not see a need to reform the debt brake rule and cautioned that doing so could be both ineffective and risky. While agreeing with the need to undertake structural fiscal reforms to make room for more public investment and other priorities, the MoF considered that such reforms should focus on the expenditure side. They did not support revising the debt brake, noting that the debt brake promoted expenditure prioritization and had provided sufficient room to expand public investment in recent years. The MoF also emphasized that a potential reform of the debt brake would not necessarily lead to more public investment or to a better-designed fiscal rule. Instead, they considered that the current design of the debt brake promotes the stability of expectations, which strengthens private investment. The MoF also noted that staff's proposal to ease the debt brake by about 1 percentage point of GDP would probably create less than 1 percentage point of GDP in usable fiscal room, at least in the near term, because the EU fiscal framework would then likely become the binding constraint until debt falls below 60 percent of GDP.

B. Safeguarding Financial Stability

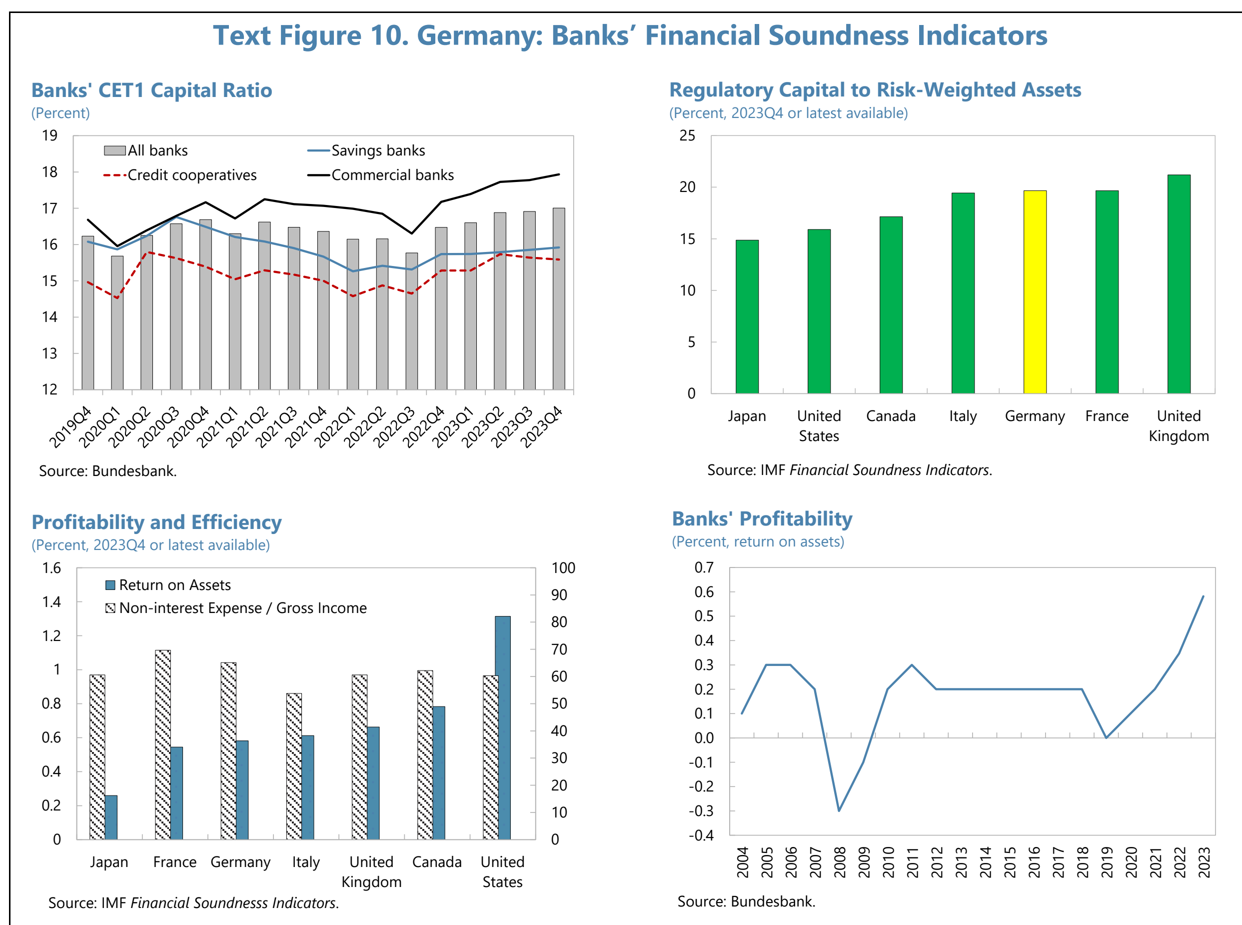
23. Germany's overall banking system has significant capital and liquidity buffers, and historically modest profitability has been boosted by higher interest rates. Banks in aggregate have a 17 percent CET1 ratio at 2023Q4 (Text Figure 10) and a Basel LCR of 166 percent. Recent gains in banks' profitability are expected to be partly temporary, given that banks' deposit funding costs rose in the second half of 2023 (as deposit rates rose and as depositors switched from sight to time deposits) and as a result of higher provisioning against rising credit losses, particularly on commercial real estate loans.[21]

24. Banks' unrealized losses on holdings of securities have declined significantly. In its 2023 Financial Stability Review, the Bundesbank reported that many banks did not fully recognize market losses on their holdings of securities, which resulted from rising interest rates during 2022–23, as some banks reclassified these as long-term assets. In its 2024 analysis, the Bundesbank found that unrealized losses are now less than one-fifth of what they were at end-2022, because

[20] "Fiscal room" is used in this report to refer to ability to increase spending or reduce revenue without violating German or EU fiscal rules. This is somewhat different than the concept of "fiscal space," which the Guidance Note for Surveillance Under Article IV Consultations defines as "the ability to provide fiscal stimulus without jeopardizing the sustainability of the financial position or the stability of the economy."

[21] As discussed in the 2022 FSAP Technical Note: "The Determinants of Banking Profitability", reasons for modest bank profitability in Germany over time include a high degree of competition in the banking system, numerous physical branches with high cost overhead, and a welfare focus of regional banks stemming from their role in subsidizing local cultural activities.

many of these reclassified securities are now approaching maturity and have benefited from the "pull-to-par" effect.



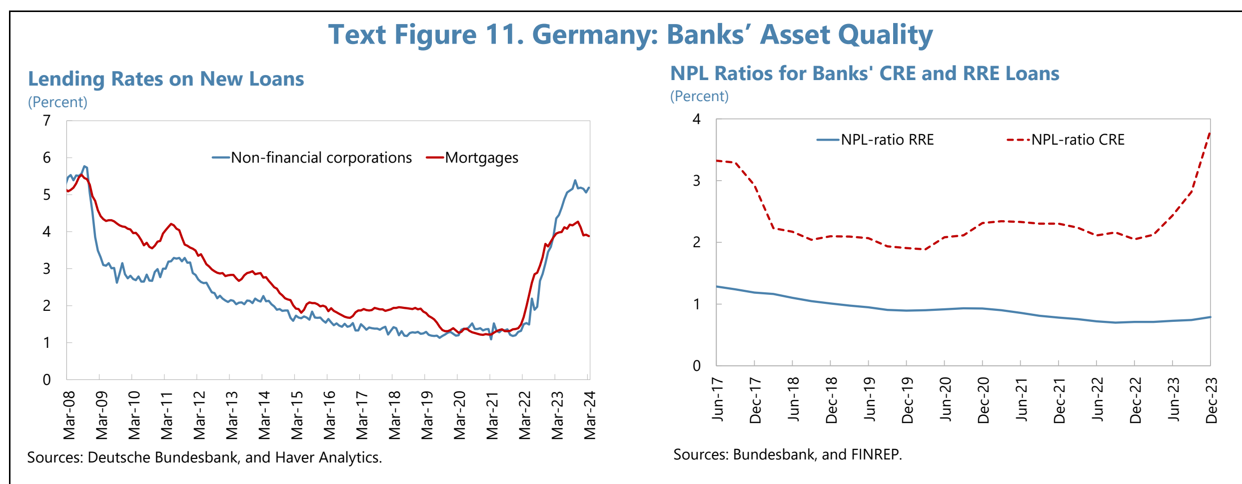
25. While banks' overall loan asset quality is high and adequately provisioned, NPLs on CRE lending have risen sharply since 2023. While overall NPLs remain relatively low at about 1.5 percent of loans as of 2023Q4, banks are increasing provisions against higher expected credit risks, particularly on CRE loans.[22]

- Banks' credit risks from households, encompassing mortgages and consumer loans, are contained for now, with the NPL ratio on mortgages stable at about 0.8 percent at end-2023. Nearly 75 percent of household debt is from mortgages, which are mainly fixed-rate with long maturities—a feature that has protected them from higher interest payments since the tightening cycle began. Low and stable unemployment rates have also kept NPLs contained.

- However, banks face higher credit risks from corporates, as a greater proportion of their debt is at variable interest rates and shorter-term maturities. Corporate insolvencies have normalized over the past two years from record low levels.

[22] In a sample of 15 banks representing roughly three-quarters of system assets, banks increased provisions by 20 percent in 2023.

- Within the corporate sector, banks' credit risks from firms operating in the CRE sector have increased sharply, with NPLs rising to 3.8 percent of CRE loans at 2023Q4, from around 2 percent at the start of the year (Text Figure 11). German banks' credit risks on CRE loans extended in the US are significantly higher, with an NPL ratio of close to 10 percent on average, even though the overall price decline in CRE price indexes in Germany and the US appears comparable in magnitude (Text Figure 12, top left chart).



Text Figure 11. Germany: Banks' Asset Quality

Sources: Deutsche Bundesbank, and Haver Analytics.

Sources: Bundesbank, and FINREP.

26. While the strains in CRE activity weighed on market perceptions of risk for some financial institutions earlier in the year, there has been some improvement in sentiment recently.

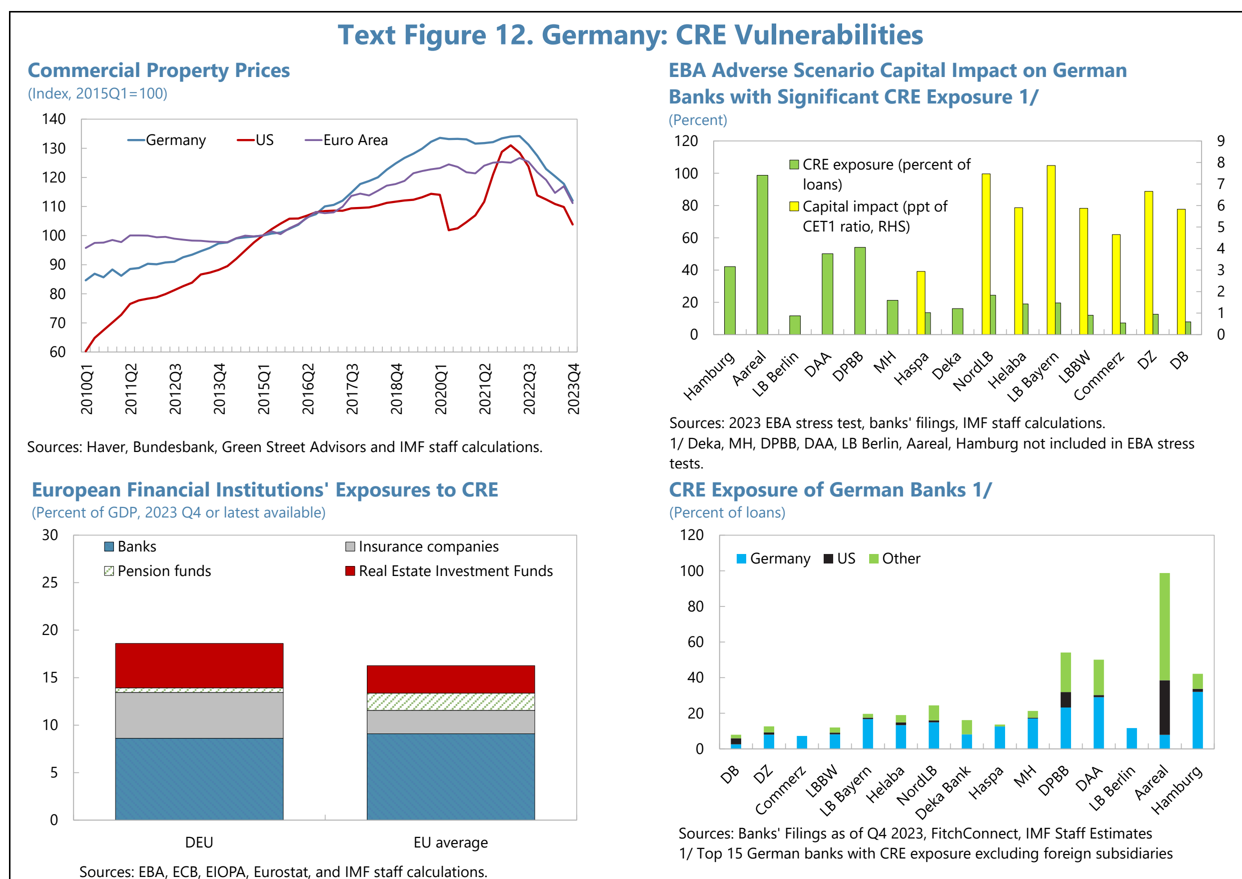
- Financial institutions in Germany, including banks, insurers, and pension and investment funds, carry non-negligible exposure to CRE through direct property holdings and CRE-related loans, debt securities, and equity shares. These exposures, which amount to 16 percent of GDP, are moderately high in comparison with other European countries (Text Figure 12, bottom left chart) and include exposures to CRE abroad, particularly in the US (Text Figure 12, bottom right chart), where a realignment in the CRE market represents a notable risk.

- Systemically important German banks have also faced market scrutiny of exposure to U.S. CRE, although the impact on equity, CDS (Figure 7), and bond pricing of these banks has been muted and rating agencies have maintained credit ratings.

- Earlier in the year, market attention was focused on two modestly sized German banks, each with assets of about 0.5 percent of the banking system, which have a high share of assets in CRE and issue covered bonds on CRE collateral.[23] These banks briefly faced sharp price declines on their AT1 bonds and equity shares, which recovered after they released Q1 results in April.

[23] One of these banks was acquired by a group of US private equity firms in November 2023, while the other remains publicly held.

Text Figure 12. Germany: CRE Vulnerabilities



27. Market concerns about banks' CRE risks are somewhat allayed by the results of the authorities' recent bank stress tests. Based on the 2023 EBA stress tests, the ECB found that systemically important German banks under its supervision have some headroom above minimum capital requirements to absorb the capital impact of a highly adverse hypothetical macroeconomic scenario, which also included significant price declines in residential and commercial estate markets, of close to 30 percent (Text Figure 12, top right chart).[24]

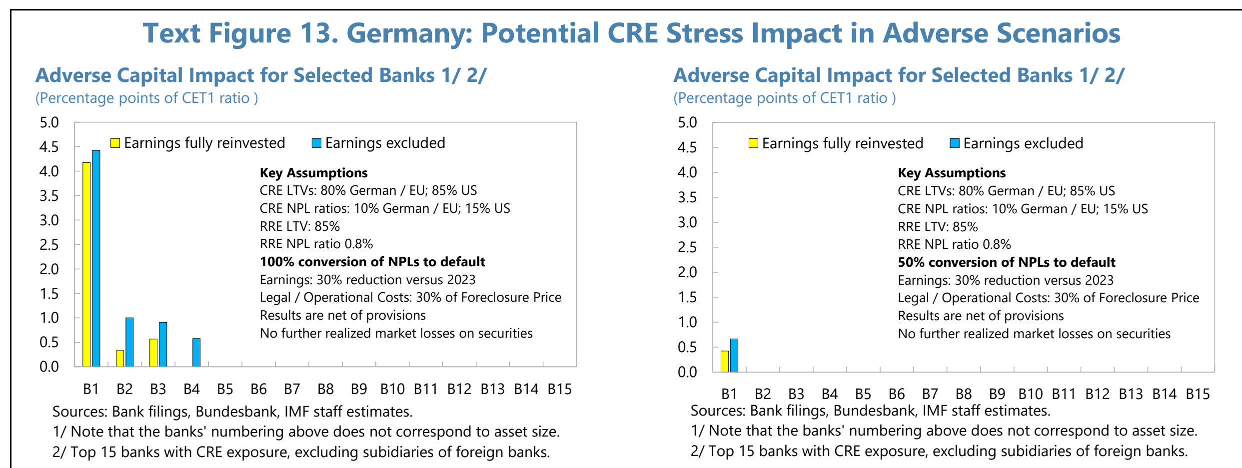
28. Staff's analysis also suggests that systemic risks from CRE for German banks are contained. As explained in detail in the accompanying *Selected Issues* paper, staff simulated a stress scenario with the following elements: (i) the NPL ratio on German CRE loans rises to 10 percent (from 3.8 percent at end-2023); (ii) that on US CRE loans rises to 15 percent (from about 10 percent for German banks at end-2023); (iii) all NPLs go into default; and (iv) banks' earnings fall by 30 percent versus those reported in 2023. Under this scenario, three banks out of 15 suffer modest declines in capital ratios, which nevertheless remain adequate (Text Figure 13, left chart).[25] In an

[24] The 2023 stress tests featured a highly adverse hypothetical 3-year scenario for Germany, in which GDP falls cumulatively by 6.4 ppt, inflation rises by 21 percent, unemployment rises by 4 percent, and residential and commercial real estate prices fall by 26 and 33 percent, respectively. In this scenario, German banks on average lose 6 ppt in CET1 capital ratio, falling to an average CET1 ratio of about 10 percent at the end of the scenario horizon.

[25] The scenario has some additional conservative assumptions, including thinner LTV buffers on both US and German CRE loans than have been reported in banks' financial statements, as well as high legal and operational costs associated with recovery from foreclosure.

alternative, less adverse scenario, in which only half of the stressed NPLs go into default, due for example to proactive restructuring of loans by lenders, only one bank faces a minor hit to its capital ratio (Text Figure 13, right chart). In such a scenario, contagion risk to other financial institutions is assessed as limited.

Text Figure 13. Germany: Potential CRE Stress Impact in Adverse Scenarios



Sources: Bank filings, Bundesbank, IMF staff estimates.
1/ Note that the banks' numbering above does not correspond to asset size.
2/ Top 15 banks with CRE exposure, excluding subidiaries of foreign banks.

29. The insurance system is solvent and modestly profitable, though liquidity risks have risen. Insurers have a high aggregate solvency ratio of 330 percent of the requirement at end-2023. The solvency of insurers has benefited from higher interest rates because their assets have shorter maturities (less interest-rate sensitivity) than their liabilities. As with banks, unrealized market losses on holdings of securities due to higher interest rates have subsided as many securities have gained in market value as they approach maturity. Liquidity drains from lapses of policies at German insurers have remained low. CRE exposures of insurers are mainly to long-term holdings of physical assets, whose valuations have risen significantly over the past decade despite the recent downturn. Insurers also carry some exposure to equity and corporate debt securities of CRE-related firms, although these tend to be diversified exposures.

30. To manage CRE-related vulnerabilities, the authorities should continue to scrutinize banks' CRE portfolios, close data gaps, ensure capital conservation, and take steps to address underlying CRE developments. Supervisors should continue efforts to ensure that CRE loans are appropriately classified, even when forborne, and provisioned adequately. To enhance oversight of CRE lending, the authorities should collect and publish data on LTV ratios, interest- and debt service-coverage ratios, and debt-yield ratios. The authorities should also encourage caution in capital distributions (i.e., bonuses, dividends), not least because profits are expected to be at least partly temporary, and issue Pillar 2 capital guidance for banks with significant CRE exposure. The authorities should also encourage efforts to modify the use of CRE properties through, for example, the conversion of office spaces and shopping malls to hotels and multi-family RRE through appropriate zoning and physical adjustments where possible.

31. The authorities should also preserve macroprudential buffers for now and pass legislation to add income-based measures to the toolkit.

- The authorities have two key macroprudential capital buffers in place, which include a CCyB at 0.75 percent of risk-weighted assets and a SSyRB at 2 percent of risk-weighted loans for residential real estate—the latter also covers loans against multi-family apartment buildings. Both of these buffers may be released in conditions of aggregate financial stress, providing a loss-absorbing cushion to the financial system. Over the medium term, the authorities could consider a positive-neutral setting for the CCyB, which would make a releasable buffer available when going from a neutral period to a downturn, consistent with elements proposed in a 2023 review of Basel Core Principles.[26]

- Furthermore, the authorities should seek to use the new data collection on lending standards to check the development of high-LTV and high-DSTI lending and to analyze the impact of introducing LTV limits. As emphasized in past staff analysis,[27] the authorities should also upgrade the macroprudential toolkit closer to best international practice by adopting legislation to allow the implementation of DSTI and DTI limits as the residential real estate market recovers.

32. Financial safety arrangements should also be reviewed and tested. A single deposit insurance scheme with a public backstop would strengthen system safeguards in case of liquidity risks, as would a reinsurance mechanism between the separate deposit guarantee schemes. Completing the EU Banking Union also remains a key priority to enhance resilience and remove barriers to efficiency-enhancing cross-border mergers.

33. Over the medium term, the authorities should continue efforts aimed at boosting overall banking sector profitability, as this would help support financial stability. In line with the 2022 FSAP recommendations, the authorities should continue to encourage: (i) consolidation across the banking sector, which is comprised of more than 1400 banks, to achieve cost efficiencies from scale; (ii) operational cost reduction through closure of some physical branches, digitalization, and process automation; and (iii) diversification of income sources. Progress towards a Capital Markets Union and a Savings and Investment Union would likely create more opportunities for banks to engage in investment banking and asset management activities.

34. Ongoing efforts to implement other recommendations from past Article IV (Annex VI) and FSAP consultations (Annex VII) are welcome and should be deepened. Notable steps toward implementing key FSAP recommendations have included: (i) strengthened microprudential analysis via expanded monitoring and stress tests of banks to comprehensively cover interest-rate related risks; and (ii) working to close data gaps by requiring new data collection on housing loans.

Authorities' Views

35. The authorities' analysis of financial sector risks was largely consistent with that of staff. Like staff, the authorities expect bank profitability to ease somewhat from its 2023 level.

[26] Basel Committee consultative paper on core principles for effective banking supervision, October 2023.

[27] See, for example: Sher, G., 2023, "Borrower-Based Macroprudential Instruments in Germany," IMF Country Report No. 2023/259 (Washington: International Monetary Fund).

However, they also assessed that the transition to higher deposit funding costs is now largely complete and that unrealized market losses on banks' holdings of securities are now much less than a year ago, mainly due to a "pull-to-par" effect by which fixed-income securities gain in market value as they approach maturity. The authorities noted that, although CRE NPLs are rising, defaults remain low because banks are working with borrowers to extend loan maturities or adjust other terms to keep borrowers current, with such loans being appropriately classified under existing regulation. The authorities also highlighted progress on FSAP recommendations (Annex VII).

C. Lifting Productivity via Entrepreneurship, Innovation, Digitalization, and Upskilling

36. Recent increases in the R&D tax credit will help support innovation. In line with past staff recommendations, the authorities recently increased the R&D tax credit in the new Growth Opportunities Act by expanding the assessment base to include depreciation of fixed assets used in the R&D projects and by expanding the maximum assessment base from €4 million to €10 million.

37. The Future Financing Act and German Growth Fund will help to provide more risk-taking capital for startups. The new law relaxes requirements for an IPO, creates a legal basis for special purpose acquisition companies,[28] allows shares to be issued with blockchain technology, and allows dual-class shares, which can enable founders to list their company without giving up control. The government and state development bank KfW also established a €1 billion fund-of-funds (*Wachstumfonds Deutschland*), using public and private funds, to provide venture capital financing.

38. Continued efforts are needed to cut red tape to make it easier to start and run a business. According to the World Bank's *Enterprise Surveys*, firms report that it takes 122 days to obtain a business operating license, compared to 62 days in the average advanced economy. 10.5 percent of firms report business licensing and permits as a major constraint, and 21.4 percent of firms report having to meet with tax officials, compared to 8.6 percent and 17.6 percent in the average advanced economy, respectively. In response to these concerns, the government surveyed 57 company associations last year for suggestions of red tape that could be cut. Out of 386 suggestions received, the government plans to implement 115 and is evaluating a further 61. To implement some of these immediately, the government is drafting a fourth Bureaucracy Relief Act (after passing three such acts between 2015–19), which will reduce the time that invoices and similar documents must be retained, substitute electronic messages for signed paper forms, and shorten public consultation periods.

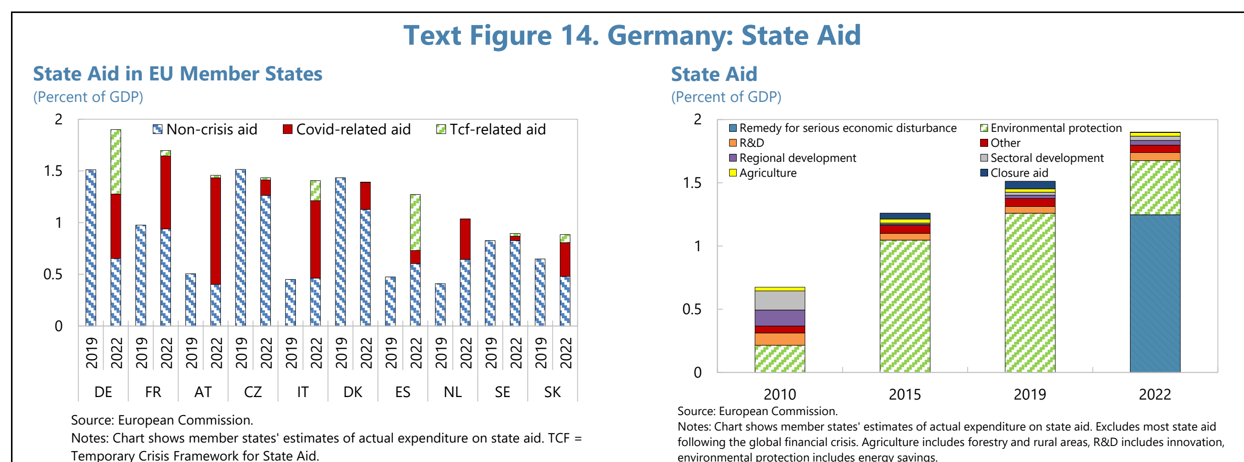
39. Deepening the Capital Markets Union and reviewing potential regulatory restrictions on institutional investment could make more financing available to startups. More integrated capital markets in Europe and steps toward a Savings and Investment Union could expand financing opportunities available to startups in Europe, as noted in the recent Letta report.[29]

[28] These are listed companies whose only business model is to acquire unlisted companies.

[29] https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf

40. More generally, deepening the European single market remains a key avenue for boosting productivity and growth. In addition to supporting deeper capital market integration, further efforts are needed to simplify cross-border services, recognize qualifications across member states, and harmonize accounting, tax, and insolvency rules, among other areas. Such deeper integration would allow Germany and other EU members to better leverage economies of scale and gains from trade and specialization within the EU, foster competition, lower costs, enhance economic resilience, and boost productivity and growth. In contrast, industrial policies should be pursued cautiously and coordinated closely at the EU level, with a view to maintaining a level playing field across firms and sectors, avoiding trade distortions, and limiting state intervention to those measures essential to address market failures.[30] In this regard, Germany's spending on state aid is not likely to be out of line with other EU member states once temporary measures relating to the pandemic and energy-price crisis expire (Text Figure 14, left). Nevertheless, Germany could review its state aid spending with a view to reconsidering aid that does not meet the above criteria, which would help to create fiscal room for the spending pressures and needed investment identified above.

Text Figure 14. Germany: State Aid



Source: European Commission.
Notes: Chart shows member states' estimates of actual expenditure on state aid. TCF = Temporary Crisis Framework for State Aid.

Source: European Commission.
Notes: Chart shows member states' estimates of actual expenditure on state aid. Excludes most state aid following the global financial crisis. Agriculture includes forestry and rural areas, R&D includes innovation, environmental protection includes energy savings.

41. Digitalization of government services could improve the business environment and accelerate the energy transition. Germany lags behind other EU countries in offering online government services to businesses—including items like registration or tax filing—and in pre-filling online forms (Text Figure 15, top left). Only 43 percent of online government services pre-fill information, compared to 68 percent in the average EU country.

42. Germany has made progress on 5G, but further progress is needed on fiber optic connections. Germany has made progress in its Gigabit Strategy, which aims to cover all homes and businesses with fiber optic and 5G networks by 2030. Key successes include publishing information on all existing infrastructure (the Gigabit Land Register) and local infrastructure potential, providing public funding, digitalizing application procedures, and bundling tenders. Strong efforts to allocate spectrum have resulted in 93 percent of households being covered by 5G (Text Figure 15, top right).

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[30] See also Industrial Policy Coverage in IMF Surveillance and [forthcoming WP on a European Perspective on Industrial Policy].

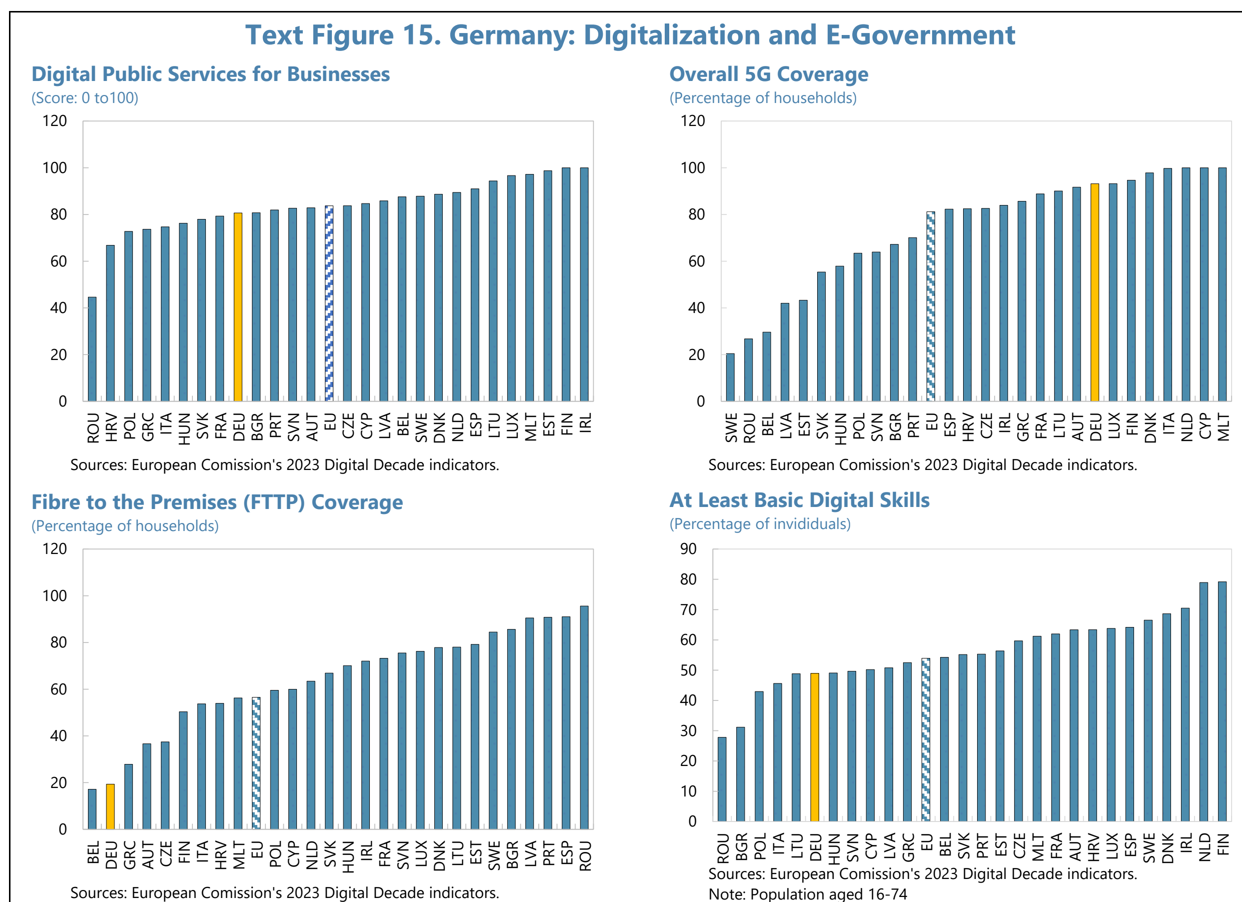
However, while Germany has one of the highest densities of broadband subscriptions in the EU, its connection speeds are relatively low. Despite quick progress in the last 12 months, only 28 percent of households have a fiber optic connection, compared to 57 percent in the EU (Text Figure 15, bottom left). To expand fiber optic rollout, further progress is needed on the Gigabit Strategy, including by clarifying the conditions for the use of public highways for digital infrastructure. The Federal Office for Information Security also assesses cyber threats to Germany to be higher than ever before, requiring continued investment in upgrading cybersecurity technology.

43. German businesses are digitalizing but further efforts are needed to develop digital skills. Artificial intelligence and big data are used more widely by German businesses than by those in the average EU country, although the use of cloud computing is more similar to the EU average. However, only 49 percent of Germans have at least basic digital skills, which is slightly below the EU average of 54 percent (Text Figure 15, bottom right). The Act to Strengthen the Promotion of Training and Further Education seeks to promote worker training by increasing public subsidies. However, the problems extend beyond financing. The system of continuing education and training in Germany is challenging for individuals and companies to navigate because it is more complex than in other countries, due to the division of tasks across levels of government and the unregulated environment for non-formal learning providers.[31] Continued implementation of the 2019 National Skills Strategy (*Nationale Weiterbildungsstrategie*) would improve coordination across the government. Further efforts are needed to expand the supply of digital training to all workers.

Authorities' Views

44. The authorities agreed with the need for a more digital government and expanded fiber optic network as well as a better environment for startups. The authorities pointed to steps they are taking to digitalize government services, including the Online Access Act 2.0, but agreed with the need for further progress, including on data sharing to reduce duplicative reporting requirements. The government questioned the generalizability of the World Bank's *Enterprise Surveys* statistic of 122 days to register a business, given that other surveys point to timeframes of 1–3 weeks. Substantial efforts are underway to reduce red tape, including the Reality Check program of the Ministry for Economic Affairs and Climate Action, which takes a case study approach to identifying all associated red tape, covering both legal requirements and their administrative implementation. The authorities agreed with the need for deeper and better-functioning capital markets to help finance innovative ventures. In this regard, they pointed to the need to ease public market access for SMEs and to make progress with the EU Listing Act.

[31] See OECD, 2021, "Continuing Education and Training in Germany," Getting Skills Right. OECD Publishing, Paris.

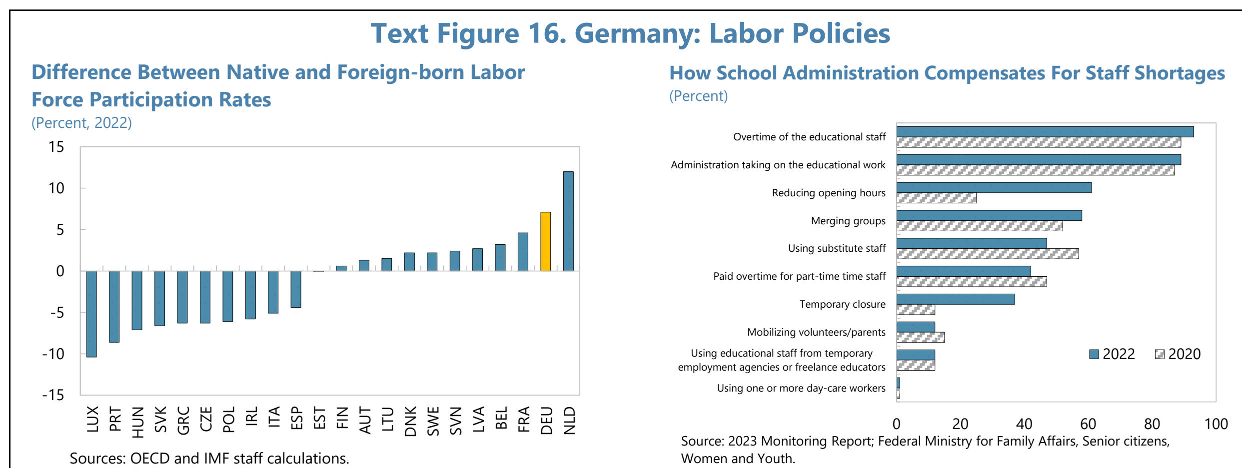


D. Stabilizing the Labor Force

45. Efforts to facilitate immigration and labor force participation of skilled workers are ongoing. There is room to improve the labor market integration of immigrants, whose employment rates are 10 percentage points lower than those of the native-born, compared to 4 percentage points in the EU. The gap in labor-force participation rates is 7 percent (Text Figure 16, left). Unemployment rates for immigrants are also double those of native-born workers. Despite skills shortages in Germany, the employment and unemployment gaps of immigrants are mainly driven by highly educated workers, pointing to the need to do more to recognize qualifications. In this regard, further provisions of the Skilled Immigration Act came into force this year, including the ability for companies to establish recognition partnerships with foreign workers, which relax the requirement to have professional qualifications recognized before entry.

46. To further boost labor supply, the authorities should continue to pursue policies that ease constraints on women's full-time employment. Germany expanded the number of places for children at daycare facilities by 21 percent between 2014 and 2023. Partly as a result, women's labor-force participation rates have improved substantially. Although a gap remains, with still around 2 million fewer women than men in the labor force, the bigger challenge is to ease constraints on women's full-time participation. Currently, women are over 4 times more likely than men to work part time. Reducing the effective marginal tax rate on second earners in couples would

help boost labor supply, and depending on the details of the reform, could even have positive revenue impacts (Perry, Klemm, and Hebous 2019). Further expanding access to reliable child- and eldercare services would also help. About 80 percent of school managers report having to deal with unexpected staff shortages in a 6-month period, during which, about 60 percent reduced opening hours and 40 percent temporarily closed the school (Text Figure 16, right). Closing three-quarters of the gap in labor force participation and one-half of the gap in working hours could boost potential growth by 0.4 percentage points per year between 2024 and 2030 (Annex II).



47. Disincentives to working hours could also be reduced by removing cliff effects inherent in transitioning out of mini-jobs. Around 7 million workers (one-sixth of the labor force) in Germany are marginally employed in so-called mini-jobs, which pay up to €538 a month. These workers only pay an optional contribution to the pension system and receive accident insurance, as well as health insurance through their spouse, which effectively amounts to an employment subsidy. The worker is exempt from other social security contributions but does not earn other health, long-term care, unemployment, or short-time work benefits. Mini-job taxation can be regressive in that these jobs can be taxed at a flat rate on gross income even though, if taxed as a part-time job under personal income tax, the worker's income would fall below the annual tax-free allowance. They also discourage secondary earners from increasing their hours beyond the €538 threshold (into the so-called midi-job range) because then all earnings become taxable, producing an effective marginal tax rate of 100 percent at that point (if the primary income earner earns enough that the standard deduction is fully utilized; see Perry, Klemm, and Hebous 2019).

48. Similarly, disincentives to working hours could be removed by smoothing effective marginal tax rates in the benefits system. Various social benefits, including Bürgergeld, the housing allowance, and the child allowance are phased out at certain income thresholds. This phaseout creates effective marginal tax rates of as much as 100 percent in some cases, depending on such household characteristics as marriage status and number of children.[32]

[32] Peichl, Andreas, and others. 2023. Reforming Transfer Withdrawal Rates and Improving Employment Incentives. Research Paper 629, Federal Ministry of Labor and Social Affairs, December.

Authorities' Views

49. The government noted that it is actively trying to remove barriers and disincentives to work. To address staff shortages in childcare, the government subsidizes salaries and training for educators under its Skilled Worker Offensive for Educators program (2019 to 2022), which the government viewed as having led to a significant and sustainable spread of the paid training model and increased the profession's attractiveness. On improving work incentives, the government noted that partners in a married couple can already elect to pay their income tax bill through rates of withholding tax during the year that correspond to their respective labor market income (placing both individuals in tax class IV with a factor),[33] instead of having the secondary earner pay higher rates of withholding tax (a combination of tax classes III and V). To further increase work incentives for secondary earners in married couples, the federal government intends to transfer couples currently under the III/V tax class combination to tax class IV under the factor procedure. Cliff effects in social security contributions when transitioning from mini- to midi-jobs were removed in 2022, although cliff effects in tax rates remain. The government also underscored that it was exploring ways to reduce high marginal tax rates associated with the phase-out of some benefits.

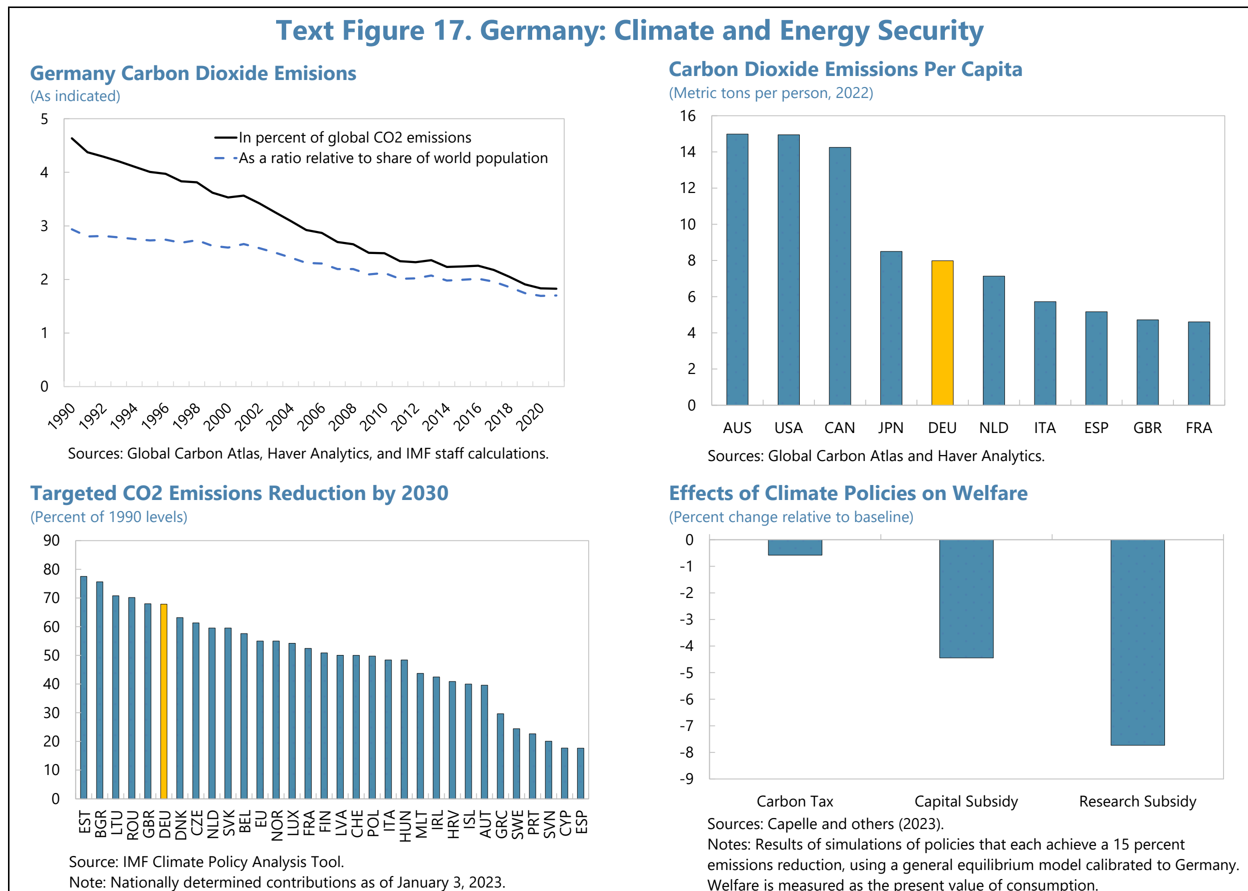
E. Tackling Climate Change and Enhancing Energy Security

50. Greenhouse gas emissions fell substantially in 2023, with more than half of electricity being generated by renewables for the first time. High energy prices and weak energy demand by industrial firms contributed to Germany achieving its lowest greenhouse gas (GHG) emissions in 70 years in 2023. Germany emitted 673 million tons of CO2 equivalent in 2023—46 percent below 1990 levels. This progress helped Germany reduce its share of global GHG emissions to 1.8 percent in 2022, down from 4.6 percent in 1990 (Text Figure 17, top left). Nevertheless, relative to other major European countries, Germany's emissions per capita remain somewhat high at 8 tons per person per year due to Germany's focus on manufacturing and its reliance on coal power (Text Figure 17, top right).

51. Germany is making strides toward achieving its ambitious climate mitigation targets, but further efforts are needed. Germany aims to reduce greenhouse gas (GHG) emissions by 65 percent between 1990 and 2030, which is relatively ambitious even when compared to advanced economies (the EU's target is 55 percent) (Text Figure 17, bottom left). Germany also aims for climate neutrality by 2045, which is also more ambitious than most advanced economies and earlier than the EU's target of 2050. Both the 2030 and 2045 targets are strengthened by the fact that they are legally binding (under the Climate Protection Act), cover all GHGs (not just carbon dioxide), and exclude the carbon sink of land use, land use change, and forestry. Official forecasters are divided on whether Germany is on track to meet its 2030 targets with policies that have already been

[33] Tax class IV for married couples is available with or without a factor. The factor procedure takes into account each spouse's personal income tax relief provisions, including the basic tax-free allowance and the pension lump sum, when calculating the monthly tax to be withheld from wages during the year. Under the factor procedure, the wage taxes that are withheld more closely approximate the actual annual income tax liability, resulting in less need for refunds or further tax payments after the end-of-year tax assessment.

implemented, but they agree that Germany is not on track to meet its 2045 target.[34] Even the more optimistic projections assume, importantly, that targets for renewable energy (80 percent of electricity supply by 2030) are met, which themselves require an ambitious acceleration in the rate of deployment. The rate of deployment would have to increase by over half, from 7 percent annual growth during the past decade to 11 percent growth during the 2024–30 period. Encouragingly in this regard, installed renewable capacity increased by 12 percent in 2023 and, for the first time, more than half of electricity was generated by renewables.



52. Germany is active in international efforts to mitigate and adapt to climate change. Germany led the establishment of the Climate Club, an intergovernmental forum, and the Global Shield against Climate Risks, a multilateral platform to facilitate disaster risk insurance. Germany has aid programs called Just Energy and Transition Partnerships with four emerging and developing economies and consultative Climate and Development Partnerships with a further six. In 2020–21, Germany provided US$8.4 billion in bilateral aid for climate-change mitigation and adaptation.

[34] Projections in March 2024 by the Federal Environment Agency indicate, for the first time, that Germany is on track to meet its 2030 target. However, separate projections in June 2024 by the Council of Experts on Climate Change indicate that Germany will miss this target, due to fiscal consolidation and lower carbon prices on the EU ETS.

53. To ensure emissions targets are met and enhance energy security, Germany needs to speed up its deployment of renewable power generation capacity and electrification.[35] The government's plans to require electricity suppliers to offer the option of variable-price contracts from 2025 will support the rollout of renewable power. To speed up renewables deployment, Germany needs to cut red tape associated with approvals processes even further.[36] Industry surveys in 2021 suggest that it takes 5–6 years, for example, to obtain the necessary permissions to build an onshore wind farm. Boosting municipal planning capacity, limiting extensions of deadlines, and digitalizing approval processes with single points of contact would help.

54. Over the medium term, additional measures will be needed to decarbonize transport, buildings, and agriculture sectors. The transport and buildings sectors missed their emissions reduction targets in 2023 for the third and fourth years running, respectively. Sales of electric vehicles (EVs) have also been lackluster, falling to about a quarter of passenger car sales in 2023, slightly below 2021 levels. The higher national carbon price on transport and heating fuels, which was raised from €30 to €45 per ton at the start of 2024, will help these sectors make progress towards their targets.[37] The sector-specific targets themselves became non-binding after legal reforms in April 2024, which could help reduce the costs of meeting economy-wide targets. However, it could also result in continued costs to the government, in the form of purchases of emissions certificates or fines, if these sectors, combined as a group with agriculture and waste, continue to miss their targets under the EU's Effort Sharing Regulation (ESR). Developing a plan for mitigating agricultural emissions, which could include such measures as feebates, and speeding up the deployment of EV charging stations would help to meet emissions reduction targets in ESR sectors.

55. Germany should rely mostly on carbon pricing in its overall policy mix for reducing emissions. In general, carbon prices are more economically efficient at reducing emissions than regulatory restrictions and subsidies (Text Figure 17, bottom right). The government plans to rely extensively on carbon pricing for its climate change mitigation. For example, in its projections, the government assumes that carbon prices on the EU ETS will rise by half by 2030 and that national carbon prices will rise by 175 percent. In contrast, the attempt to ban gas-powered home heating systems was rejected in parliament, showing the difficulty of relying on non-price policies. Furthermore, subsidies on fossil fuels persist (Text Figure 9, top right) and should be phased-out to meet emissions reduction and energy-efficiency targets and boost fiscal room for green public investment. Relatedly, Germany needs to ensure that its investment in natural gas infrastructure is consistent with its net zero plans (e.g., making them hydrogen-ready or using carbon capture),

[35] Developing interconnectors with neighboring countries will also help to manage the intermittency of renewables. In December 2023, the European Commission assessed that Germany had interconnector capacity of 11.2 percent of domestic power supply, compared to the EU's 2030 target of 15 percent.

[36] Germany approved so-called Easter and summer legislative packages in 2022 that helped cut some red tape.

[37] The German authorities plan for a seamless transition to ETS II, which will replace the domestic carbon price, including by maintaining the same scope of emissions covered.

especially where public funds are involved. For example, the government plans to tender for 10 GW of new gas power plants in the near term.

Authorities' Views

56. The government welcomed notable progress toward its climate targets but underscored that further efforts were needed. The government emphasized that renewable electricity generation and the electricity grid are expanding rapidly, thanks in part to the range of measures taken to streamline approval processes. The government expects the coal phase-out to be complete by 2038 at the latest. It noted that, while measures have been taken to decarbonize the transport and buildings sectors, further effort is needed to achieve the 2045 climate neutrality target. The authorities agreed that carbon pricing is important as a central instrument in an efficient toolbox, as this minimizes adverse effects on the economy by incentivizing businesses and individuals to reduce emissions in the most cost-efficient manner.

F. Voluntary Assessment of Transnational Aspects of Corruption and Strengthening AML/CFT

57. Germany continues to take steps to address transnational aspects of corruption, but further efforts are needed. Box 1 assesses Germany's framework for combatting foreign bribery and the concealment of foreign proceeds of corruption.

58. Germany's efforts to enhance its AML/CFT framework are critical to tackling illicit financial flows and addressing international ML/TF risks to Germany. Given Germany's stable economy and strong financial sector, Germany is at particularly high risk of money laundering (ML) from foreign predicate crimes, as also recognized by the 2019 National Risk Assessment and 2022 FATF Mutual Evaluation Report. The underlying criminality of ML proceeds could potentially have negative economic impacts through a variety of transmission channels.

59. To address these concerns, authorities are stepping up efforts to undertake a more holistic and coordinated approach to addressing ML/TF. The authorities hope to enact a comprehensive bill of legislative reform by August (*Finanzkriminalitätsbekämpfungsgesetz*), which includes establishing a new federal crime agency and enhancing the beneficial ownership transparency register. The new agency, expected to operate by 2027, aims to reduce fragmentation by bundling competencies related to financial intelligence, criminal investigations, and supervision under one agency, while maintaining the autonomy of the financial intelligence unit. One of the agency's objectives will be international ML cases, thereby addressing concerns that Germany to-date has not focused on ML prosecutions commensurate with its risk profile. The central office for AML supervision aims to enhance supervision in the non-financial sector. In addition, a real-estate transaction register will be established to collate data on financial flows related to real estate, which has been identified as a high-risk sector. The authorities should ensure that the new agency has adequate resources to support its multi-pronged activities. Efforts are also underway to improve the quality of data in Germany's beneficial ownership transparency registry, with verification of data

further supported by discrepancy reporting from obliged entities. The anticipated legislative reforms will provide necessary enforcement and monitoring tools to support further verification efforts.

Box 1. Germany: Combatting Transnational Corruption[1,2]

The authorities have made efforts to mitigate high exposure to foreign bribery risks. The size and number of multinational enterprises, the scale of outward FDI, and the export-driven nature of its economy contribute to the country's foreign bribery risks.[3] The OECD Phase 4 evaluation of Germany acknowledged the continued efforts of the authorities, including maintaining steady enforcement against natural persons, organizing training, and adopting guidelines, and developing tools to improve the collection of cases and statistics. The authorities also reported that the EU Whistleblowing Directive was transposed into the German Whistleblower Protection Act in 2023. However, enforcement of criminal liability against corporations is low. In addition, administrative forfeiture orders are used in quite a number of cases in lieu of imposing a regulatory fine on companies. Since Phase 4, the authorities have been seeking to amend Germany's legislation on corporate criminal liability, including to increase the level of sanctions, but an initial draft bill was not adopted, and the authorities are currently working on a new proposal. The authorities should continue to implement the OECD Phase 4 recommendations pursuant to the findings of the 2021 Follow-Up Report, including further reforming the corporate liability regime, enhancing transparency in the use of informal negotiated agreements and resolutions, and mitigating risks in the defense sector.

The authorities are continuing to enhance their risk understanding of the laundering of foreign proceeds of corruption in the Germany. In addition to the ongoing reforms noted in ¶59, which aim to improve the overall effectiveness of the AML system, the authorities are also carrying out several deep-dive risk assessments to further enhance their understanding of cross-border ML/TF risks, including in relation to foreign proceeds of corruption, beneficial ownership transparency, politically exposed persons, and asset recovery.

1/ Germany volunteered to have its legal and institutional frameworks assessed in the context of bilateral surveillance for purposes of determining whether it: (a) criminalizes and prosecutes the bribery of foreign public officials and (b) has an effective AML/CFT system that is designed to prevent foreign officials from concealing the proceeds of corruption

2/ Information relating to supply-side corruption in this Box is based on information and data provided by the German authorities. IMF staff has provided additional views and information. The information in this Box has not been verified by the OECD Working Group on Bribery (WGB) or the OECD Secretariat and does not prejudice the WGB's monitoring of the implementation of the OECD Anti-Bribery Convention.

3/ Out of the 500 largest multinational enterprises (MNE) in the world, 14 are headquartered in Germany, with some operating in high-risk sectors, according to the OECD–UNSD Multinational Enterprise Information Platform.

Authorities' Views

60. The authorities underscored the ongoing efforts made since the 2022 Mutual Evaluation report. In addition to the draft law on strengthening the fight against financial crime, the authorities also highlighted that the recently adopted EU legislative package on AML/CFT, which harmonizes rules across member states and extends them to cover new entities, and the EU's anti-money laundering authority (which will be based in Frankfurt), will result in further enhancements to Germany's AML framework.

STAFF APPRAISAL

61. The German economy has begun to recover following major shocks, but important medium-term challenges remain. A strong policy response to the energy shock greatly mitigated last year's GDP contraction. The economy is now set to return to growth in 2024 and gather further momentum during 2025-26 as the output gap closes. In addition, inflation is expected to slowly ease further to around 2 percent. Further out, however, important challenges loom, with real GDP growth expected to average well below 1 percent due to major headwinds from population aging, absent significant increases in productivity growth. Risks around this baseline are broadly balanced and reflect uncertainties about the pace of disinflation, recovery in consumer sentiment, geoeconomic fragmentation, and medium-term immigration, among other factors.

62. Germany faces rising public spending pressures over the medium term. Rapid population aging will fuel a significant increase in public spending on pensions, healthcare, and long-term care. Defense spending pressures are also rising. And, despite public investment having increased in recent years, investment needs remain large, with further substantial increases needed to upgrade infrastructure in transport, energy, communications, and other critical areas in order to boost productivity and growth and support the green transition.

63. To accommodate rising spending needs, the authorities should consider moderately easing the debt brake. A well-designed fiscal rule helps promote fiscal discipline and debt sustainability. However, Germany's debt brake is set at a relatively tight level, such that the annual limit on net borrowing could be eased by about 1 percentage point of GDP while still keeping the debt-to-GDP ratio on a downward path. Such an easing would allow more room for much-needed public investment and other key priorities. Higher public investment would also reduce imbalances in Germany's external position, which is assessed to be stronger than the level implied by medium-term fundamentals and desirable policies. Similarly, though the implementation of the EU's new fiscal framework is ongoing, early indications suggest that it may be preferable for Germany to choose the more gradual, 7-year adjustment period under the framework over the default 4-year period, considering the need to create fiscal room for public investment. Given weak domestic demand, staff also welcomes the authorities' plans to make full use of countercyclicality available under the debt-brake in 2024, including by ensuring full implementation of the capital spending budget.

64. Reforms to reduce medium-term spending pressures and/or increase revenue are also needed.

- Adjusting the debt brake, as proposed above, would ease fiscal consolidation pressures but not fully address them. Credible medium-term fiscal plans and reforms to create fiscal room are therefore also needed to address these pressures and reduce policy uncertainty.

- Options that could be explored include eliminating environmentally harmful subsidies and tax expenditures, increasing the efficiency of public healthcare spending, raising taxes on real estate and on goods and services, and/or closing loopholes in inheritance taxes.

- Reforms to the social security system could also significantly reduce strains on the government budget while shoring up the system's finances. Contribution rates in the system are expected to increase in the coming years, as reserves are used up and expected spending growth outpaces expected growth of revenue. This could exacerbate labor market distortions. Possible reforms to lessen such outcomes include indexing retirement ages to increases in life expectancy and indexing pensions-in-payment to inflation rather than to wages. Reforms that increase incentives to extend working lives would also help mitigate adverse economic growth effects from population aging.

65. Continued prudent financial sector policies are needed to contain risks. Germany's banking and insurance systems have further strengthened their overall capital and liquidity positions. However, bank profitability is expected to ease somewhat going forward, and CRE risks are elevated.

- In the *near term*, the authorities should continue to closely monitor CRE-related risks of financial institutions; ensure that recorded valuations of real-estate assets remain current; encourage conservativism in capital distributions; and continue to review and test financial safety arrangements. For banks, in particular, the authorities should support efforts aimed at maintaining borrowers' ability to service loans, for example via maturity extensions for solvent borrowers, while requiring appropriate classifications of any modified loans and sufficient provisions against future loan losses. The authorities could also consider facilitating the conversion of CRE properties to other uses by, for example, easing zoning restrictions on their conversion to residential units. The authorities should also preserve existing macroprudential buffers, close gaps in data collection on lending standards for CRE loans, and pass legislation to add income-related borrower-based measures for residential mortgages to the macroprudential toolkit.

- Over the *medium term*, the authorities could consider a positive setting for the countercyclical capital buffer in normal times, as this would make a releasable capital buffer available when going from a neutral period to a protracted downturn. In addition, a single deposit insurance scheme with a public backstop would strengthen system safeguards in case of liquidity risks. To further bolster financial stability, the authorities should also further efforts to improve banking sector profitability, including by achieving scale efficiencies by consolidation of small banks—a process that could be further accelerated by an EU-wide Banking Union.

66. To further boost productivity and entrepreneurship, the government should redouble efforts to cut red tape, promote digitalization, and deepen the European single market. Unnecessary red tape, whether obtaining a business license, registering a business, or filing taxes, remains an important constraint on productivity. Such delays are likely related to a lack of online government services in Germany. In this context, swift implementation of e-government plans will

be important. And, while important progress has been made in digitalization (notably in 5G), further expansion is needed of fiber optic networks, which cover less than one-third of homes. Deepening the European single market would allow Germany and other EU member states to better leverage economies of scale and gains from trade and specialization within the EU, foster competition, lower costs, enhance economic resilience, and boost productivity and growth. A key priority in this regard is achieving Capital Markets Union, which would expand financing opportunities for innovative startups and other businesses. Industrial policies should be pursued cautiously and coordinated closely at the EU level.

67. Germany should also explore ways to boost labor supply. The authorities should explore ways to lessen obstacles that prevent women who wish to work more hours from doing so, including by expanding access to full-day child- and eldercare and improving its reliability. Ways to reduce further the effective marginal tax rate on second earners in married couples, compared to single earners, could also be explored, as well as ways to ease high effective marginal tax rates on additional income that some workers face due to reduced public benefit payments when their income increases and/or when the income of second-earners in mini-jobs exceeds the mini-job threshold. Such efforts to boost labor supply could notably increase the economy's growth potential, as will ongoing efforts to enhance worker skills and to facilitate the labor market integration of migrants.

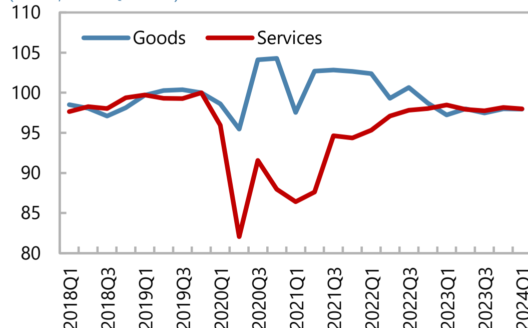
68. Continued efforts are needed to meet Germany's ambitious climate mitigation targets. Recent measures to streamline approval processes for solar and onshore wind projects are welcome. Further efforts along these lines would help meet climate targets—including measures to boost municipal planning capacity, limit extensions of deadlines, and digitalize approval processes with single points of contact—as would accelerated decarbonization efforts in building and transport sectors.

69. Germany is encouraged to strengthen its AML/CFT framework further. Staff welcome the government's initiatives to establish a new federal financial crime agency and to improve the quality of data in the beneficial ownership transparency registry. It will be important to ensure that the new agency has adequate resources to fulfil its mandate.

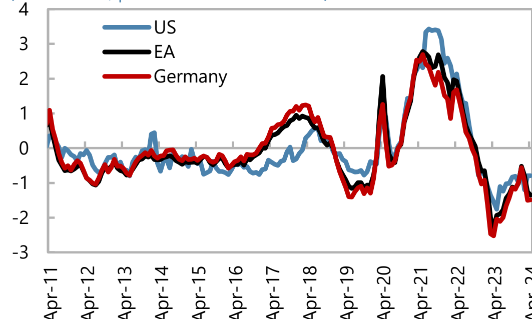
70. It is recommended that the next Article IV consultation take place on the standard 12-month cycle.

Figure 1. Germany: Real Activity

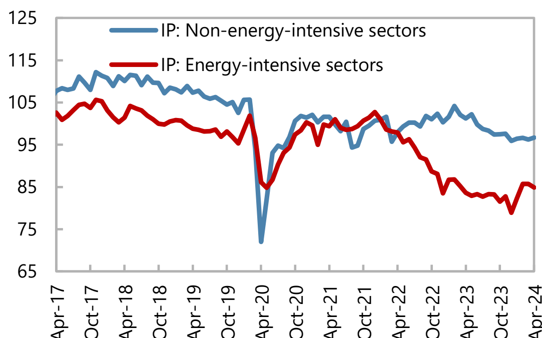
Services consumption has recovered to pre-pandemic levels, but high inflation and interest rates weighed on total consumption growth.



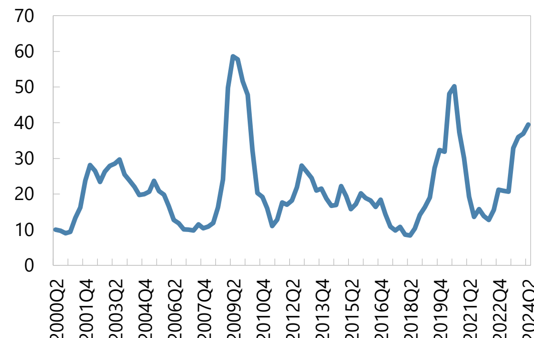
Supply chain disruptions have continued to ease...



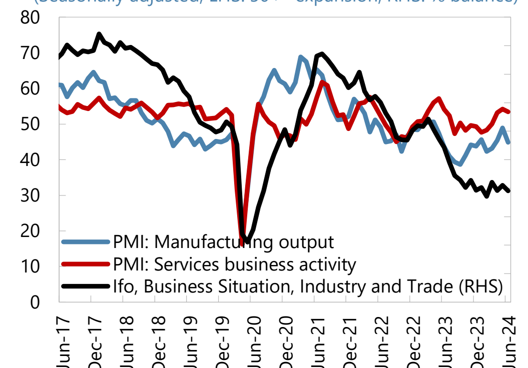
...but production of energy-intensive sectors has declined sharply due to persistently high energy input prices.



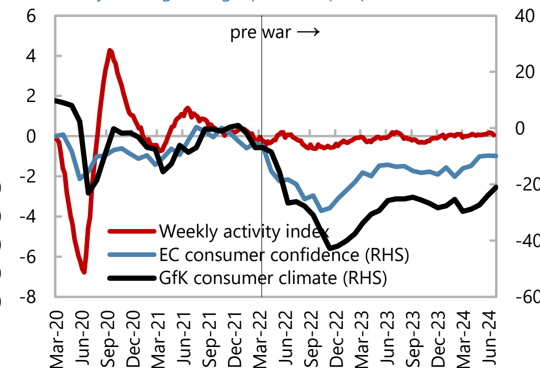
Manufacturers point to demand as the factor most commonly holding back production.



Business confidence declined after Spring 2023 as the lagged impact of the energy crisis became clearer, but it has begun to improve.



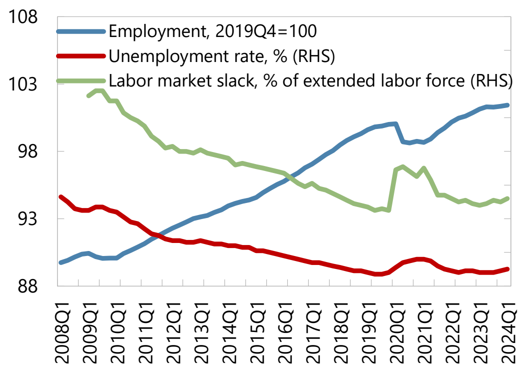
Consumer confidence initially recovered in 2023 after feared winter gas shortages did not occur, but it has remained depressed since then.



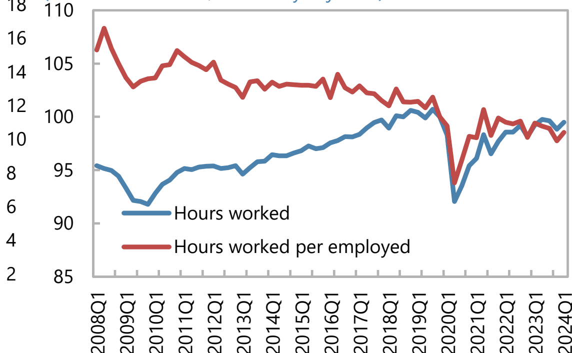
Sources: BMWK, Destatis, Deutsche Bundesbank, European Commission, Eurostat, Haver Analytics, IFO Institute, Markit, Oxford University, and IMF staff calculations.
1/ Manufacturing PMI is a composite index based on a weighted combination of new orders, output, employment, suppliers' delivery times, and stocks of materials purchased.

Figure 2. Germany: Prices and Labor Market

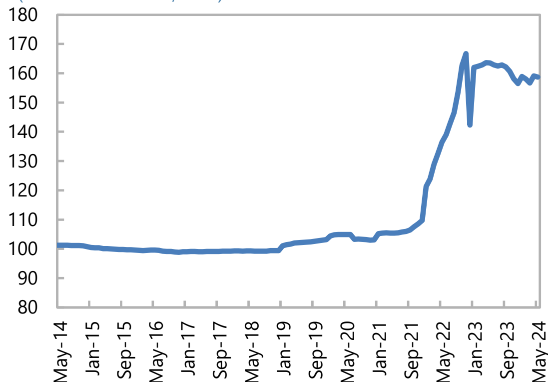
Labor markets remain tight...



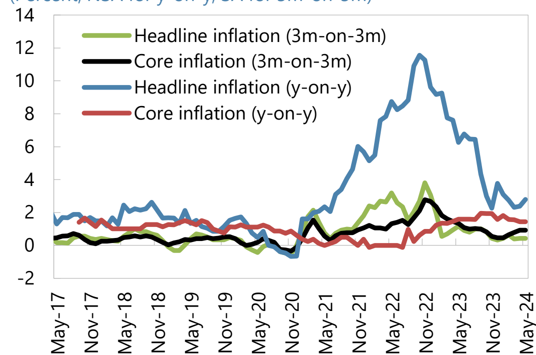
... but hours worked remain below pre-pandemic levels, partly due to increased sick leave.



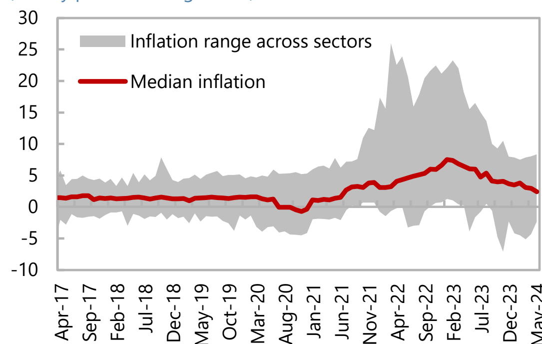
Consumer energy prices have stablized and are no longer adding to inflation.



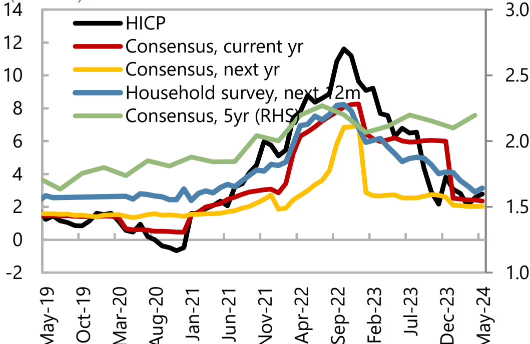
Inflation has fallen given the earlier normalization of imported energy prices and weakening demand.



The breadth of inflation pressures has continued to normalize.



Short-term inflation expectations have notably declined, and medium-term inflation expectations remained anchored.



Sources: Bundesbank, Consensus Forecasts, Eurostat, Federal Statistical Office, Haver Analytics, and IMF staff calculations.

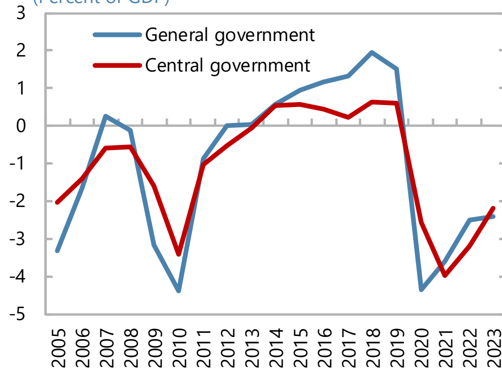
1/ Employment and the unemployment rate are National Accounts Concepts.

2/ Consensus forecasts show the mean of annual inflation projections for current year, next year, and 5 years from now.

Figure 3. Germany: Fiscal Developments and Outlook

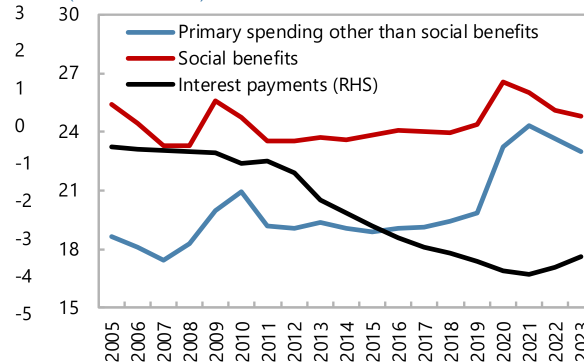
Germany's headline deficit remained at 2.5 percent of GDP in 2023...

General and Central Government Balances
(Percent of GDP)



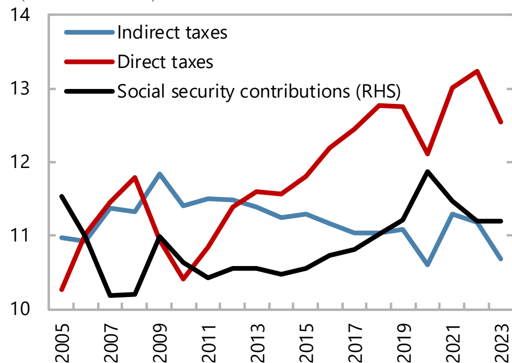
... as the phase out of temporary support related to the COVID-19 pandemic was offset by energy price relief.

General Government Spending
(Percent of GDP)



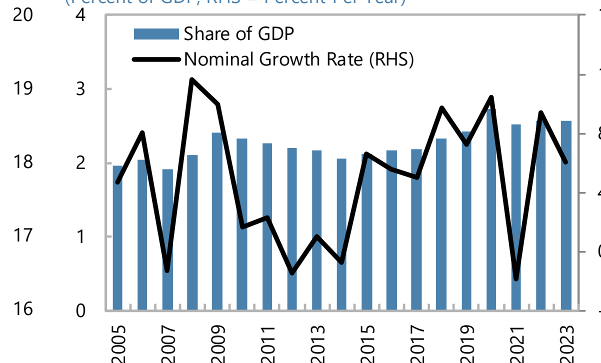
Direct tax revenues grew slower than GDP. Indirect taxes grew slower than GDP due to VAT exemptions for gas and heating.

Tax Revenue and Social Security Contributions
(Percent of GDP)



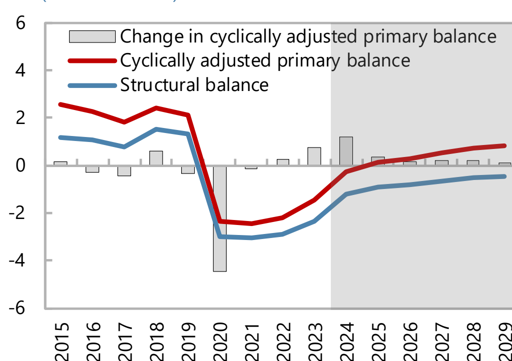
Public investment as a percent of GDP remained broadly unchanged in 2023.

General Government Gross Fixed Capital Formation
(Percent of GDP; RHS = Percent Per Year)



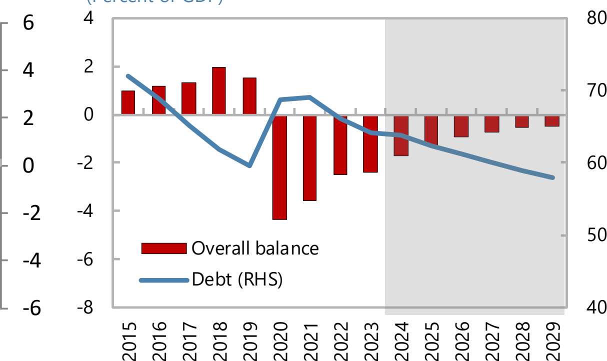
The phase out of gas and electricity price brakes is expected to lead to a tight fiscal stance in 2024.

General Government Structural Balances, Staff Projection
(Percent of GDP)



Tight fiscal policy and a gradual economic recovery are expected to bring down the ratio of public debt to GDP throughout the forecast horizon.

General Government Fiscal Outlook, Staff Projection
(Percent of GDP)

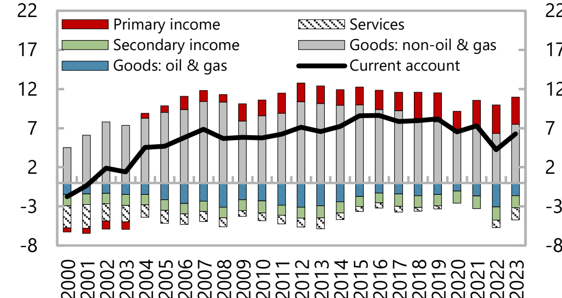


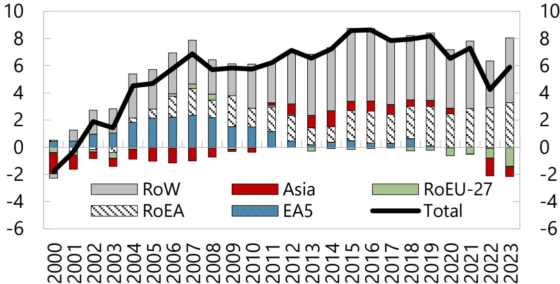
Sources: Federal Statistical Office, Ministry of Finance, and IMF staff calculations and projections.

Figure 4. Germany: Balance of Payments

The current account (CA) surplus strengthened in 2023 as the cost of energy imports declined…

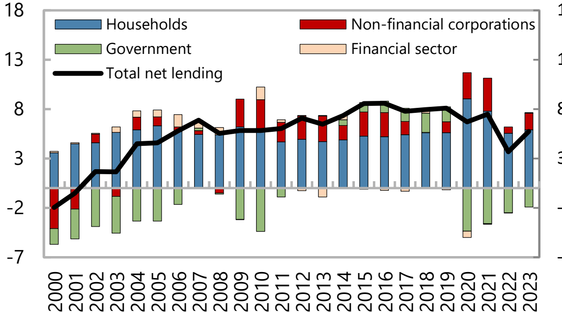
…with an increase of the CA surplus versus non-euro area countries, particularly a reduced deficit with Asia.

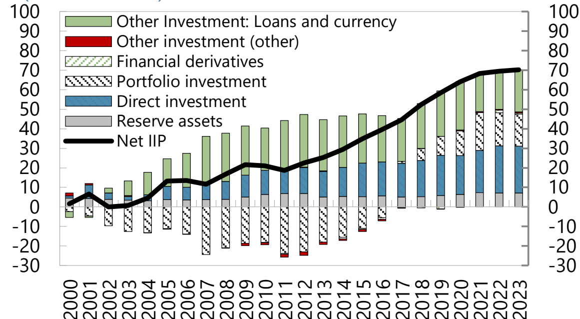




The savings-investment balance of the private sector rose, while that of the public sector fell slightly in 2023 versus 2022

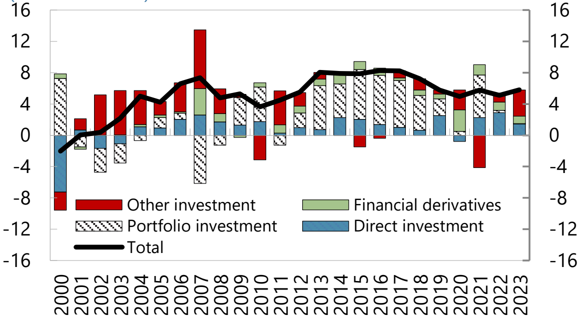
The NIIP was unchanged despite the CA surplus due to valuation losses on external assets versus liabilities

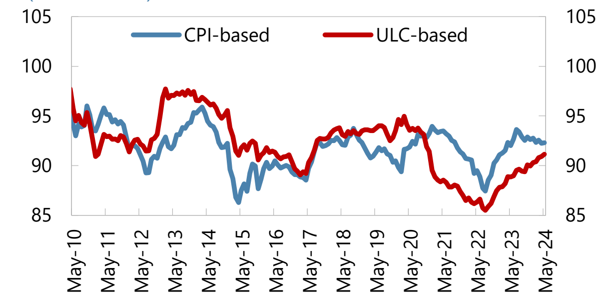




The CA surplus financed mainly "other investments" via accounts of banks rather than portfolio investment

Despite a strong REER depreciation during the energy crisis, the REER has recovered to pre-pandemic levels.

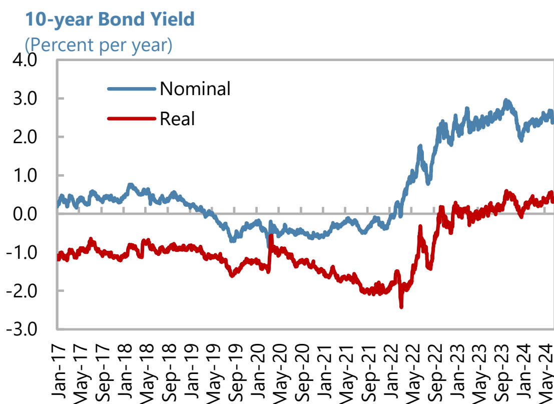




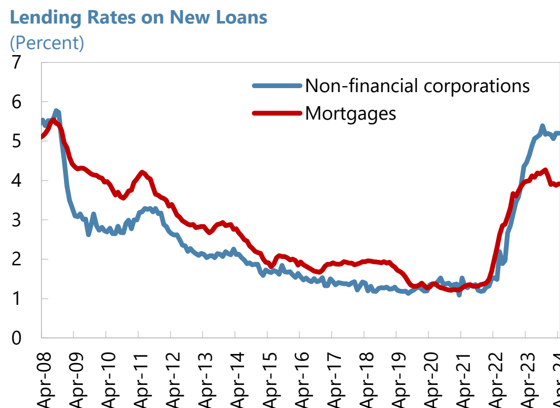
Sources: Bundesbank, DOTS, GDS, Haver Analytics, IMF *World Economic Outlook*, and IMF staff calculations.
1/ The ULC-based REER is measured using ULC statistics for the manufacturing sector in Germany and 37 trading partners, using the OECD System of Unit Labor Cost Indicators.
Note: EA5= Euro area economies (Greece, Ireland, Italy, Portugal, Spain) with high borrowing spreads during the 2010-11 sovereign debt crisis.

Figure 5. Germany: Credit Conditions and Asset Prices

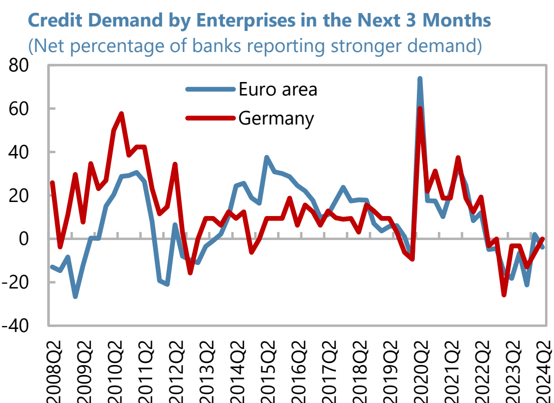
Long-term interest rates have not changed much in 2024, remaining historically elevated. Real interest rates are positive.



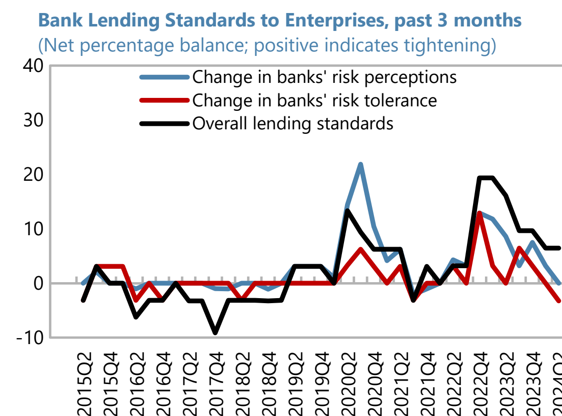
Rising government bond yields have passed through to lending rates.



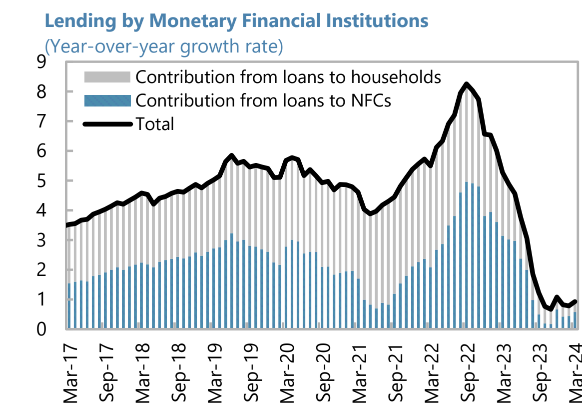
Demand for corporate credit has fallen on higher interest rates.



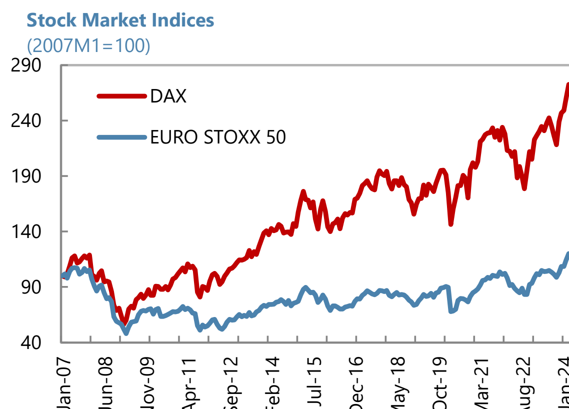
Lending standards to enterprises eased on banks' risk perceptions of lower risk and their higher risk tolerance.



Credit growth has decelerated from high levels, although credit continues to expand.



Stock prices have rebounded, due to the underlying recovery after the pandemic and energy price crisis, despite higher interest rates.

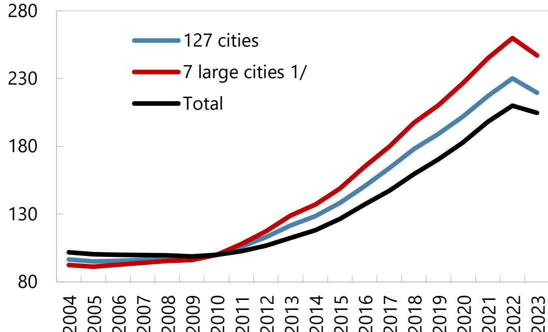


Sources: Bundesbank, ECB, Haver Analytics, Tullett Prebon Information, and IMF staff calculations.

Figure 6. Germany: Real Estate Developments

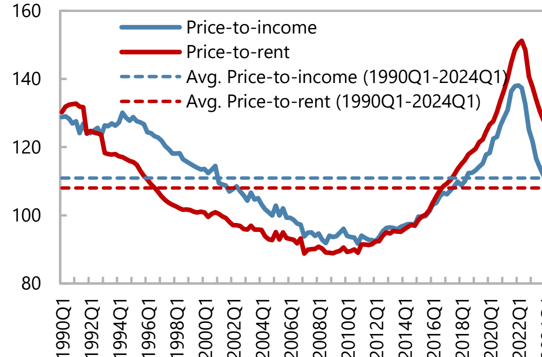
House prices have fallen due to higher interest rates...

Housing Prices
(Index, 2010=100)



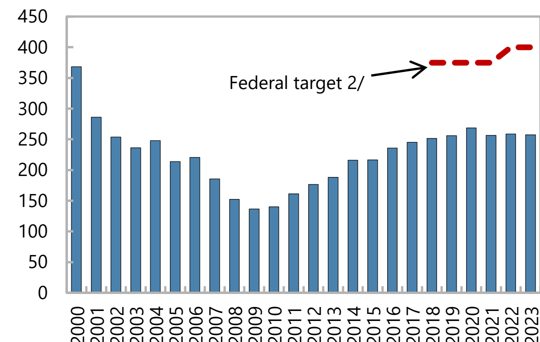
...and affordability measures have reverted back towards historical averages.

House Price Valuation
(Index, 2015=100)



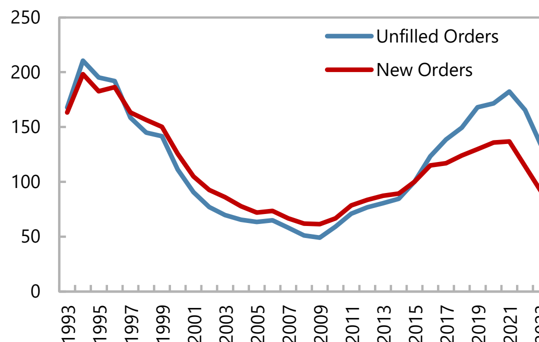
Despite higher housing completions, housing supply is not adequate to meet the demand...

New Residential Housing Units
(Thousands)



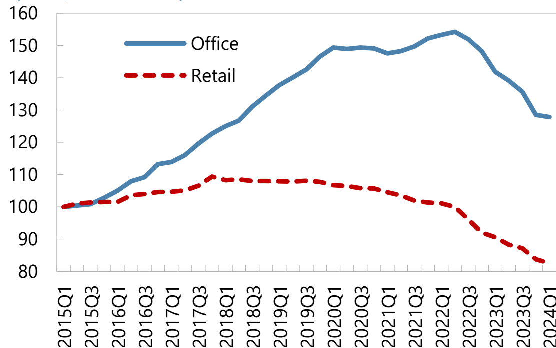
...which led to a backlog of unfilled orders that is slowly being met. Interest rate increases have slowed new orders.

New Orders and Unfilled Orders of Housing Construction
(Index, 2015=100)



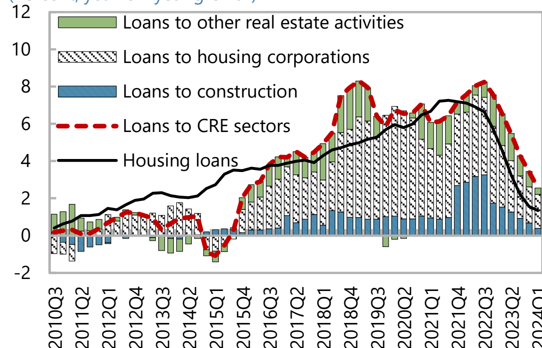
Retail commercial property prices have been falling since 2019, while the declines in office prices came after 2022.

Commercial Real Estate Prices
(Index, 2015Q1=100)



Real estate lending has slowed after monetary tightening.

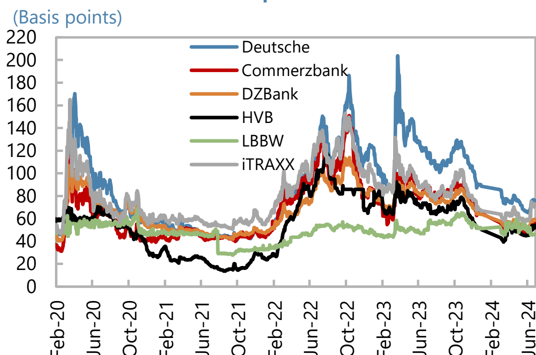
German MFIs: Exposure to Commercial Real Estate 3/
(Percent, year-on-year growth)



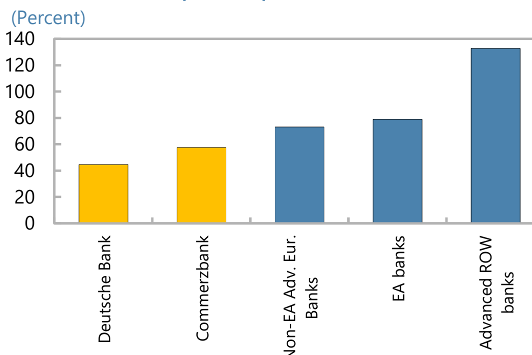
Sources: bulwiengesa AG, Destatis, Deutsche Bundesbank, Federal Ministry of the Interior, Building and Community, vdpResearch, Local Real Estate Surveyor Commission, Haver Analytics, OECD, and IMF staff calculations.
1/ Berlin, Dusseldorf, Frankfurt am Main, Hamburg, Cologne, Munich, and Stuttgart.
2/ According to the 2017 and 2021 coalition agreements.
3/ CRE sectors proxied by construction, housing corporations, and other real estate activities.

Figure 7. Germany: Banking Sector Developments

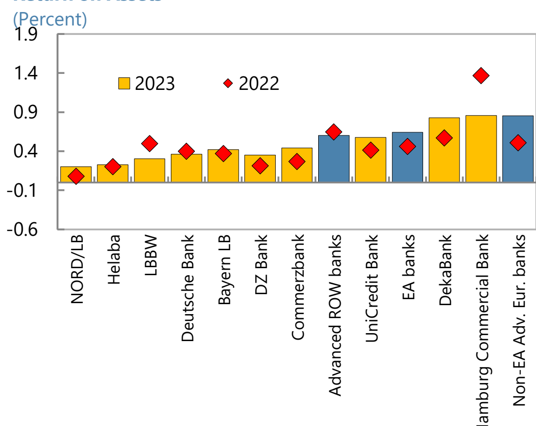
CDS spreads of large banks have declined since last year's global banking turmoil.



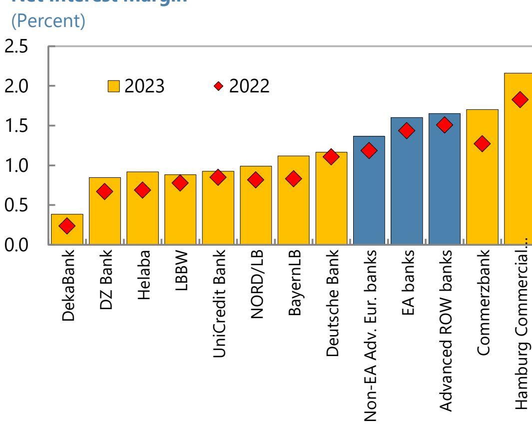
The two largest commercial banks continue trading at a discount relative to many European peers...



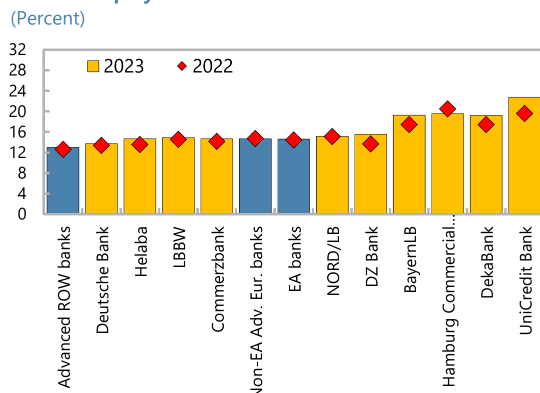
...on the back of structurally low profitability, like many other German banks,...



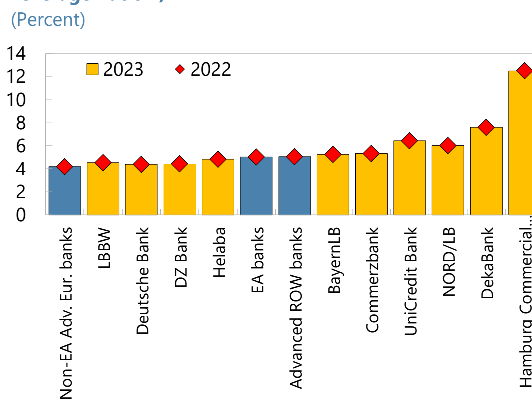
...which in part reflects lower net interest rate margin versus advanced economy peers.



German banks' risk-weighted capital buffers remain stronger than some peers'...



...as do their leverage ratios.



Sources: Bloomberg Finance L.P., S&P Global Market Intelligence, and IMF staff calculations.
Notes: Credit Suisse is excluded from Non-EA Advanced European banks averages.
1/ Leverage ratio is defined as common equity net of intangibles as a percent of total assets net of intangibles.

Table 1. Germany: Selected Economic Indicators, 2022–26

	2022	2023	2024	2025	2026
			Projections		
National Accounts	(Percent change, working-day adjusted)				
GDP	1.9	0.0	0.2	1.4	1.2
Private consumption	3.9	-0.6	0.9	2.2	1.3
Public consumption	1.6	-1.0	0.2	0.6	0.5
Gross fixed investment	0.2	-0.2	0.0	1.7	1.4
Construction	-1.6	-2.1	1.0	1.7	1.4
Machinery and equipment	4.2	3.4	-2.0	1.7	1.4
Final domestic demand	2.5	-0.6	0.5	1.7	1.2
Inventory accumulation 1/	0.7	-0.3	-0.4	-0.4	-0.1
Total domestic demand	3.2	-0.9	0.0	1.3	1.1
Foreign balance 1/	-1.3	0.9	0.2	0.2	0.1
Exports of goods and services	3.4	-0.2	1.4	3.2	2.9
Imports of goods and services	6.8	-2.1	1.0	3.1	3.0
Output gap (percent of potential GDP)	0.8	-0.3	-1.0	-0.7	-0.2
	(Percent change, non-adjusted)				
GDP	1.8	-0.2	0.2	1.3	1.5
Private consumption	3.9	-0.7	1.1	2.1	1.6
Public consumption	1.6	-1.0	0.4	0.4	0.8
Gross fixed investment	0.1	-0.7	-0.2	1.6	1.7
Construction	-1.8	-2.7	0.8	1.6	1.7
Machinery and equipment	4.0	2.8	-2.2	1.5	1.7
Final domestic demand	2.5	-0.8	0.6	1.6	1.5
Inventory accumulation 1/	0.7	-0.2	-0.4	-0.4	-0.1
Total domestic demand	3.2	-1.1	0.2	1.2	1.4
Foreign balance 1/	-1.3	0.8	0.2	0.2	0.2
Exports of goods and services	3.3	-0.7	1.2	3.1	3.3
Imports of goods and services	6.6	-2.4	1.0	3.0	3.3
Output gap (percent of potential GDP)	0.8	-0.3	-1.0	-0.7	-0.2
Unemployment	(Millions, unless indicated otherwise)				
Labor force	43.8	44.2	44.4	44.3	44.3
Employment	42.4	42.9	42.9	43.0	43.0
Unemployment	1.3	1.3	1.5	1.4	1.3
Unemployment rate (percent) 2/	3.1	3.0	3.3	3.1	3.0
Unemployment rate (percent) 3/	2.8	2.8	3.1	2.9	2.8
Prices and Incomes	(Percent change)				
GDP deflator	5.3	6.6	3.2	3.1	2.2
Consumer price index (harmonized)	8.7	6.0	2.5	2.2	2.0
Consumer price index (harmonized), core	5.0	6.3	3.0	2.3	2.0
Compensation per employee (total economy)	3.8	5.8	5.7	3.8	3.6
Compensation per employee (manufacturing)	3.1	6.0	6.0	4.1	3.9
Unit labor cost (total economy)	3.4	6.7	5.5	2.7	2.1
Unit labor cost (manufacturing)	3.7	6.5	4.6	2.8	2.6
Real disposable income 4/	-0.5	-0.4	1.4	1.9	1.5
Household saving ratio (percent)	11.2	11.4	11.6	11.4	11.3

1/ Contribution to GDP growth.

2/ ILO definition.

3/ National Accounts Concepts.

4/ Deflated by national accounts deflator for private consumption; not SWDA.

Table 1. Germany: Selected Economic Indicators, 2022–26 (concluded)

	2022	2023	2024	2025	2026
			Projections		
Public Finances			(Billion of euros)		
General government					
Expenditure	1,918.1	2,007.1	2,047.9	2,141.6	2,213.9
(percent of GDP)	49.5	48.6	48.0	48.1	48.0
Revenue	1,821.2	1,908.0	1,975.4	2,084.4	2,170.7
(percent of GDP)	47.0	46.2	46.3	46.8	47.0
Overall balance 5/	-96.9	-99.1	-72.4	-57.3	-43.2
(percent of GDP)	-2.5	-2.4	-1.7	-1.3	-0.9
Structural balance	-85.5	-96.0	-51.8	-40.5	-37.6
(percent of GDP)	-2.2	-2.3	-1.2	-0.9	-0.8
General government debt	2,561.7	2,622.7	2,721.4	2,778.6	2,823.0
(percent of GDP)	66.1	63.6	63.8	62.4	61.2
Federal government					
Overall balance 5/	-124.3	-90.5	-96.6	-72.5	-64.7
(percent of GDP)	-3.2	-2.2	-2.3	-1.6	-1.4
Balance of Payments			(Percent of GDP)		
Current account	4.2	6.3	6.3	6.3	6.0
Trade balance 6/	3.2	5.9	5.9	5.5	4.9
Services balance	-1.0	-1.5	-1.5	-1.3	-1.3
Primary income balance	3.7	3.5	3.5	3.7	3.9
Secondary income balance	-1.7	-1.6	-1.6	-1.6	-1.6
Monetary Data			(Percent change)		
Money and quasi-money (M3) 7/ 8/	5.2	0.4	...	...	...
Credit to private sector 7/	6.6	1.1	...	...	...
Interest Rates			(Period average in percent)		
Three-month interbank rate 7/	0.3	3.4	...	...	...
Yield on ten-year government bonds 7/	1.3	2.6	...	...	...
Exchange Rates					
Euro per US$	0.95	0.92	...	...	...
Nominal effective rate (2010=100) 9/	102.4	105.9	...	...	...
Real effective rate (2010=100) 10/	93.6	96.7	...	...	...
Memorandum Items:					
Nominal GDP (billions of euros)	3,876.8	4,126.2	4,265.3	4,451.5	4,615.6
Population growth (percent)	0.7	0.9	...	...	...
GDP per capita (thousands of euros)	46.3	48.8	...	...	...

Sources: Deutsche Bundesbank, Federal Statistical Office, IMF staff estimates and projections.

5/ Net lending/borrowing.

6/ Excluding supplementary trade items.

7/ Data refer to end of December.

8/ Data reflect Germany's contribution to M3 of the euro area.

9/ Nominal effective exchange rate, all countries.

10/ Real effective exchange rate, CPI based, all countries.

Table 2. Germany: General Government Operations, 2019–29

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
						Projections					
Revenue	46.5	46.1	47.3	47.0	46.2	46.3	46.8	47.0	47.3	47.5	47.6
Taxes	23.8	22.7	24.3	24.4	23.2	23.3	23.5	23.6	23.8	23.8	23.9
Indirect taxes	11.1	10.6	11.3	11.2	10.7	10.7	10.8	10.8	10.9	10.9	10.9
Direct taxes	12.7	12.1	13.0	13.2	12.5	12.7	12.7	12.8	12.8	12.9	12.9
Social contributions	17.2	17.9	17.5	17.2	17.2	17.3	17.4	17.5	17.6	17.8	17.9
Grants	0.1	0.1	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Other current revenue	5.4	5.4	5.3	5.1	5.7	5.5	5.7	5.7	5.7	5.7	5.7
Expense	45.0	50.5	51.0	49.5	48.7	47.8	47.9	47.7	47.8	47.8	47.9
Compensation of employees	7.9	8.4	8.2	7.9	7.9	8.1	8.1	8.2	8.2	8.2	8.2
Goods and services	5.4	6.2	6.3	6.1	6.3	6.2	6.0	5.8	5.7	5.7	5.7
Interest	0.8	0.6	0.6	0.7	0.9	1.0	1.0	1.1	1.2	1.3	1.3
Subsidies	0.8	2.1	3.0	1.8	1.6	0.6	0.7	0.6	0.6	0.6	0.6
Social benefits	24.4	26.6	26.0	25.1	24.8	25.2	25.6	25.9	26.2	26.2	26.2
Social benefits in kind	8.5	9.0	9.2	9.2	8.7	8.9	9.0	9.2	9.3	9.3	9.3
Social transfers	15.8	17.6	16.9	16.0	16.1	16.3	16.6	16.7	16.9	16.9	16.9
Pensions	9.1	9.6	9.3	9.0	8.9	9.0	9.1	9.2	9.3	9.4	9.5
Child benefits	0.6	0.8	0.7	0.6	0.7	0.6	0.5	0.5	0.5	0.5	0.5
Unemployment benefits	1.2	1.9	1.7	1.3	1.3	1.5	1.3	1.3	1.3	1.3	1.3
Other social transfers	4.9	5.3	5.2	5.1	5.2	5.2	5.3	5.3	5.4	5.4	5.5
Other expense	5.8	6.6	6.9	7.8	7.2	6.8	6.4	6.2	5.8	5.8	5.8
Gross public investment	2.4	2.7	2.5	2.6	2.6	2.9	3.0	2.8	2.7	2.7	2.7
Net acquisition of nonfinancial assets	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Net lending/borrowing	1.5	-4.3	-3.6	-2.5	-2.4	-1.7	-1.3	-0.9	-0.7	-0.5	-0.5
Primary balance	2.3	-3.7	-3.0	-1.8	-1.6	-0.7	-0.2	0.2	0.5	0.7	0.8
Memorandum Items:											
Structural balance	1.3	-3.0	-3.0	-2.2	-2.3	-1.2	-0.9	-0.8	-0.7	-0.5	-0.5
Change in structural balance	-0.3	-4.3	-0.1	0.8	-0.1	1.1	0.3	0.1	0.2	0.1	0.0
Structural primary balance	2.1	-2.3	-2.5	-1.5	-1.4	-0.2	0.1	0.3	0.5	0.7	0.8
Change in structural primary balance	-0.4	-4.5	-0.1	0.9	0.1	1.2	0.4	0.2	0.2	0.2	0.1
Public gross debt (Maastricht definition)	59.6	68.8	69.0	66.1	63.6	63.8	62.4	61.2	60.1	59.0	57.9

Sources: Bundesbank, Federal Statistical Office, Ministry of Finance, and IMF staff estimates and projections.

Notes: The structural balance excludes one-off revenue and expenditure items from the cyclically adjusted balance.

Table 3. Germany: Medium Term Projections, 2019–29

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
						Projections					
Real Sector	(Percentage change unless otherwise indicated, working-day adjusted)										
Real GDP	1.1	-4.2	3.1	1.9	0.0	0.2	1.4	1.2	1.1	0.8	0.7
Total domestic demand	1.5	-3.3	2.5	3.2	-0.9	0.0	1.3	1.1	1.0	0.9	0.8
Private consumption	1.6	-6.1	1.5	3.9	-0.6	0.9	2.2	1.3	1.3	0.9	0.8
Households saving ratio (in percent)	10.9	16.6	14.9	11.2	11.4	11.6	11.4	11.3	11.2	11.2	11.2
Foreign balance (contribution to growth)	-0.3	-1.1	0.8	-1.3	0.9	0.2	0.2	0.1	0.1	0.0	0.0
	(Percentage change unless otherwise indicated, non-adjusted)										
Real GDP	1.1	-3.8	3.2	1.8	-0.2	0.2	1.3	1.5	1.1	0.8	0.7
Total domestic demand	1.5	-3.1	2.5	3.2	-1.1	0.2	1.2	1.4	1.0	0.9	0.8
Private consumption	1.6	-5.9	1.5	3.9	-0.7	1.1	2.1	1.6	1.3	0.9	0.8
Households saving ratio (in percent)	10.9	16.6	14.9	11.2	11.4	11.6	11.4	11.3	11.2	11.2	11.2
Foreign balance (contribution to growth)	-0.3	-1.0	0.8	-1.3	0.8	0.2	0.2	0.2	0.1	0.0	0.0
Output gap (percent of potential GDP)	0.4	-3.1	-1.1	0.8	-0.3	-1.0	-0.7	-0.2	-0.1	0.0	0.0
	(Percentage change unless otherwise indicated)										
Employment (millions of persons)	41.6	41.2	41.4	42.4	42.9	42.9	43.0	43.0	43.0	42.9	42.8
Labor productivity (per employed person)	0.2	-3.1	3.0	0.4	-0.9	0.2	1.1	1.4	1.2	1.0	0.9
Consumer prices (headline, period avg.)	1.4	0.4	3.2	8.7	6.0	2.5	2.2	2.0	2.0	2.0	2.0
Consumer prices (core, period avg.)	1.4	0.9	2.3	5.0	6.3	3.0	2.3	2.0	2.0	2.0	2.0
Compensation per employee	3.4	0.5	3.1	3.8	5.8	5.7	3.8	3.6	3.4	3.2	3.2
External Sector	(Percent of GDP)										
Current account balance	8.2	6.5	7.3	4.2	6.3	6.3	6.3	6.0	6.0	5.8	5.8
Trade balance (goods and services)	5.9	5.6	5.5	2.3	4.3	4.4	4.2	3.6	3.3	3.3	3.4
Net international investment position	58.5	64.0	68.3	69.5	70.1	74.9	78.2	81.5	85.1	88.5	91.9
General Government											
Overall balance	1.5	-4.3	-3.6	-2.5	-2.4	-1.7	-1.3	-0.9	-0.7	-0.5	-0.5
Cyclically adjusted balance	1.3	-3.0	-3.0	-2.9	-2.3	-1.2	-0.9	-0.8	-0.7	-0.5	-0.5
Cyclically adjusted primary balance	2.1	-2.4	-2.5	-2.2	-1.4	-0.2	0.1	0.3	0.5	0.7	0.8
Gross debt	59.6	68.8	69.0	66.1	63.6	63.8	62.4	61.2	60.1	59.0	57.9

Sources: Federal Statistical Office, Bundesbank, and IMF staff estimates.

Table 4. Germany: Balance of Payments, 2019–29[1]

(Percent of GDP)

						Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Current account	8.2	6.5	7.3	4.2	6.3	6.3	6.3	6.0	6.0	5.8	5.8
Trade balance	5.9	5.6	5.5	2.3	4.3	4.4	4.2	3.6	3.3	3.3	3.4
Trade in goods	6.3	5.4	5.4	3.2	5.9	5.9	5.5	4.9	4.2	3.7	3.5
Exports	37.7	34.9	38.0	40.8	38.0	36.9	36.3	35.9	35.4	35.4	35.6
Imports	31.4	29.5	32.6	37.5	32.1	31.0	30.8	30.9	31.2	31.7	32.1
Trade in services	-0.4	0.2	0.0	-1.0	-1.5	-1.5	-1.3	-1.3	-0.9	-0.4	-0.1
Exports	9.4	8.6	9.6	10.6	9.9	9.7	9.8	9.9	10.3	10.3	10.4
Imports	9.8	8.4	9.5	11.5	11.4	11.2	11.0	11.2	11.2	10.8	10.5
Primary income balance	3.7	2.5	3.4	3.7	3.5	3.5	3.7	3.9	4.2	4.1	4.0
Secondary income balance	-1.5	-1.6	-1.6	-1.7	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6
Capital and Financial Account	5.7	4.7	5.7	4.6	5.1	6.3	6.3	6.0	6.0	5.8	5.8
Capital account	-0.1	-0.3	-0.1	-0.6	-0.7	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	5.8	5.0	5.8	5.1	5.8	6.3	6.3	6.0	6.0	5.8	5.8
Direct Investment	2.5	-0.8	2.3	2.9	1.4	2.2	2.2	1.9	2.1	2.1	2.0
Abroad	4.4	3.7	4.6	4.4	1.8	3.6	3.3	2.9	3.3	3.1	3.1
Domestic	1.9	4.5	2.4	1.5	0.4	1.4	1.1	1.0	1.2	1.1	1.1
Portfolio investment balance	2.1	0.5	5.5	0.3	0.0	2.1	0.9	1.0	1.3	1.0	1.1
Financial derivatives	0.6	2.7	1.3	1.1	1.0	1.2	1.1	1.1	1.1	1.1	1.1
Other financial transactions	0.5	2.5	-4.1	0.8	3.3	0.9	2.1	1.9	1.5	1.6	1.6
Change in reserve assets	0.0	0.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net errors and omissions	-2.3	-1.3	-1.4	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0

Sources: Bundesbank, Federal Statistical Office, IMF Statistics Department, and IMF staff estimates.

1/ Based on Balance of Payments Manual 6.

Table 5. Germany: International Investment Position, 2015–23[1]

(Percent of GDP)

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Assets	260.8	264.2	261.4	260.9	277.4	309.1	316.8	312.0	302.7
Direct investment	59.4	60.3	61.0	64.1	67.1	71.9	73.0	73.8	71.4
Portfolio investment	88.2	90.1	93.3	89.2	99.1	108.2	112.4	90.1	94.5
Equity and investment fund shares	28.9	30.5	34.6	31.5	38.2	43.3	53.0	43.2	45.7
Debt securities	59.3	59.6	58.7	57.7	60.9	64.9	59.4	47.0	48.8
Financial derivatives (other than reserves) and employee stock options	22.0	19.5	14.5	12.7	18.0	24.7	20.5	40.8	36.0
Other investment	85.9	88.7	87.4	89.8	87.5	97.9	103.6	100.2	93.7
Reserve assets	5.3	5.6	5.1	5.1	5.7	6.4	7.2	7.1	7.1
Liabilities	225.9	224.7	216.8	208.5	219.0	245.2	248.5	242.5	232.6
Direct investment	42.2	42.9	43.8	45.6	46.3	52.0	51.3	49.6	47.3
Portfolio investment	99.2	95.6	92.3	83.0	89.5	95.5	93.0	73.2	78.2
Equity and investment fund shares	34.3	34.0	36.9	29.1	33.8	34.4	36.5	26.4	29.2
Debt securities	64.9	61.5	55.4	54.0	55.7	61.1	56.6	46.8	49.0
Financial derivatives (other than reserves) and employee stock options	22.5	20.4	15.0	13.2	18.9	25.0	20.4	39.5	35.4
Other investment	62.0	65.8	65.7	66.7	64.2	72.6	83.7	80.3	71.7
Net International Investment Position	34.9	39.5	44.6	52.3	58.5	64.0	68.3	69.5	70.1
Direct investment	17.2	17.4	17.2	18.6	20.7	19.9	21.7	24.2	24.1
Portfolio investment	-11.0	-5.5	1.0	6.2	9.6	12.6	19.4	16.9	16.3
Financial derivatives (other than reserves) and employee stock options	-0.5	-0.9	-0.4	-0.6	-0.9	-0.3	0.0	1.3	0.6
Other investment	24.0	22.9	21.8	23.0	23.3	25.3	19.9	19.9	22.1

Sources: Deutsche Bundesbank, IMF Statistics Department, and IMF staff calculations.

1/ Based on Balance of Payments Manual 6.

Table 6. Germany: Core Financial Soundness Indicators for Banks, 2018–23

(Percent, unless otherwise indicated)

	2018	2019	2020	2021	2022	2023
Capital adequacy						
Regulatory capital to risk-weighted assets	18.9	18.6	19.2	18.8	19.3	19.7
Commercial banks	18.1	18.3	19.8	20.1	21.7	22.2
Landesbanken	20.2	20.0	19.9	20.0	19.7	20.5
Savings banks	17.6	17.3	17.6	16.7	16.7	16.9
Credit cooperatives	17.5	17.1	17.2	16.6	16.5	16.9
Regulatory Tier I capital to risk-weighted assets	16.6	16.5	17.2	16.8	17.1	17.5
Commercial banks	16.0	16.4	17.6	17.4	18.2	18.7
Landesbanken	15.6	15.7	15.8	15.9	15.9	16.9
Savings banks	16.2	16.1	16.4	15.7	15.8	16.0
Credit cooperatives	15.0	14.9	15.4	15.0	15.3	15.6
Asset composition and quality						
Sectoral distribution of loans to total loans						
Loan to households	29.1	29.5	28.4	27.9	27.5	27.8
Commercial banks	21.4	22.2	21.1	20.2	19.6	19.7
Landesbanken	4.2	4.0	3.8	3.7	3.4	3.3
Savings banks	55.3	54.5	51.6	50.9	52.1	52.2
Credit cooperatives	66.0	64.7	61.5	60.3	60.9	61.1
Loans to non-financial corporations	15.7	16.1	15.4	15.1	15.7	16.0
Commercial banks	12.6	13.1	11.9	11.3	11.8	11.9
Landesbanken	22.2	21.9	20.9	21.8	21.3	21.9
Savings banks	25.1	25.2	24.2	23.8	24.9	25.6
Credit cooperatives	19.0	19.6	19.6	20.1	21.5	22.5
NPLs to gross loans	1.2	1.1	1.7	1.5	1.2	1.5
Commercial banks	1.1	1.0	2.1	1.9	1.7	1.8
Landesbanken	1.7	0.9	0.9	0.9	0.8	1.5
Savings banks	1.2	1.1	1.5	1.3	1.2	1.6
Credit cooperatives	1.4	1.2	1.7	1.5	1.3	1.6
NPLs net of provisions to capital	9.1	6.8	6.2	5.4	13.4	16.2
Commercial banks	6.1	3.0	9.3	7.8	15.9	16.5
Landesbanken	10.6	4.9	5.9	5.8	13.1	21.8
Savings banks	11.9	10.4	3.0	2.4	11.8	15.5
Credit cooperatives	14.4	12.5	5.2	4.5	12.2	15.4
Earnings and profitability						
Return on average assets (after-tax)	0.2	0.0	0.1	0.2	0.3	0.6
Commercial banks	0.1	-0.5	-0.1	0.1	0.4	0.6
Landesbanken	-0.2	0.1	0.0	0.1	0.4	0.5
Savings banks	0.4	0.4	0.3	0.4	0.3	0.8
Credit cooperatives	0.5	0.6	0.4	0.5	0.2	0.7
Return on average equity (after-tax)	2.4	-0.4	1.1	3.2	5.0	7.8
Commercial banks	1.5	-9.0	-3.0	1.4	6.9	8.8
Landesbanken	-3.9	1.6	0.8	2.3	8.4	8.8
Savings banks	4.8	4.8	3.4	4.2	2.8	8.0
Credit cooperatives	5.5	6.6	5.0	6.2	2.6	7.0
Interest margin to gross income	72.3	69.5	67.3	65.2	52.1	50.7
Commercial banks	67.8	61.8	57.6	55.8	42.2	43.2
Landesbanken	74.2	73.0	75.7	70.7	45.9	53.3
Savings banks	71.7	71.4	70.5	68.1	74.6	59.1
Credit cooperatives	74.6	73.5	72.3	70.6	75.7	60.1
Trading income to gross income	2.9	2.1	2.9	3.9	-4.8	7.7
Commercial banks	4.9	3.2	5.3	6.5	7.6	11.6
Landesbanken	8.8	6.4	6.2	10.7	2.7	6.7
Savings banks	0.0	0.0	0.0	0.0	-32.9	5.9
Credit cooperatives	0.0	0.0	0.0	0.0	-30.2	4.3
Noninterest expenses to gross income	73.1	76.0	72.3	72.9	77.7	65.1
Commercial banks	79.3	84.9	77.7	79.9	75.9	71.7
Landesbanken	76.6	78.5	75.9	70.6	69.4	63.8
Savings banks	68.3	71.4	70.1	70.7	84.3	54.0
Credit cooperatives	66.2	67.2	67.2	65.9	84.4	59.7
Liquidity						
Liquid assets to total short-term liabilities 1/	151.7	161.2	169.6	170.9	33.0	34.8
Commercial banks	140.3	147.4	157.4	160.9	36.5	38.7
Landesbanken	126.0	152.6	178.4	152.6	44.8	46.4
Savings banks	198.6	186.0	187.2	174.4	18.2	20.5
Credit cooperatives	162.2	169.9	158.6	166.9	15.1	16.4
LCR	...	...	...	...	162.6	165.9
Commercial banks	...	...	...	...	153.8	154.5
Landesbanken	...	...	...	...	163.8	179.1
Savings banks	...	...	...	...	166.7	184.5
Credit cooperatives	...	...	...	...	156.3	169.5
NSFR	...	...	...	...	123.4	125.4
Commercial banks	...	...	...	...	126.3	128.8
Landesbanken	...	...	...	...	118.1	121.8
Savings banks	...	...	...	...	125.6	126.7
Credit cooperatives	...	...	...	...	121.0	122.0
Sensitivity to market risk						
Net open positions in FX to capital 2/	3.2	3.7	3.4	4.3	2.8	2.8
Commercial banks	2.2	2.6	2.4	2.8	1.7	1.6
Landesbanken	3.1	2.6	3.2	3.4	3.5	3.3
Savings banks	3.5	4.0	3.6	4.6	3.7	3.6
Credit cooperatives	7.4	7.6	7.4	9.6	5.2	5.3

Source: Deutsche Bundesbank. The authorities provide annual data only and disseminate them once a year.

1/ Due to methodological amendments given a corresponding methodological break in time series occurs in 2022.

2/ Due to the new FSI Compilation Guide the indicator is no longer included in the IMF's requirement for the FSI.

Table 7. Germany: Depository Corporations Survey, 2019–23

	2019	2020	2021	2022	2023 1/
	(In billions of euros, end of period)				
Net foreign assets	1834	1908	1817	1887	1988
Claims on Nonresidents	3101	3346	3632	3762	3659
Central Bank	1159	1427	1590	1617	1414
Other Depository Corporations	1942	1919	2041	2146	2245
Liabilities to Nonresidents (-)	1266	1437	1815	1876	1671
Central Bank (-)	228	308	500	401	150
Other Depository Corporations (-)	1039	1129	1315	1475	1521
Net domestic assets	3458	3750	3835	4938	4817
Net Claims on Central Government	309	328	487	437	488
Claims on State and Local Government	469	512	513	478	483
Claims on NBFIs	1121	1269	1061	2031	1965
Financial Derivatives	690	828	594	1521	1450
Claims on Private Sector	2758	2892	3045	3235	3267
Corporates	1006	1058	1115	1220	1238
Households	1752	1834	1930	2015	2029
Capital and Reserves (-)	794	817	828	732	798
Other Items, Net (-, including discrepancy)	405	434	445	509	589
Broad Money	3353	3659	3874	4071	4061
Currency in Circulation	282	312	337	374	369
Transferable Deposits	2257	2579	2784	2813	2565
Other Deposits	804	762	744	867	1077
Securities	10	6	10	16	50
Other Liabilities	1940	1999	1778	2753	2744
Financial Derivatives	654	801	574	1503	1415
	(Annual percentage change)				
Net foreign assets	6.0	4.0	-4.8	3.8	5.4
Net domestic assets	9.6	8.4	2.3	28.7	-2.5
Claims on private sector	4.8	4.9	5.3	6.2	1.0
Corporates	5.3	5.2	5.4	9.3	1.5
Households	4.5	4.7	5.2	4.4	0.7
Broad Money	5.3	9.1	5.9	5.1	-0.2
	(In millions of U.S. dollars, end of period)				
Net foreign assets	2039	2323	2054	1998	2168
Net domestic assets	3843	4563	4335	5228	5252
Claims on private sector	3065	3520	3442	3425	3562
Corporates	1118	1288	1261	1292	1350
Households	1947	2232	2182	2134	2213
Memorandum items					
Velocity (GDP/Broad Money)	1.0	0.9	0.9	1.0	1.0
Euro per U.S. dollar (end of period)	0.90	0.82	0.88	0.94	0.92

Sources: International Financial Statistics and IMF staff estimates.

1/ As of November 2023.

Annex I. External Sector Assessment

<table>
<tr><td colspan="7">Overall Assessment: The external position in 2023 was stronger than the level implied by medium-term fundamentals and desirable policies. In 2023, the CA strengthened versus 2022 mainly due to a normalization in the prices of energy imports, which had previously risen significantly in the wake of Russia's invasion of Ukraine. In 2024, the CA is expected to strengthen slightly from improved terms of trade and as demand from Asia recovers. Over the medium term, the CA is projected to taper slightly as higher wage growth pushes up imports.

Potential Policy Responses: Policies aimed at promoting investment and diminishing excess saving would support external rebalancing and a further reduction of the CA balance toward its norm. Over the medium term, higher fiscal deficits than currently planned are likely to be needed to ensure adequate public investment in the green transition, digitalization, and transport infrastructure. Structural reforms to foster innovation, including strengthening of venture capital financing for start-up companies and streamlining of administrative procedures to start a business, would also stimulate investment. Training to enhance employability of older workers with outdated skills could also extend working lives and reduce the need for excess saving. Industrial policies should be deployed cautiously, remain targeted to specific objectives where externalities or market failures prevent effective market solutions, and avoid favoring domestic producers over imports to minimize trade and investment distortions.</td></tr>
<tr><td>Foreign Asset and Liability Position and Trajectory</td><td colspan="6">Background. The NIIP was largely unchanged at 70 percent of GDP in 2023 versus 2022. This was despite the year's CA surplus because of valuation losses on Germany's external assets versus liabilities over the course of the year. Germany's external assets include holdings of sovereign securities, whose market prices fell in response to global policy rate tightening. Germany's TARGET2 claims on the Eurosystem fell to €1.1 trillion at the end of 2023, down from €1.3 trillion at the end of 2022 as the ECB initiated its quantitative tightening program from March 2023 onwards. Between 2017 and 2023, the NIIP increased by some 24 percent of GDP, lifting the primary income balance going forward.

Assessment. Germany's exposure to the Eurosystem remains large.</td></tr>
<tr><td>2023 (% GDP)</td><td>NIIP: 70</td><td>Gross Assets: 303</td><td colspan="2">Debt Assets: 157</td><td>Gross Liab.: 233</td><td>Debt Liab.: 148</td></tr>
<tr><td>Current Account</td><td colspan="6">Background. The CA surplus came in at 6.3 percent of GDP in 2023, compared with 4.2 percent in 2022 and 8.0 percent on average over 2017–19. The strengthening of the CA in 2023 was driven mainly by a significant increase in the goods balance, as the cost of commodity imports (mainly natural gas and other energy sources) declined sharply, even though goods exports weakened slightly. The increase in the goods balance was partially offset by a significant decrease in the services balance, mainly due to a normalization of travel, transport, and vaccine-related intellectual property exports after the pandemic. Primary and secondary income accounts were largely unchanged. The increase in the CA surplus reflected a sharp increase in Germany's CA surplus with non-euro area countries. With Asia, Germany's trade balance increased, reflecting, in particular, a reduced deficit with China, as both exports and imports contracted, the latter more sharply. The government's savings-investment balance increased slightly, in line with the tight fiscal stance. The savings-investment surpluses of households and firms also increased slightly, especially given lower inventory accumulation than in the previous year.

Assessment. The cyclically adjusted CA balance is estimated by the EBA model to be 6.3 percent of GDP in 2023. IMF staff assess the CA norm to be between 2.6 and 3.6 percent of GDP, with a midpoint of 3.1 percent of GDP, in line with the EBA model. The difference between the cyclically adjusted CA and the CA norm implies that the CA gap for 2023 was in the range of 2.6–3.6 percent of GDP, with a midpoint of 3.1 percent of GDP.</td></tr>
<tr><td>2023 (% GDP)</td><td>CA: 6.3</td><td>Cycl. Adj. CA: 6.3</td><td>EBA Norm: 3.1</td><td>EBA Gap: 3.1</td><td>Staff Adj: 0.0</td><td>Staff Gap: 3.1</td></tr>
<tr><td>Real Exchange Rate</td><td colspan="6">Background. Despite a strong REER depreciation during the energy-price crisis (early 2021-mid-2022), the REER has recovered to pre-pandemic levels. The REER based on consumer prices appreciated by 3.5 percent in 2023, driven by real appreciation against China and Japan. As of April 2024, the REER was 0.5 percent below the 2023 average.

Assessment. The IMF staff CA gap implies a REER gap of -8.6 percent in 2023 (with an estimated elasticity of 0.36 applied). The EBA REER level and index models suggest an undervaluation of 9.3 percent and an overvaluation of 8.0 percent, respectively. Consistent with the staff CA gap, the staff assesses the REER to be undervalued, with a midpoint of 8.6 percent and a range of uncertainty of +/-1.4 percent.</td></tr>
<tr><td>Capital and Financial Accounts: Flows and Policy Measures</td><td colspan="6">Background. In 2023, significant capital exports corresponding to the CA surplus were largely in the "other investments" category due to transactions via the accounts of monetary and financial institutions by firms, households, and governments, as FDI and portfolio investment were muted, while derivatives transactions were largely unchanged. Foreign institutions reduced deposits with German banks, reflecting in part a decline in excess liquidity in the euro area. FDI (both inward and outward) as well as portfolio investment declined versus the previous year, in part due to the global rate tightening environment, especially during the first three quarters of 2023. This led to reduced demand for listed and unlisted equities and higher demand for highly rated sovereign securities, with German investors buying euro area securities and foreign investors buying German securities.

Assessment. Risks are limited, given Germany's safe-haven status and the strength of its external position.</td></tr>
<tr><td>FX Intervention and Reserves Level</td><td colspan="6">Background. The euro has the status of a global reserve currency.

Assessment. Reserves held by euro area economies are typically low relative to standard metrics. The currency floats freely.</td></tr>
</table>

Annex II. Potential Growth

This annex projects the potential growth rate of the German economy over the medium term using a production function approach. It shows that aging alone is expected to reduce potential growth from around 1.4 percent a year before the pandemic to just 0.7 percent by 2029, through shrinking the workforce and reducing productivity growth. The medium-term potential growth rate could be 0.2–0.4 percentage points higher or lower in a high- or low-immigration scenario. Finally, closing part of the gap between women and men in labor force participation and working hours could boost potential growth by around 0.4 percentage points per year between 2024 and 2030.

1. There are numerous methods to estimate potential output growth, each with strengths and weaknesses. Methods range from univariate filters (e.g., HP-filer, band-pass filters) to more structural models of the economy (e.g., production function, semi-structural gap models, fully structural DSGE models). To estimate the structural drivers of potential output growth for the German economy while keeping the estimation problem tractable, this annex employs the production function approach. This method has the advantage of attaching a structural interpretation to developments in potential growth. However, it requires the estimation of the potential levels of the underlying production inputs, which could introduce substantial bias.

Estimating Potential Output Growth

2. Potential output growth is estimated using a production function approach. In particular, we assume that GDP is given by a standard Cobb-Douglas production function with constant returns to scale. Potential output is then given by:

$$\overline{Y_t} = \overline{A_t}(\overline{K_t})^{\alpha}(\overline{L_t})^{1-\alpha} \qquad (1)$$

where Y_t is real GDP, A_t is total factor productivity (TFP), K_t is the capital stock, and L_t is the labor input; bars represent potential values of the respective inputs and $(1-\alpha)$ is the share of labor in production. Taking logs on both sides of equation (1) and differentiating, we have the following expression for potential output growth:

$$\Delta\log(\overline{Y_t}) = \Delta\log(\overline{A_t}) + \alpha\Delta\log(\overline{K_t}) + (1-\alpha)\Delta\log(\overline{L_t}) \qquad (2)$$

where potential inputs are estimated by applying the Hodrick-Prescott (HP) filter (see Hodrick and Prescott, 1981) to the underlying data series (more details provided below).

Forecast of Production Inputs

3. Capital accumulation is expected to slow in line with projected investment growth. Historical data on the real capital stock for the period 1991 to 2019 is sourced from the Federal Statistical Office of Germany (Destatis). The capital stock is then projected forward for the period 2020 through 2035 using the capital accumulation equation:[1]

[1] Forecasts for underlying inputs are extended beyond the current WEO forecast horizon, before applying the HP filter, to mitigate the end-point bias when using the HP-filter to calculate the potential level of production inputs.

$$K_{t+1} = I_t + (1 - \delta)K_{t-1} \qquad (3)$$

where I_t is real gross fixed investment and δ is the implicit capital depreciation rate. The forecast for fixed investment for 2024 through 2029 is the latest IMF staff forecast, while investment growth is kept constant at its 2029 level between 2030 and 2035. The depreciation rate is set equal to the 2015–19 average of the historic implicit depreciation rate calculated from equation (3). Growth in the real capital stock is expected to slow from an average of around 1.6 percent per year between 1995 and 2019 to around 1 percent per year over the forecast horizon, in line with the expected developments in investment growth (see Annex II Figure 1, top left).

4. Population aging contributes to a substantial decline in the working age population over the forecast horizon. The labor input in equation (2) is defined in terms of hours worked:[2]

$$L_t = WPOP_t * LFPR_t * (1 - UNR_t) * HOURS_t \qquad (4)$$

where $WPOP_t$ the working age population (defined as the population aged 15 to 64), $LFPR_t$ is the labor force participation rate, UNR_t is the unemployment rate, and $HOURS_t$ is average hours worked per worker. Historical data are sourced from the Annual Labor Force Survey published by Destatis. Forecasts for the working age population are from Eurostat. The working age population is expected to shrink by 0.5 percent per year between 2024 and 2030 under baseline immigration assumptions. In the baseline, Germany's labor force is projected to decline by more than for any G7 economy bar Japan (see Annex II Figure 1, top right). Under scenarios of high and low immigration, the working age population is expected to shrink by an average of 0.3 percent and 0.8 percent per year, respectively.[3]

5. Other labor inputs are projected as follows:

i) Hours worked per worker are kept flat at their 2023 level, in line with a longer-term quadratic trend (see Annex II Figure 1, middle left).

ii) The unemployment rate is projected forward using the latest staff projections.

iii) The forecast for the labor force participation rate is calculated as the population-share weighted average of the participation rates for males and females. Male labor force participation has remained relatively stable over the last 20 years, albeit with a small pick-up in recent years (see Annex II Figure 1, middle right). In contrast, female labor force participation has increased substantially over the same period. Male labor force participation is expected to tick up marginally over the forecast horizon, in line with recent trends. We expect female participation to continue to trend higher (albeit at a slightly slower pace), reducing the gap between male and female participation by about one third (Annex II Figure 1, middle right).

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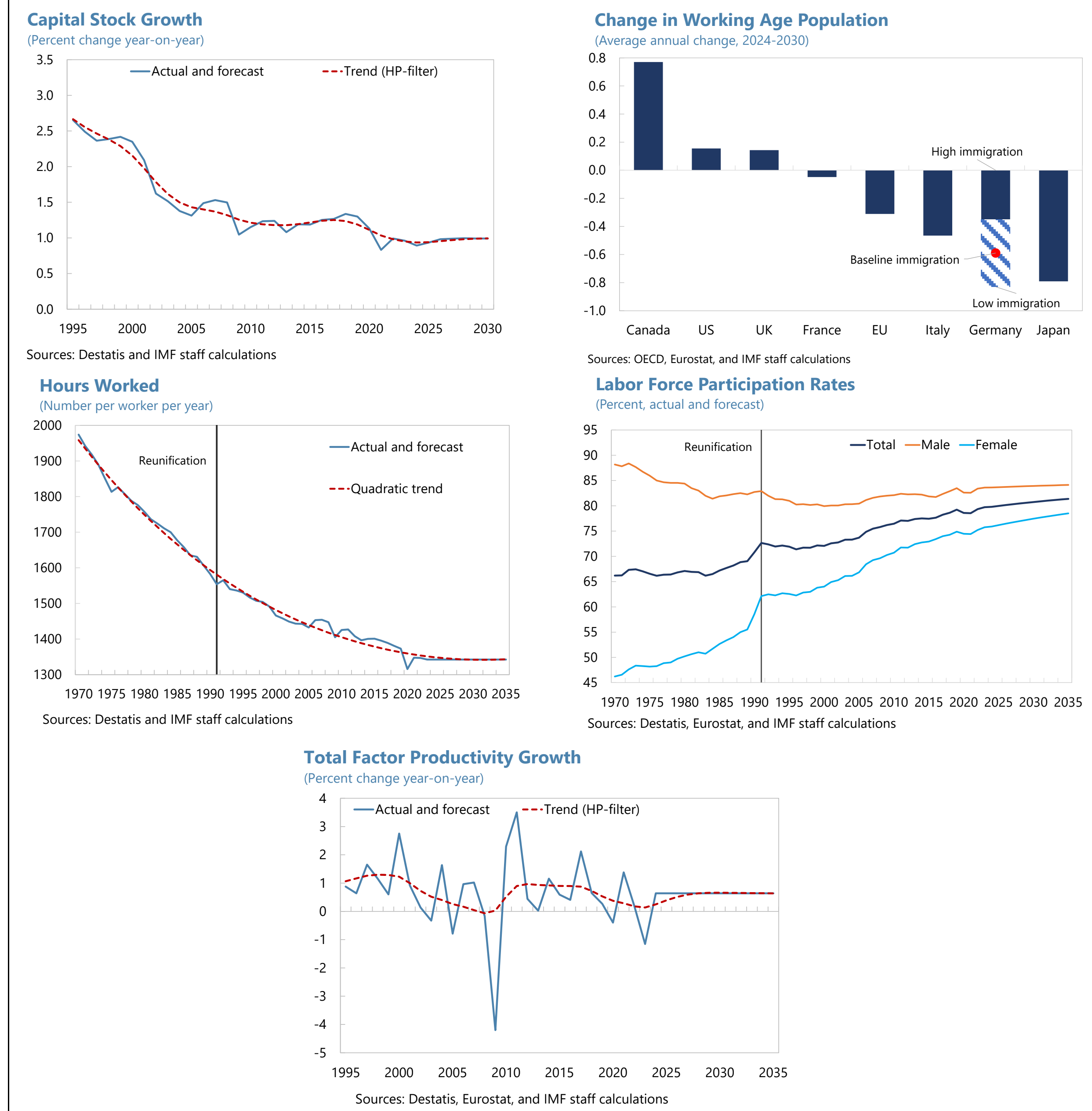
[2] Results are similar of the labor input were specified in terms of the number of workers, rather than hours worked.

[3] Assumptions underlying Eurostat's population projections can be found here.



6. Finally, population aging is expected to weigh on total factor productivity over the medium-term. Historically, TFP is calculated as the Solow residual from equation (1), with its growth given by: [4]

$$\Delta \log(TFP_t) \equiv \Delta\log(A_t) = \Delta\log(Y_t) - \alpha\Delta \log(K_t) - (1-\alpha)\Delta\log(L_t) \qquad (3)$$

[4] The labor share $(1-\alpha)$ is set equal to 0.64, in line with the average empirical labor share in gross value added over the sample period. For comparison, the German Council of Economic Experts use a value of 0.66, but the study covers a longer sample staring in 1970. Results are not substantially different when using the slightly higher value for the labor share.

with historic capital and labor inputs as described above. According to this calculation, TFP growth averaged around 0.9 percent per year between 1995 and 2019 (excluding the Global Financial Crisis) and around 1 percent per year in the decade pre-Covid. An aging population is expected to weigh on TFP growth over the forecast. The baseline forecast assumes that TFP growth measures around 0.6 percent per year between 2024 and 2035, about two-thirds of the pre-Covid average (see Annex II Figure 1, bottom).[5] This is in line with recent literature on the impact of population aging on productivity growth. Maestas and others (2023) estimate that for the US, a 10 percent increase in the share of the population aged 60+ (equivalent to an increase of around 2.4 percentage points) reduces labor productivity (that is, output per hour worked) by 3.4 percent over a ten-year period. Applying this estimate to TFP in Germany, staff's baseline assumption of an 8.8 percent increase in the share of the German population aged 60+ in the ten years through 2034 (from 29.8 to 32.4 percent of the population), implies a reduction of around 3 percent (=3.4*8.8/10) in the level of TFP over ten years relative to a baseline without aging. This is equivalent to a reduction in annual productivity growth of around 0.3 percentage points per year due to aging.

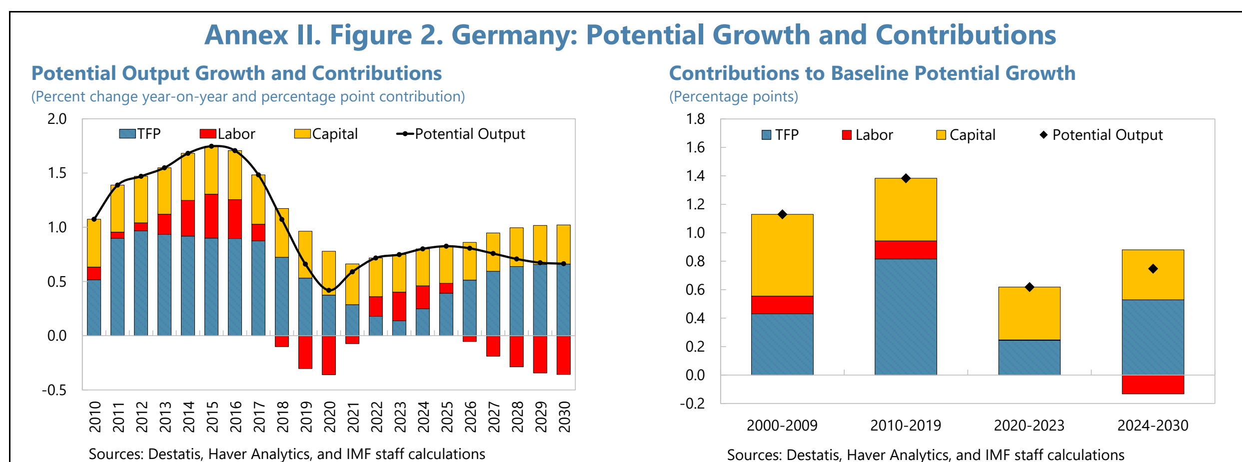
Potential Growth Estimates

7. Using the inputs described above, potential output growth can be estimated by adding up the three components, as shown in equation (2). The HP-filter is used to obtain potential levels of each of the individual input series (labor, capital, and TFP) across the entire sample, which are then used in equation (2) to estimate potential growth.[6]

8. Potential GDP growth is expected to slow to around 0.7 per year by 2030 under baseline immigration assumptions (see Annex II Figure 2, left), about 0.7 percentage points below its 2010–19 average. Potential growth picks up to around 0.9 percent in 2025/26, in part due to the continued positive impact of the recent conflict-related immigration and in part due to the post-Covid/post-energy shock recovery in productivity. However, potential growth slows toward 0.7 percent by 2030 as an aging population and a shrinking workforce weigh on potential output. In fact, the labor component subtracts around 0.1 percentage points per year on average from potential growth between 2024 and 2030 (see Annex II Figure 2, right), with the negative contribution reaching a peak of 0.4 percentage points in 2030. The contribution from TFP initially increases as productivity recovers following recent shocks, but then stabilizes at 0.6 percentage points between 2027 and 2030. The contribution from capital remains stable at 0.4 percentage points between 2025 and 2030.

[5] Measured and projected TFP growth does not include the possible indirect effect of productivity growth on capital and labor inputs.

[6] The smoothing parameter for the HP-filter is set equal to 6.25 following Ravn and Uhlig (2001). The authors show that using a smoothing parameter of 6.25 for annual data produces the same trend as when using a smoothing parameter of 1600 on quarterly data, the standard practice when using the HP-filter on quarterly series.



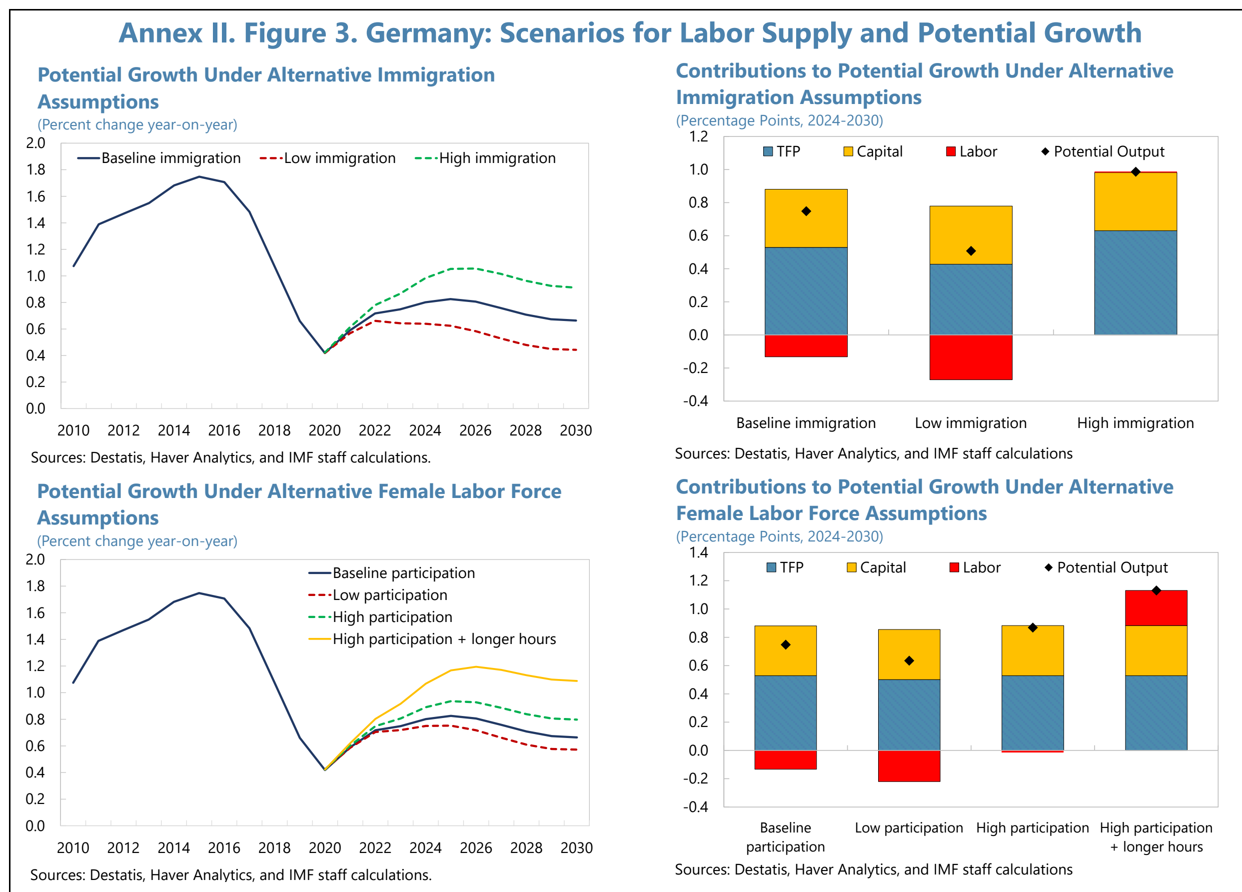
9. This forecast depends crucially on assumptions regarding developments in the working age population and its impact on productivity. Under baseline immigration assumptions, the working age population is expected to shrink by an average of 0.5 percent per year between 2024 and 2030. In contrast, under Eurostat's low immigration scenario, the working age population contracts by 0.8 percent per year, while in the high immigration scenario the population contracts by only 0.3 percent per year.[7] Different immigration assumptions also impact the assumed path for productivity growth—under a low immigration scenario, the share of the population over the age of 60 increases by more than under the baseline, resulting in a drag on annual productivity growth of around 0.4 percentage points versus the 0.3 percentage point drag assumed under the baseline. In contrast, under the high immigration scenario, the drag on productivity growth is somewhat smaller at 0.2 percentage points. In all, potential growth slows to just 0.5 percent under the low immigration scenario with smaller contributions from labor and TFP than under the baseline (see Annex II Figure 3, top right). Under a high immigration scenario, potential growth accelerates to around 1.1 percent in 2025/2026 before slowing to 0.9 percent by 2030, with a broadly neutral contribution from labor over the forecast (see Annex II Figure 3, top right).

10. Increasing the labor force participation and hours worked of women could boost potential growth. As mentioned in the main text, there are substantial gaps between male and female labor force participation and hours worked. While female participation is projected to increase over the forecast, the participation gap only narrows by about a third relative to 2023. The bottom panels in Annex II Figure 3 gives potential growth estimates under alternative female labor force participation assumptions. Under a low participation scenario, it is assumed that female participation remains flat at its 2023 level over the entire forecast. This results in potential growth slowing to 0.6 percent in 2030, with average potential growth between 2024 and 2030 measuring just 0.6 percent as opposed to 0.8 percent in the baseline. In contrast, under a high participation scenario, it is assumed that the various reforms aimed at lifting female participation reduce the male-female participation gap by 75 percent relative to baseline by 2035. Under this scenario, potential growth picks up to 1 percent in 2025 before slowing moderately to 0.8 percent by 2030. In

[7] The low immigration scenario assumes 33 percent less immigration from non-EU countries relative to baseline in each individual year, while the high immigration scenario assumes 33 percent more non-EU immigration per year. See Eurostat for details.

addition to having lower participation rates, women also work on average 25 percent fewer hours per week than men. A final scenario assumes that on top of narrowing the participation gap, labor market reforms reduce the male-female hours gap by half by 2035. This has a sizable impact on the forecast, lifting average potential growth to 1.1 percent per year between 2024 and 2030.

Annex II. Figure 3. Germany: Scenarios for Labor Supply and Potential Growth



Conclusion

11. Potential output growth is expected to slow to just 0.7 percent per year by 2030, a decline of around 0.7 percentage points relative to the pre-Covid average. The medium-term forecast lies at the upper end of available forecasts, which range from 0.4 percent (German Council of Economic Experts) and 0.7 percent (European Commission). The main driver of the decline is the expected contraction in the working age population and the projected aging-related slowdown in total factor productivity growth. These two factors account for around 70 percent and 20 percent of the slowdown in overall potential growth, respectively. Under a scenario of weak immigration, the slowdown is even more pronounced, with potential growth slowing to just 0.5 percent in 2030. Finally, increasing female labor force participation could have a sizable positive impact on medium-term growth. These results highlight the importance of reforms to boost labor supply and productivity, as described in the main text.

Annex III. Risk Assessment Matrix[1]

Source of Risks	Relative Likelihood	Impact	Policy Response
Global Conjunctural and Structural Risks			
Intensification of regional conflict(s). Escalation or spread of the conflict in Gaza and Israel, Russia's war in Ukraine, and/or other regional conflicts or terrorism disrupt trade (e.g., energy, food, tourism, supply chains), remittances, FDI and financial flows, payment systems, and increase refugee flows.	High	High Given its high integration in global value chains, Germany is vulnerable to disruptions in trade associated with regional conflicts. Higher energy/commodity prices could add to inflation pressures. Heightened uncertainty could also weigh on consumer and business confidence.	• Allow automatic stabilizers to operate fully. • Provide targeted support to vulnerable households. • Closely monitor the arrival of refugees, facilitate labor market integration, and use fiscal space if necessary to provide further support.
Abrupt global slowdown. Global and idiosyncratic risk factors cause a synchronized sharp growth downturn, with recessions in some countries, adverse spillovers through trade and financial channels, and market fragmentation triggering sudden stops in EMDEs. • **US:** Amid tight labor markets, inflation remains elevated, prompting the Fed to keep rates higher for longer and resulting in more abrupt financial, housing, and commercial real estate market correction. • **Europe:** Intensifying fallout from Russia's war in Ukraine, supply disruptions, tight financial conditions, and real estate market corrections exacerbate economic downturn. • **China:** Sharper-than-expected contraction in the property sector weighs on private demand, further amplifies local government fiscal strains, and results in disinflationary pressures and adverse macro-financial feedback loops.	Medium US: Medium Europe: Medium China: Medium	High Weakened external demand would take a toll on Germany's relatively open economy. Subdued sentiment would deter consumption and investment.	• Allow automatic stabilizers to operate fully and supplement with discretionary stimulus in the event of a significant downturn. • Carefully monitor potential implications on financial markets and calibrate measures to ensure financial stability as needed.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path. The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. The conjunctural shocks and scenario highlight risks that may materialize over a shorter horizon (between 12 to 18 months) given the current baseline. Structural risks are those that are likely to remain salient over a longer horizon.

Source of Risks	Relative Likelihood	Impact	Policy Response
Global Conjunctural and Structural Risks			
Commodity price volatility. A succession of supply disruptions (e.g., due to conflicts, export restrictions, and OPEC+ decisions) and demand fluctuations causes recurrent commodity price volatility, external and fiscal pressures in EMDEs, cross-border spillovers, and social and economic instability.	High	Medium Germany's energy imports are a similar share of GDP as those of other large EU member states. Rising energy prices could lead to consumer price inflation and erode corporate profits and household real income.	• Intensify search for secure alternative energy resources and the associated storage and processing facilities. • Maintain price signals to promote energy savings. • If necessary, provide additional targeted support to vulnerable households impacted by high energy prices. • Carefully monitor potential implications on financial markets and calibrate measures to ensure financial stability as needed.
Monetary policy miscalibration. Amid high economic uncertainty, major central banks loosen policy stance prematurely, hindering disinflation, or keep it tight for longer than warranted, causing abrupt adjustments in financial markets, and weakening the credibility of central banks.	Medium	Medium Monetary policy miscalibration could contribute to volatility in inflation, growth, exchange rates, and/or financial markets.	• If shocks are significant, deploy fiscal policy to help mitigate volatility in growth and/or inflation. • Carefully monitor potential implications on financial markets and calibrate measures to ensure financial stability as needed.
Systemic financial instability. High interest rates and risk premia and asset repricing amid economic slowdowns and political uncertainty (e.g., from elections) trigger market dislocations, with cross-border spillovers and an adverse macro-financial feedback loop affecting weak banks and NBFIs.	Medium	Medium A sharp correction in residential and commercial real estate (CRE) prices (including through international CRE exposure) partly due to high interest rates could impair banks' balance sheets, lead to financial market disruptions, and weigh on firms' financial health and economic activity.	• Intensify monitoring of banks' liquidity and capital positions and risk management practices to contain systemic risk. • At the euro-area level, provide liquidity to solvent banks to prevent liquidity issues from morphing into solvency issues. • Encourage a conservative approach to bank capital distributions. • Swiftly intervene in weak institutions and undertake contingency planning. • In the event of a sharp downturn, relax prudential settings so that banks can keep credit flowing.

Source of Risks	Relative Likelihood	Impact	Policy Response
Global Conjunctural and Structural Risks			
Deepening geo-economic fragmentation. Broader conflicts, inward-oriented policies, and weakened international cooperation result in a less efficient configuration of trade and FDI, supply disruptions, protectionism, policy uncertainty, technological and payments systems fragmentation, rising shipping and input costs, financial instability, a fracturing of international monetary system, and lower growth.	High	High With its high degree of trade openness, Germany is susceptible to fluctuations in global trade and trade costs. Higher trade barriers and/or supply disruptions could lead to shortages of crucial inputs.	• Continue support for the multilateral rules-based trading system. Promote cooperation within and across continents to realize mutual benefits from cross-border flows. • Identify critical dependencies, assess the impact and transmission channels of different GEF scenarios, and develop strategies for coping with risks. • Undertake structural reforms to further enhance Germany's attractiveness as an investment destination.
Cyberthreats. Cyberattacks on physical or digital infrastructure and service providers (including digital currency and crypto assets) or misuse of AI technologies trigger financial and economic instability.	Medium	High With increased remote work and digitalization, Germany's economic activity and financial system are both dependent on smooth functioning of digital systems. Cyberattacks could also erode confidence in financial institutions and disrupt energy supply.	• Assess and address the vulnerabilities and other potential weaknesses exposed by cyberattacks. • Update and further strengthen governance and risk management of large public and private organizations, including in the financial system, and scale up investment in cyber risk monitoring and resilience.
Disorderly energy transition. A disorderly shift to net-zero emissions (e.g., owing to shortages in critical metals) and climate policy uncertainty cause supply disruptions, stranded assets, market volatility, and subdued investment and growth.	Medium	Medium With a large industrial sector and high share of coal-fired power generation, reaching net-zero in Germany will be complex. Missing emissions targets in the transport and buildings sectors could result in fiscal costs. Shortages of critical minerals could disrupt manufacturing. Political and societal backlash could increase policy uncertainty and deter investment.	• Cut red tape and speed up the deployment of renewable power generation capacity and electrification. • Strengthen emissions reduction policies in the road transport and buildings sector. • Provide targeted support to vulnerable households impacted by the transition. • Ensure that investments in natural gas power are "hydrogen-ready" from the outset.

Source of Risks	Relative Likelihood	Impact	Policy Response
Regional Risks			
A shift in market sentiment against some high-debt euro area countries. Policy slippages with weak growth outturns in some high-debt euro area countries, along with higher-for-longer interest rates, could raise concerns over debt sustainability in high debt countries.	Medium	High A rise in sovereign yields may reduce the values of sovereign debt on the balance sheets of German financial institutions.	• Ensure that banks' liquidity and capital buffers are adequate, encourage further adoption of liquidity management tools among investment funds. • Bolster the stability and efficiency of the euro area by completing the pan-European Banking Union and Capital Markets Union. • Enhance liquidity support for financial institutions and markets, coordinating with the ECB.
Domestic Risks			
Aging workforce. Unfavorable demographics and subdued productivity growth due to an aging workforce and slowing immigration reduces medium-term growth and leads to increased fiscal spending pressures.	High	High Over the past decade, Germany's working-age population has been buoyed by migrants fleeing regional conflicts. A faster-than-expected shrinking of the workforce could result in lower productivity growth, lower per capita GDP growth, and increased public spending on pensions and healthcare.	• Boost labor supply through measures to increase female labor force participation, including increasing access to reliable child- and eldercare. • Reduce high marginal tax rates on second earners in married couples to boost labor supply. • Facilitate the integration of immigrants into the labor force. • Boost labor productivity through digitalization and improving conditions for startups.
Key sectors fail to adjust in a timely fashion to technological change and digitalization. Lack of progress in adapting to the technological and digital revolution, as well as pandemic-related change in production and consumption preferences, could undermine Germany's position as an innovation leader.	Medium	High Loss of competitiveness and shrinking market shares for Germany's key export products (automobiles and machinery) could threaten the country's growth model, increasing structural unemployment and lowering potential growth.	• Increase public investment in digital infrastructure, digital skills training, and digital government services. Crowd-in private investment in digitalization. • Ensure that trade barriers remain low so that key technologies can be imported as needed. • Continue to support innovation hubs.

Source of Risks	Relative Likelihood	Impact	Policy Response
Domestic Risks			
Public investment shortfalls. Money budgeted for public investment has been routinely underspent in the past. Public investment could undershoot current plans due either to a persistence and deepening of this tendency or a need to scale back current public investment plans due to unexpected fiscal shortfalls.	**Medium**	**Medium** Lower public investment would reduce both near-term aggregate demand and medium-term potential growth. It would also exacerbate external imbalances.	• Continue to deploy and deepen centralized investment planning services, such as Partnerschaft Deutschland, to bolster implementation capacity. • Prioritize public investment in the budgeting process.

Annex IV. Downside Scenario

1. The baseline scenario assumes that sentiment recovers, and energy import prices decline. German consumer and business confidence remains depressed. The GfK consumer sentiment index stood at -27.9 in the first quarter of 2024, while the European Commission economic climate index stood at 89.4 index points, compared to averages of 10.3 and 108.7 over the 2017–19 period, respectively. In the baseline, these indicators are expected to improve as real wage growth continues and as rising growth and falling inflation boost sentiment. At the same time, the baseline assumes that global energy commodity prices decline steadily over the forecast, with European natural gas prices and Brent crude oil prices declining by an average of 13 percent and 4 percent per year, respectively, between 2024 and 2026. As a result, energy import prices are expected to decline over the forecast, supporting continued disinflation. Finally, shipping costs and suppliers' delivery times are expected to remain contained, after they temporarily spiked in early-2024 on disruptions in the Red Sea.

2. However, further deterioration of German consumer and business confidence, combined with escalating geopolitical conflicts, could derail the expected economic recovery. This annex uses the IMF's G20 Model to quantify the impact of an alternative scenario in which consumer and business confidence instead deteriorate, accompanied by widening geopolitical conflicts that lead to higher global oil prices and shipping costs.[1] The shocks are modeled as follows:

- *Deteriorating consumer and business confidence*. Persistent concerns over weak domestic economic activity and fears of imminent deindustrialization, as well as increased geopolitical uncertainty, lead to a sequence of negative shocks to both consumer and business confidence in every quarter throughout the last three quarters of 2024 and into 2025. Using historical relationships based on a vector autoregressive model, confidence shocks are calibrated to reduce the growth rates of consumption and investment in 2025 by about one-and-a-half standard deviations.
- *Escalating geopolitical conflicts*. This layer of the scenario is similar to the scenario described in the April 2024 *World Economic Outlook*. Oil prices are assumed to rise 15 percent above the baseline in 2024 due to escalating geopolitical conflicts. Container shipping costs are also assumed to rise, increasing on average by 150 percent in 2024–25, similar to the increase in costs following recent incidents in the Red Sea, with higher increases on Asia-to-Europe routes. Oil prices and container costs return to baseline in 2026. Monetary policy is assumed to tighten slightly in response to the inflationary effects of higher oil and shipping costs.[2,3]

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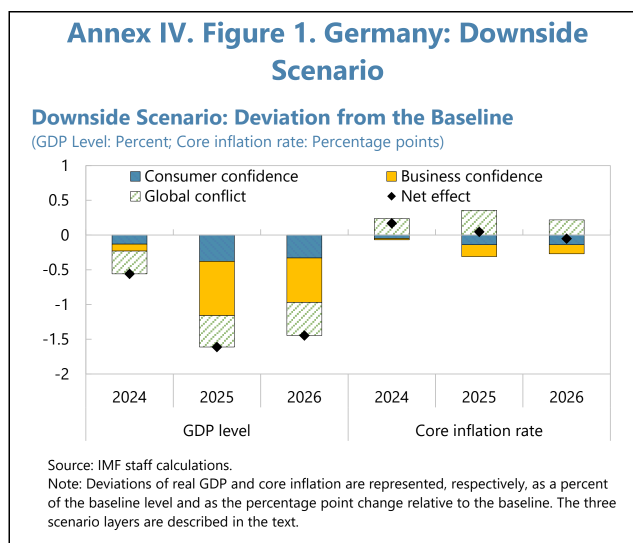
[1] The model is described in Andrle and others (2015).

[2] Monetary policy is assumed not to respond to the deterioration in confidence, because the deterioration is Germany-specific, with limited direct spillovers from weaker German activity to the rest of the euro area (see, for example, Picek and Schröder 2018).

[3] This scenario does not assume any financial instability as a result of the shocks. If financial instability were to arise, it could further amplify the negative economic effects. Financial instability scenarios are discussed in the main text and Annex III.

3. In such an adverse scenario, German GDP would be about 1.6 percent lower than the baseline in 2025 and 1.4 percent lower in 2026. Import compression helps to buffer the economic effects. The effects on GDP in 2024 are smaller because the shocks are assumed to occur only from the second quarter onwards and past empirical relationships suggest that the effects of the shocks take time to materialize—shocks to business confidence are particularly long-lived, affecting investment for about a year afterwards. Business confidence has a stronger economic effect than consumer confidence, given that investment has historically been much more volatile than consumption, which more than outweighs the smaller weight of investment than consumption in GDP.

Annex IV. Figure 1. Germany: Downside Scenario



Source: IMF staff calculations.
Note: Deviations of real GDP and core inflation are represented, respectively, as a percent of the baseline level and as the percentage point change relative to the baseline. The three scenario layers are described in the text.

4. Germany's core inflation would be similar to the baseline. While deteriorating confidence would reduce domestic demand and inflation, these effects would be largely offset by the impact of escalating geopolitical conflicts, which would put upward pressure on import prices.

Annex V. Sovereign Risk and Debt Sustainability Analysis

Germany's debt is assessed to be sustainable, and its risk of debt distress is assessed to be low. Public debt relative to GDP is expected to remain stable in 2024 and then to decline throughout the forecast horizon, falling below 60 percent of GDP in 2028. Although risks of debt distress are low overall, long-run risks of debt distress are moderate. In the absence of reforms, aging is expected to increase the government's spending on pensions and healthcare over the long term, which could increase the debt burden.

A. Background

1. The public debt-to-GDP ratio declined by 4.7 percentage points between 2021 and 2023 as most pandemic-related measures phased out and high inflation reduced the debt burden. In 2022 and 2023, inflation in output prices was high, which led to a high rate of nominal GDP growth and hence reduced the debt-to-GDP ratio. Temporary pandemic-related relief of around 1¾ percent of GDP was phased out in 2022, and a further 1.5 percent of GDP was phased out in 2023. The latter was roughly offset by new temporary energy-related relief that was introduced in 2023 and by higher interest payments, resulting in a stable overall general government fiscal deficit of 2.5 percent of GDP in 2023. A statistical reclassification of 0.4 percent of GDP in transfers also increased the deficit in 2023.[1]

2. Germany's public debt is held largely by stable investors although coverage of debt in the national statistics is incomplete. Germany's public debt statistics include general government debt (i.e., federal, Länder, and municipal debt) and include debt from public-private partnerships. However, like most advanced economies, public debt statistics exclude the debt of public corporations (around 88 percent of GDP), contingent liabilities (around 16 percent of GDP), and Germany's share of EU debt (around 1.5 percent of GDP). Of public debt covered by the statistics, about one-third is held by the Bundesbank or external official creditors, and this share is expected to reduce gradually in future as the ECB allows its asset holdings to mature. Around 8 percent of debt is held by external private creditors. Public debt is almost entirely in domestic currency and issued under domestic law. The average maturity of federal government debt is around 6.7 years, which shielded the government from the rapid rise in global interest rates. German 10-year bond yields increased from -0.24 percent a year at end-2021 to around 2.2 percent in late-2022.

B. Baseline Scenario

3. Higher interest rates are expected to pass through to government interest payments. Debt projections are based on the macroeconomic and fiscal projections described in the main text. In addition, long-term interest rates on German bonds are projected to continue rising, from 2.4 percent a year in 2023 to 2.7 percent in 2029, which should lift the effective interest rates on

[1] These transfers are linked to the so-called EEG surcharge and are intended to support renewable energy generation.

public debt from 1.4 percent in 2023 to 2.3 percent by 2029. Gross financing needs (GFN) are expected to decline from around 13 percent of GDP in 2023 to 11 percent of GDP in 2029.

4. Public debt is expected to decline quickly relative to GDP in the baseline scenario. In the near term, a tight fiscal stance required to meet the debt brake rule, combined with elevated inflation in output prices, are together expected to reduce the ratio of debt-to-GDP. In 2025, inflation is projected to subside and real GDP growth to pick up, which means that nominal GDP growth is expected to continue to be favorable and bring down the debt-to-GDP ratio. From 2026 onwards, the ratio is projected to decline further on stable real GDP growth and primary surpluses. Public debt is expected to fall below 60 percent of GDP by 2028 and then to continue falling to around 55 percent of GDP by 2033. Notably, the constitutional court ruling of November 2023 tightened the application of the debt brake and therefore sped up the expected future reduction in the ratio of debt-to-GDP.

C. Risk Assessment

5. Germany's risk of sovereign debt distress is low overall, which reflects low medium-term risk. Germany's risk of medium-term debt distress is low, which reflects low risks as measured by both the debt fan chart and the GFN module. In the fan chart analysis, even though Germany's risk of debt non-stabilization is around 30 percent, which puts it in the upper quartile of the distribution of peer countries, its fan chart width and end-of-horizon debt-to-GDP ratio are in line with those of peer countries. Liquidity risks from the GFN module are also low, although one subcomponent that stands out for Germany is its average future GFN, which are in the upper quartile of the distribution of peer countries.

6. However, Germany's risk of long-term debt distress is moderate, which reflects the potential for unfunded aging-related pension and health liabilities to increase its debt burden. The pension system has quasi-automatic mechanisms that partially stabilize the solvency of the system, including rising contributions and falling benefits if reserves in the system reach low levels. However, the quasi-automatic mechanisms are incomplete, and federal subsidies to the pension system are projected to increase over time, in the absence of reforms. Furthermore, the authorities can override these quasi-automatic mechanisms. Planned measures (higher contribution rates) are expected to keep pension benefit replacement rates constant until 2039. Beyond the pension system, similar strains are expected in the health and long-term care systems.[2] These additional aging-related spending pressures could add to the debt burden. Even though the debt brake places strong constraints on debt accumulation, it contains exemptions, such as an exemption for debt issued to finance the extension of loans.

[2] These projected increases in pension and health spending are *after* considering recent reforms, like the gradual extension of the retirement age to 67 and the health insurance stabilization package of October 2022. However, they do not consider the *Generationenkapital* reform, which is expected to help somewhat.

Annex V. Figure 1. Germany: Risk of Sovereign Stress

Horizon	Mechanical signal	Final assessment	Comments
Overall	...	**Low**	Staff assesses the overall risk of sovereign stress as low, reflecting a relatively low level of vulnerability in the near- and medium-term horizons, and a moderate vulnerability in the long-term horizon.
Near term 1/			
Medium term	**Low**	**Low**	Staff assess medium-term risks as low, consistent with the mechanical signals. Germany benefits from strong institutions, a stable investor base, a relatively long average debt maturity, and predominantly euro-denominated debt.
Fanchart	**Low**	...	
GFN	**Low**	...	
Stress test		...	
Long term	...	**Moderate**	Long-term risks are assessed to be moderate, given growing aging-related expenditures on pensions and healthcare that are not expected to be fully financed by social security contributions.
Sustainability assessment 2/	Not required for surveillance countries	Sustainable with high probability	Debt is projected to be firmly on a downward path relative to GDP, largely because the national fiscal rules require a fast pace of debt reduction relative to GDP, and GFNs are expected to remain at manageable levels. Therefore, debt is assessed to be sustainable with high probability.
Debt stabilization in the baseline			Yes

DSA Summary Assessment

Commentary: Germany is at a low overall risk of sovereign stress and debt is sustainable. Following about a 9 percent of GDP increase over 2020-21 during the COVID-19 pandemic, public debt declined by around 5.4 percent of GDP in 2022-23, as the effects of high inflation outweighed those of temporary energy relief. Debt is expected to remain stable relative to GDP in 2024 and decline thereafter on favourable debt dynamics, falling below 60 percent of GDP by 2028 and further to around 55 percent of GDP by 2033. Medium-term risks, analyzed by the debt fanchart and GFN modules, remain low. Over the long run however, health and pension costs are likely to rise with population aging. If unaddressed, these pose a moderate risk to debt dynamics. Reforms are therefore needed to raise contributions or reduce benefits.

Source: Fund staff.

Note: The risk of sovereign stress is a broader concept than debt sustainability. Unsustainable debt can only be resolved through exceptional measures (such as debt restructuring). In contrast, a sovereign can face stress without its debt necessarily being unsustainable, and there can be various measures—that do not involve a debt restructuring—to remedy such a situation, such as fiscal adjustment and new financing.

1/ The near-term assessment is not applicable in cases where there is a disbursing IMF arrangement. In surveillance-only cases or in cases with precautionary IMF arrangements, the near-term assessment is performed but not published.

2/ A debt sustainability assessment is optional for surveillance-only cases and mandatory in cases where there is a Fund arrangement. The mechanical signal of the debt sustainability assessment is deleted before publication. In surveillance-only cases or cases with IMF arrangements with normal access, the qualifier indicating probability of sustainable debt ("with high probability" or "but not with high probability") is deleted before publication.

Annex V. Figure 2. Germany: Debt Coverage and Disclosures

	CG	GG	NFPS	CPS	Other	Comments
1. Debt coverage in the DSA: 1/	CG	GG	NFPS	CPS	Other	
1a. If central government, are non-central government entities insignificant?					n.a.	

2. Subsectors included in the chosen coverage in (1) above:

Sector groups	#	Subsectors captured in the baseline	Inclusion	Comments
CPS / NFPS / GG: expected / CG	1	Budgetary central government	Yes	
CPS / NFPS / GG: expected / CG	2	Extra budgetary funds (EBFs)	Yes	Not applicable
CPS / NFPS / GG: expected / CG	3	Social security funds (SSFs)	Yes	
CPS / NFPS / GG: expected	4	State governments	Yes	
CPS / NFPS / GG: expected	5	Local governments	Yes	
CPS / NFPS	6	Public nonfinancial corporations	No	
CPS	7	Central bank	No	
CPS	8	Other public financial corporations	No	

3. Instrument coverage:	Currency & deposits	Loans	Debt securities	Oth acct. payable 2/	IPSGSs 3/

4. Accounting principles:	Basis of recording		Valuation of debt stock		
	Non-cash basis 4/	Cash basis	Nominal value 5/	Face value 6/	Market value 7/

5. Debt consolidation across sectors:	Consolidated	Non-consolidated

Color code: chosen coverage; Missing from recommended coverage; Not applicable

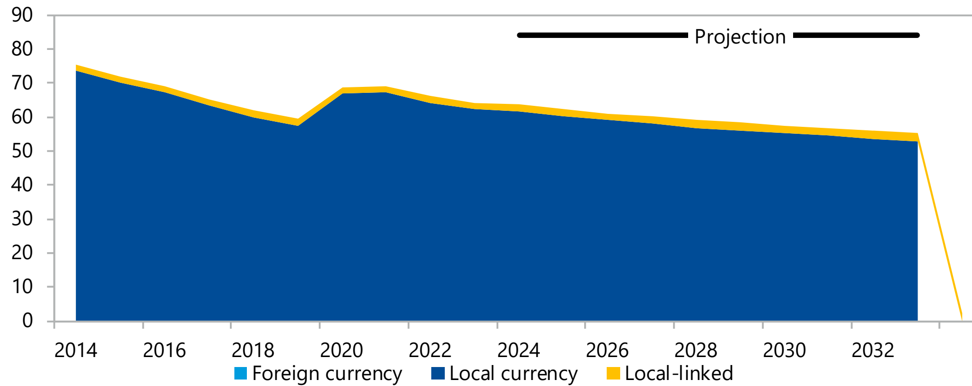
Reporting on Intra-Government Debt Holdings

Sector groups	#	Issuer \ Holder	Budget. central govt	Extra-budget. funds	Social security funds	State govt.	Local govt.	Nonfin. pub. corp.	Central bank	Oth. pub. fin corp	Total
CPS / NFPS / GG: expected / CG	1	Budget. central govt									0
CPS / NFPS / GG: expected / CG	2	Extra-budget. funds									0
CPS / NFPS / GG: expected / CG	3	Social security funds									0
CPS / NFPS / GG: expected	4	State govt.									0
CPS / NFPS / GG: expected	5	Local govt.									0
CPS / NFPS	6	Nonfin pub. corp.									0
CPS	7	Central bank									0
CPS	8	Oth. pub. fin. corp									0
		Total	0	0	0	0	0	0	0	0	0

1/ CG=Central government; GG=General government; NFPS=Nonfinancial public sector; PS=Public sector.
2/ Stock of arrears could be used as a proxy in the absence of accrual data on other accounts payable.
3/ Insurance, Pension, and Standardized Guarantee Schemes, typically including government employee pension liabilities.
4/ Includes accrual recording, commitment basis, due for payment, etc.
5/ Nominal value at any moment in time is the amount the debtor owes to the creditor. It reflects the value of the instrument at creation and subsequent economic flows (such as transactions, exchange rate, and other valuation changes other than market price changes, and other volume changes).
6/ The face value of a debt instrument is the undiscounted amount of principal to be paid at (or before) maturity.
7/ Market value of debt instruments is the value as if they were acquired in market transactions on the balance sheet reporting date (reference date). Only traded debt securities have observed market values.

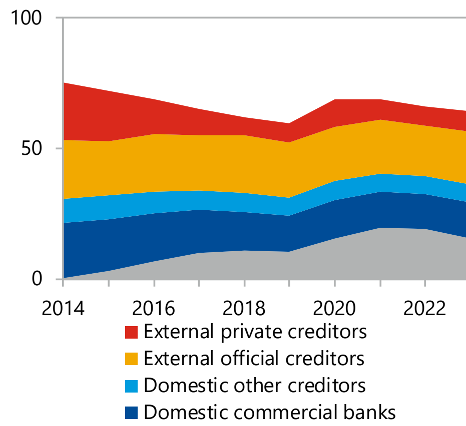
Commentary: The debt coverage remains unchanged from the last Article IV -- i.e., it covers general government debt, with most debt issued by the federal (central) government. Outstanding general government guarantees at end-2023 amounted to 15.5 percent of GDP and liabilities of public corporations at end-2022 amounted to 88.4 percent of GDP.

Annex V. Figure 3. Germany: Public Debt Structure Indicators



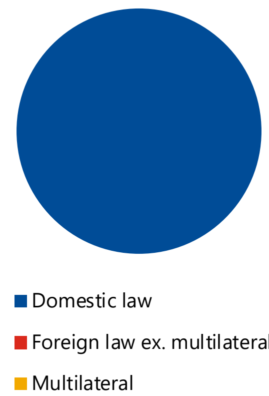
Note: The perimeter shown is general government.

Public Debt by Holder (Percent of GDP)



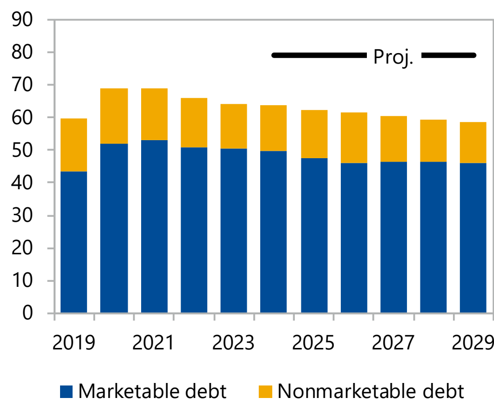
Note: The perimeter shown is general government.

Public Debt by Governing Law, 2023 (percent)



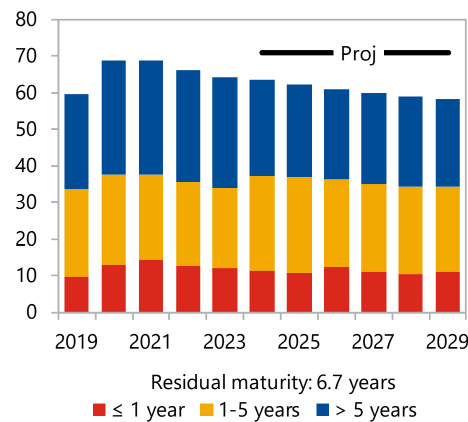
Note: The perimeter shown is general government.

Debt by Instruments (Percent of GDP)



Note: The perimeter shown is general government.

Public Debt by Maturity (Percent of GDP)



Note: The perimeter shown is general government.

Commentary: Public debt is almost entirely in domestic currency and predominantly marketable. The share held by the central bank has risen from zero in 2014 to 15 percent in 2023 while the share of external private creditors declined from 22 percent in 2014 to 8 perecent in 2023.

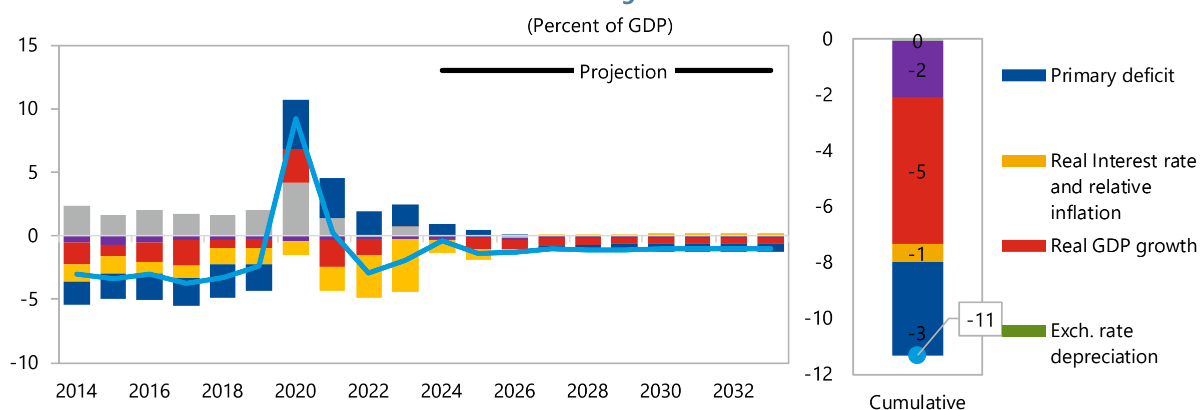
Annex V. Figure 4. Germany: Baseline Scenario

(Percent of GDP unless indicated otherwise)

	Actual	Medium-term projection						Extended projection			
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Public debt	63.6	63.8	62.4	61.2	60.1	59.0	57.9	56.9	55.9	54.8	53.8
Change in public debt	-2.5	-0.4	-1.4	-1.3	-1.0	-1.1	-1.1	-1.0	-1.0	-1.0	-1.0
Contribution of identified flows	-2.6	-0.4	-1.4	-1.1	-1.0	-1.1	-1.1	-1.0	-1.0	-1.0	-1.0
Primary deficit	1.8	0.9	0.4	0.0	-0.3	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6
Noninterest revenues	46.0	46.1	46.6	46.8	47.1	47.3	47.5	47.5	47.5	47.5	47.5
Noninterest expenditures	47.8	47.0	47.1	46.8	46.8	46.7	46.8	46.8	46.8	46.8	46.8
Automatic debt dynamics	-4.1	-1.1	-1.7	-0.9	-0.6	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2
Real interest rate and relative inflatio	-4.1	-1.0	-0.8	-0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Real interest rate	-4.1	-1.0	-0.8	-0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Relative inflation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real growth rate	0.0	-0.1	-0.9	-0.7	-0.6	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4
Real exchange rate	0.0	…	…	…	…	…	…	…	…	…	…
Other identified flows	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(minus) Interest Revenues	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Other transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contribution of residual	0.1	0.0	0.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs	13.6	13.7	12.3	11.4	12.9	11.4	10.7	11.2	10.8	10.1	10.1
of which: debt service	12.1	13.0	12.0	11.6	13.4	12.2	11.6	12.1	11.6	10.9	10.9
Local currency	11.7	12.9	12.0	11.1	13.3	12.1	11.5	11.6	11.6	10.9	10.7
Foreign currency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Memo:											
Real GDP growth (percent)	0.0	0.2	1.4	1.2	1.1	0.8	0.7	0.7	0.7	0.7	0.8
Inflation (GDP deflator; percent)	6.6	3.2	3.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Nominal GDP growth (percent)	6.4	3.4	4.4	3.7	3.0	2.9	2.8	2.7	2.7	2.8	2.8
Effective interest rate (percent)	0.0	1.6	1.7	1.9	2.1	2.2	2.3	2.3	2.4	2.4	2.4

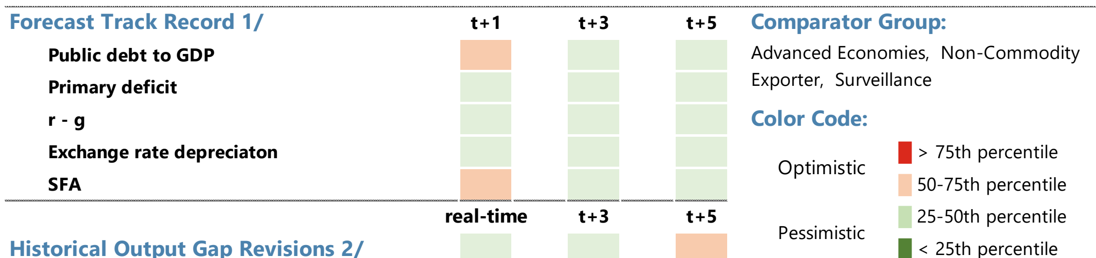
Contribution to Change in Public Debt

(Percent of GDP)

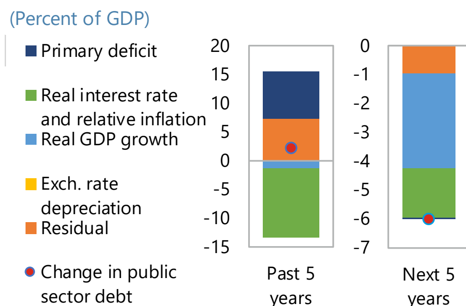


Commentary: Public debt is expected to remain stable relative to GDP, in the near term. In 2024, negative real interest rates help to erode the value of public debt, and in 2025, real GDP growth drives the reduction in ratio of debt to GDP.

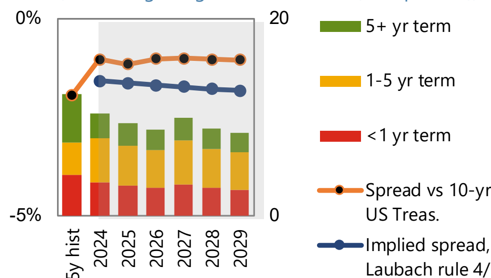
Annex V. Figure 5. Germany: Realism of Baseline Assumptions



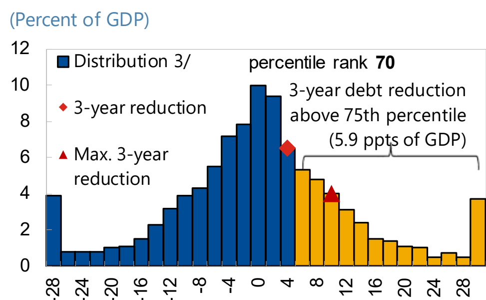
Public Debt Creating Flows
(Percent of GDP)



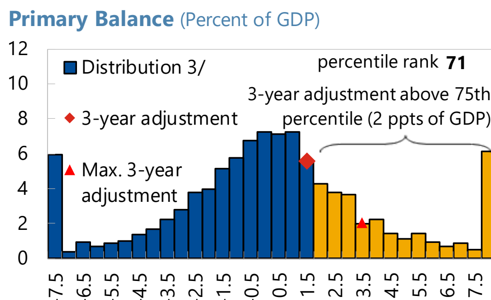
Bond Issuances (Bars, debt issuances (RHS, %GDP); lines, avg marginal interest rates (LHS, percent))



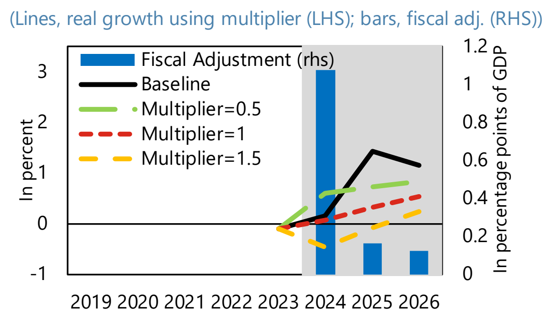
3-Year Debt Reduction
(Percent of GDP)



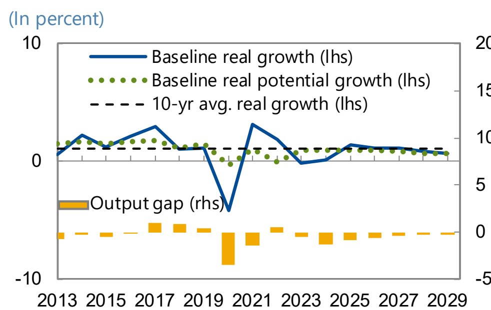
3-Year Adjustment in Cyclically-Adjusted Primary Balance (Percent of GDP)



Fiscal Adjustment and Possible Growth Paths
(Lines, real growth using multiplier (LHS); bars, fiscal adj. (RHS))



Real GDP Growth
(In percent)



Commentary: Past forecasts appear realistic. Given the higher interest rate environment, a lower share of long-maturity bond issuance is expected in future. The projected fiscal adjustment and debt reduction are within historical norms.

Source : IMF Staff.

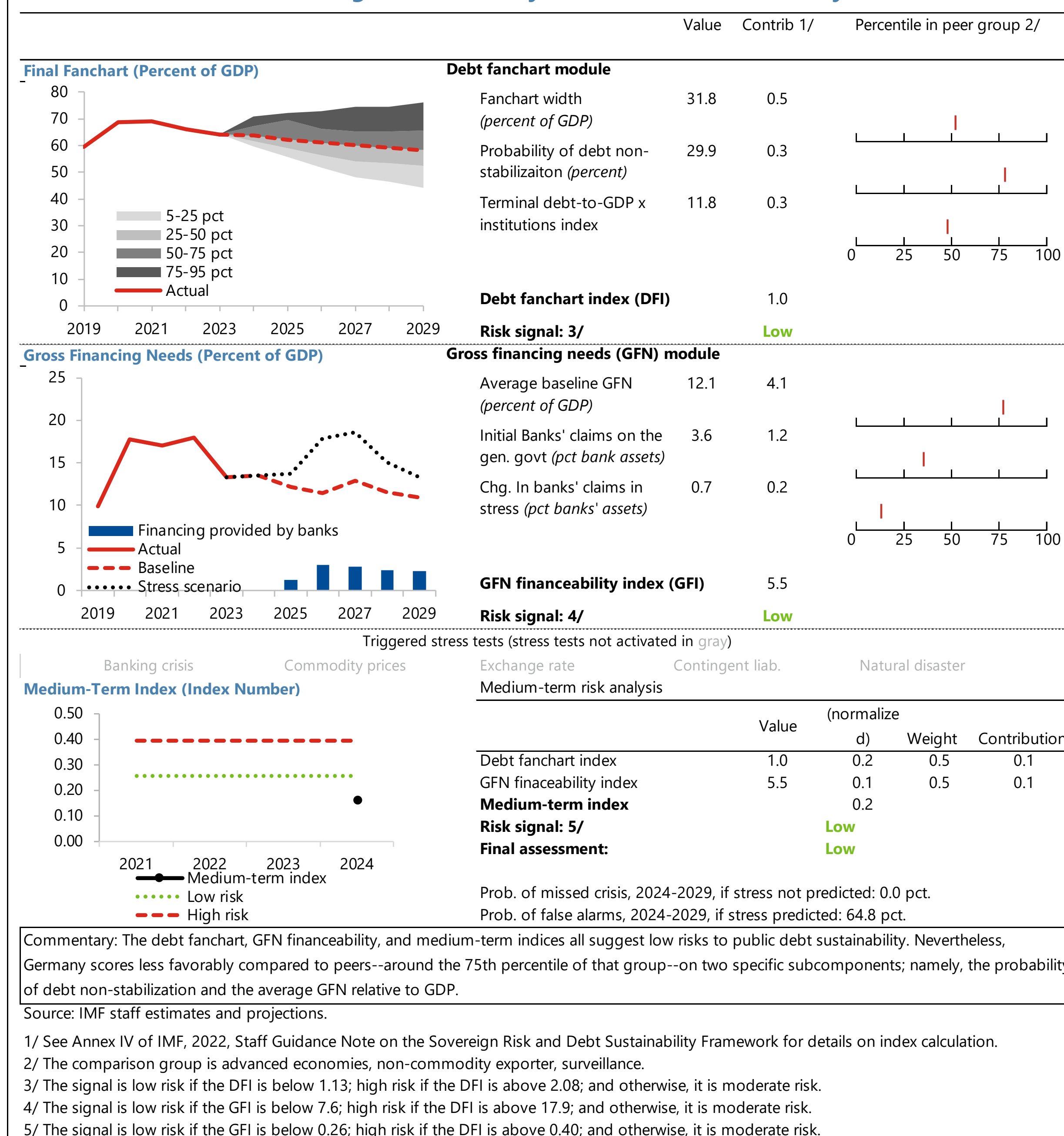
1/ Projections made in the October and April WEO vintage.

2/ Calculated as the percentile rank of the country's output gap revisions (defined as the difference between real time/period ahead estimates

3/ Data cover annual observations from 1990 to 2019 for MAC advanced and emerging economies. Percent of sample on vertical axis.

4/ The Laubach (2009) rule is a linear rule assuming bond spreads increase by about 4 bps in response to a 1 ppt increase in the projected debt-to-GDP ratio.

Annex V. Figure 6. Germany: Medium-Term Risk Analysis



Annex VI. Authorities' Response to Past IMF Policy Recommendations

IMF 2023 Article IV Recommendation	Authorities' Response
Fiscal Policy	
• Fiscal policy should remain tight in 2024. Electricity and gas price brakes should be allowed to expire as planned by April 2024 at the latest.	The fiscal stance is expected to be tight in 2024. Electricity and gas price brakes expired at the end of 2023.
• Create fiscal room for higher public investment and rising aging-related spending, including through structural revenue and spending reforms.	The government drafted legislation to establish the *Generationenkapital* fund, which is expected to provide the Pillar 1 public pension system with 0.2 percent of GDP yearly from the mid-2030s onwards.
• Consider adjusting the debt-brake rule to better align it to EU fiscal rules and lessen reliance on extra-budgetary funds.	No action was taken on the debt-brake rule.
Financial Sector Policy	
• Financial stability risks associated with rapidly rising interest rates should be closely monitored and addressed, including by continuing to identify banks that are most vulnerable to interest-rate and liquidity stress and subjecting them to more intensive supervision; encouraging a conservative approach to bank capital distributions; and further enhancing transparency around bank health.	Interest-rate risk is monitored quarterly and the most vulnerable institutions are identified. Measures that have encouraged conservatism in bank capital distributions include bank-specific (Pillar 2) capital requirements imposed on vulnerable banks, amounting to 0.69 percentage points of the CET1 capital ratio in 2023 for the aggregate banking system. In addition, interest-rate scenarios are part of regular stress testing exercises that help to set non-binding bank-specific capital requirements (Pillar 2 guidance).
• Given elevated risks from commercial real estate (CRE), the authorities should close data gaps and strengthen supervision.	While data gaps in CRE remain, the authorities obtained more data on CRE investment transactions and made more use of AnaCredit data for CRE analyses. CRE has been a top priority for supervision in the past year. On-site inspections assessed banks' CRE concentration risk, asset quality, provisioning, collateral valuation, and refinancing risks, and their credit risk management practices. The authorities also assessed CRE exposures of real estate investment funds and insurers.
• Enhancing beneficial ownership transparency is key to preventing the misuse of legal entities to launder the proceeds of crime, including corruption.	Discrepancy reporting from obliged entities should improve the quality of the data in the beneficial ownership transparency register.

IMF 2023 Article IV Recommendation	Authorities' Response
Structural Reforms	
• Accelerating the green transition and ensuring the provision of affordable energy is essential to meet climate goals and safeguard energy security.	The authorities passed the Energy Efficiency Act, with a target of reducing energy consumption by about a quarter between 2021 and 2030. The national carbon price was increased to €45 per ton in early 2024, from €30 previously. The cabinet agreed in October 2023 to a Climate Action Program, which includes reforms to the Climate Action Law that would smooth targets over time and make sector-specific targets non-binding.
• Increase productivity by increasing incentives for R&D, expanding financing for young and innovative firms, and lowering market entry and growth barriers for young and innovative firms.	The authorities passed the Growth Opportunities Act, which expands tax credits for R&D. The government and state development bank KfW established a €1 billion fund-of-funds (*Wachstumfonds Deutschland*) to provide venture capital financing. The authorities passed the Future Financing Act, which reduces barriers to startup financing as described in the main text.
• Facilitate the use of employee stock-ownership option plans by aligning their tax treatment with international standards.	The Future Financing Act raised the tax allowance for employee shares from €1,440 to €2,000 a year. The Act also expands the set of companies that can benefit from rules that allow taxes on transferred shares to be deferred until the shares are sold.
• Continue efforts to expand connectivity and enhance the diffusion of ICT tools.	The government continued the rollout of its Gigabit Strategy, as described in the main text.
• Assess and prepare for risks of global economic fragmentation while pursuing structural reforms to increase Germany's attractiveness as an investment destination.	The authorities seek to maintain an open economy and avoid further fragmentation while increasing resilience to potential trade disruptions. The authorities support the EU's efforts to strengthen the multilateral trading system, conclude new trade agreements, and avoid critical raw materials dependencies. The national authorities are reforming trade promotion instruments, e.g. investment guarantees and trade fairs, to encourage diversification.

Annex VII. 2022 FSAP Key Recommendations—Implementation Status

Recommendations[1]	Due[2]	Status
Systemic Risk Analysis		
Perform top-down stress tests of interest rate risks.	I/NT	The authorities have implemented a comprehensive top-down LSI stress test, which simulates a 3-year macroeconomic scenario encompassing interest rate and inflation shocks. The test estimates earnings of individual banks over this period and market losses on their bond portfolios in relation to higher interest rates. The results were shared and discussed with supervisors. The Bundesbank is also monitoring banks' duration on a quarterly basis.
Strengthen monitoring of larger LSIs with significant FX (USD) exposures to mitigate liquidity risk.		The authorities did not agree with the FSAP finding for more intensified monitoring of USD liquidity of LSIs, as they already monitor USD/EUR swaps on a daily basis and receive USD LCR positions for all German banks on a monthly basis, alongside overall LCR, for which there is a minimum requirement, consistent with the Basel standard.
Climate Transition Risks		
Expand the analytical capacity of banks for assessing climate risks, promote the disclosure of climate risks; conduct supervisory climate stress tests for LSIs to facilitate such efforts.	NT	In 2023, the authorities conducted top-down climate stress tests for both SIs and LSIs. As a member of the BCBS and EBA teams, the Bundesbank is drafting climate-related disclosure requirements that will be applied to all banks. It is also meeting with banks on a regular basis and carrying out a pilot test for selected institutions to ensure that they develop analytical capacity in this area.
Macroprudential Framework and Policy		
Enhance the legislated powers over yet-to-be activated borrower-based instruments to facilitate their effective use, and rapidly introduce powers to set debt-to-income and debt service limits.	NT	The coalition agreement includes a commitment to add income-based measures, including debt-to-income (DTI) and debt-service-to-income (DSTI) measures, to the macroprudential toolkit. A working group comprised of representatives from the Ministry of Finance, BaFin, and the Bundesbank is preparing a draft law.
Strengthen current guidance on residential real estate lending standards.	NT	BaFin may strengthen its current guidance on RRE loans in case there is evidence of a weakening in credit standards on such loans. In the meantime, it has emphasized potential RRE-related risks in its Risks in Focus 2024 report.
Initiate the development of a communication strategy in support of the activation of borrower-based measures.	NT	In 2023, the Financial Stability Committee expanded its communication in this area. The Bundesbank regularly discusses borrower-based measures in its Financial Stability Report and occasionally publishes relevant research.

Recommendations[1]	Due[2]	Status
Close data gaps on lending standards to monitor existing and evolving risks.	I	A new data collection initiative (*WIFSta*) began in 2023. Data quality issues have been identified. Supervisors have been in contact with the banks to improve data quality. The Bundesbank, MoF, and BaFin have set up a Task Force to address the issue and expect to resolve the data quality issues by 2025.
Supplement the toolkit to assess real estate risks with a price-at-risk model for commercial and residential real estate prices.	NT	The Bundesbank has developed a price-at-risk model for RRE as discussed in Hafemann, Lucas. 2023. "A House Prices at Risk Approach for the German Residential Real Estate Market." Technical Paper, Bundesbank, July. A similar tool for CRE is also anticipated.
Supervision and Regulation: Banking and Insurance		
Strengthen BaFin's operational independence and strategic cooperation between BaFin and Bundesbank on banking supervision.	I	BaFin has amended its principles of cooperation with the MoF, which enhance its operational independence. It has also strengthened several areas of cooperation with the Bundesbank, including with respect to organizational structures, supervisory tasks, and resources.
Align the corporate governance framework with international best practices; provide additional supervisory guidelines to align MaRisk with EBA Guidelines on key banking risk issues.	NT/MT	New and/or updated EBA guidelines which regulate issues of risk management are incorporated into MaRisk on an ongoing basis. The latest version of MaRisk was published in May 2024.
Review the minimum engagement level (MEL) and inspection frequency, strengthen the ability to effectively challenge external auditors' work, and make earlier use of corrective and sanctioning powers.	I	The MEL framework has been significantly updated, with the implementation of a risk tolerance framework. The updated framework also includes an expanded on-site presence and more meetings with the external auditor to challenge their findings as appropriate.
Step up efforts on fintech data collection, forward looking dynamic market monitoring and related financial stability analysis.	NT	BaFin and Bundesbank have expanded their fintech database. The MoF, in close cooperation with BaFin and Bundesbank, is currently drafting national regulation on reporting obligations for Markets in Crypto Assets Regulation (MiCAR) regulated entities. BaFin is also testing whether blockchain analytics tools might help with monitoring.

Recommendations[1]	Due[2]	Status
Take steps to strengthen the solvency framework for insurers. a) Considering the impact of more extreme interest-increase scenarios on the funding of the Zinszusatzreserve b) Strengthening liquidity risk management reporting and (liquidity) stress testing requirements. c) Streamlining internal model approval and reporting requirements.		a) The authorities disagree with the FSAP team regarding the need to include more extreme interest-rate scenarios on the funding of the ZZR. b) BaFin is participating in the EIOPA liquidity data query, which is currently being conducted on a quarterly basis. The 2024 EIOPA Stress Test contains a liquidity component, which will cover selected entities of seven German insurance groups and include a narrative section on reporting of liquidity risks. Liquidity stress testing is being updated as part of the Solvency II review. c) Regarding approval of internal models, the framework is set at the European level and may not be changed unilaterally by the MoF or BaFin; small companies with less complex risk profiles are allowed to use an internal model. Regarding internal model reporting, EIOPA has materially extended the requirements, which will apply to data submissions received from May 2024.
Clearstream and Financial Market Infrastructure		
Improve the independence of the internal control functions at the Executive Board (EB) level.	NT	In line with current reorganization of the Executive Board of Clearstream Banking AG, the responsibilities of each Executive Board member, including the CEO, have been reallocated as of July 1, 2023.
Broaden Clearstream's explicit identification criteria for clients of direct participants by including system-level thresholds.	NT/ MT	BaFin has held discussions with Clearstream Banking AG in this area in June and November 2023.
Crisis Management and Financial Safety Nets		
Ensure robust planning for financial distress of IPS, including planning for recovery and resolution at a consolidated level, promoting review of EU legislation if necessary.	NT	The EU crisis management and deposit insurance (CMDI) framework, which is under review, would encompass possible amendments to planning for financial distress. IPS recovery plans at a consolidated level are regularly updated by the IPS and assessed by BaFin and Bundesbank. A revision of minimum standards on recovery planning is planned in order to refine the requirements for the IPS.
Establish a single mandatory DGS as a public body, with access to a robust backstop liquidity line.	NT	The MoF does not agree with the proposal to merge all statutory deposit guarantee schemes into a single body, as it views the existence of several different deposit guarantee schemes as a strength rather than a weakness. On the other hand, the Bundesbank has affirmed its support for the completion of the Banking Union and notes that a discussion of the future of the different deposit guarantee schemes will depend on the scope and architecture of a possible European-wide Deposit Insurance Scheme.

1/ Includes only recommendations to the German authorities.

2/ I = Immediate (within one year); NT = Near Term (within 1 to 3 years); MT=Medium Term (within 3 to 5 years).

Annex VIII. Data Issues

Annex VIII. Table 1. Germany: Data Adequacy Assessment for Surveillance

Data Adequacy Assessment Rating 1/

A

Questionnaire Results 2/

Assessment	National Accounts	Prices	Government Finance Statistics	External Sector Statistics	Monetary and Financial Statistics	Inter-sectoral Consistency	Median Rating
	A	A	A	A	B	A	A

Detailed Questionnaire Results

Data Quality Characteristics						
Coverage	A	A	A	A	B	
Granularity 3/	A		A	A	A	
			A		A	
Consistency			A	B		A
Frequency and Timeliness	B	A	B	A	B	

Note: When the questionnaire does not include a question on a specific dimension of data quality for a sector, the corresponding cell is blank.
1/ The overall data adequacy assessment is based on staff's assessment of the adequacy of the country's data for conducting analysis and formulating policy advice, and takes into consideration country-specific characteristics.
2/ The overall questionnaire assessment and the assessments for individual sectors reported in the heatmap are based on a standardized questionnaire and scoring system (see IMF *Review of the Framework for Data Adequacy Assessment for Surveillance*, January 2024, Appendix I).
3/ The top cell for "Granularity" of Government Finance Statistics shows staff's assessment of the granularity of the reported government operations data, while the bottom cell shows that of public debt statistics. The top cell for "Granularity" of Monetary and Financial Statistics shows staff's assessment of the granularity of the reported Monetary and Financial Statistics data, while the bottom cell shows that of the Financial Soundness indicators.

A	The data provided to the Fund is adequate for surveillance.
B	The data provided to the Fund has some shortcomings but is broadly adequate for surveillance.
C	The data provided to the Fund has some shortcomings that somewhat hamper surveillance.
D	The data provided to the Fund has serious shortcomings that significantly hamper surveillance.

Rationale for staff assessment. Staff assess data quality to be adequate for fund surveillance. Data on gross value added are sufficiently granular but the granular data are published with a delay of around two years, which has hampered staff's efforts to assess the health of the manufacturing sector following the energy crisis. Data on one-off fiscal measures, which affect structural balances under EU fiscal rules, are also only available with a delay, thereby hampering staff's fiscal projections. Representative data on residential and commercial real estate lending standards (e.g., loan-to-value ratios, debt service-to-income ratios) are not available, which hampers staff's assessment of financial stability risks. Data on banking sector profitability are also published with a delay, which hampers staff's ability to assess the health of the banking system.

Changes since the last Article IV consultation. The authorities are working on improving the usefulness of the data on lending standards in residential real estate (WIFSta), as explained in Annex VIII.

Corrective actions and capacity development priorities. Staff recommend that the authorities close data gaps on lending stadards, as explained in the main text.

Use of data and/or estimates different from official statistics in the Article IV consultation. Staff does not use data and/or estimates different from existing official statistics. Staff uses third-party data on lending standards, given a lack of official data.

Other data gaps. None.

Annex VIII. Table 2.Germany: Data Standard Initiative

Germany adheres to the Special Data Dissemination Standard (SDDS) Plus since February 2015 and publishes the data on its National Summary Data Page. The latest SDDS Plus Annual Observance Report is available on the Dissemination Standards Bulletin Board (https://dsbb.imf.org/)

Annex VIII. Table 3. Germany: Table of Common Indicators Required for Surveillance

(As of June 20, 2024)

	Data Provision to the Fund				Publication under the Data Standards Initiatives through the National Summary Data Page			
	Date of Latest Observation	Date Received	Frequency of Data[6]	Frequency of Reporting[6]	Expected Frequency[6,7]	Germany[8]	Expected Timeliness[6,7]	Germany[8]
Exchange Rates	Jun 20, 2024	Jun 20, 2024	D	D	D	...	...	...
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	May 2024	Jun 2024	M	M	M	M	1W	1W
Reserve/Base Money	Apr 2024	May 2024	M	M	M	M	2W	14D
Broad Money	Apr 2024	May 2024	M	M	M	M	1M	1M
Central Bank Balance Sheet	May 2024	Jun 2024	M	M	M	M	2W	14D
Consolidated Balance Sheet of the Banking System	May 2024	Jun 2024	M	M	M	M	1M	1M
Interest Rates[2]	Jun 20, 2024	Jun 20, 2024	D	D	D	...	...	...
Consumer Price Index	May 2024	Jun 2024	M	M	M	M	1M	3W
Revenue, Expenditure, Balance and Composition of Financing[3]–General Government[4]	Q1:2024	May 2024	Q	Q	A/Q	Q	2Q/12M	55D
Revenue, Expenditure, Balance and Composition of Financing[3]–Central Government	Q1:2024	May 2024	Q	Q	M	M	1M	1M
Stocks of Central Government and Central Government-Guaranteed Debt[5]	Q4:2023	May 2024	Q	Q	Q	M	1Q	NLT 2M
External Current Account Balance	Apr 2024	Jun 2024	M	M	Q	M	1Q	5-6W
Exports and Imports of Goods and Services	Apr 2024	Jun 2024	M	M	M	M	8W	40D
GDP/GNP	Q1:2024	May 2024	Q	Q	Q	Q	1Q	55D
Gross External Debt	Q4:2023	Mar 2024	Q	Q	Q	Q	1Q	1Q
International Investment Position	Q4:2023	Mar 2024	Q	Q	Q	Q	1Q	3M

[1] Includes reserve assets pledged or otherwise encumbered, as well as net derivative positions.

[2] Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.

[3] Foreign, domestic bank, and domestic nonbank financing.

[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

[5] Including currency and maturity composition.

[6] Frequency and timeliness: ("D") daily; ("W") weekly or with a lag of no more than one week after the reference date; ("M") monthly or with lag of no more than one month after the reference date; ("Q") quarterly or with lag of no more than one quarter after the reference date; ("A") annual.; ("SA") semiannual; ("I") irregular; ("NA") not available or not applicable; and ("NLT") not later than;.

[7] Encouraged frequency of data and timeliness of reporting under the e-GDDS and required frequency of data and timeliness of reporting under the SDDS and SDDS Plus. Any flexibility options or transition plans used under the SDDS or SDDS Plus are not reflected. For those countries that do not participate in the IMF Data Standards Initiatives, the required frequency and timeliness under the SDDS are shown for New Zealand, and the encouraged frequency and timeliness under the e-GDDS are shown for Eritrea, Nauru, South Sudan, and Turkmenistan.

[8] Based on the information from the Summary of Observance for SDDS and SDDS Plus participants, and the Summary of Dissemination Practices for e-GDDS participants, available from the IMF Dissemination Standards Bulletin Board (https://dsbb.imf.org/). For those countries that do not participate in the Data Standards Initiatives, as well as those that do have a National Data Summary Page, the entries are shown as "..."

INTERNATIONAL MONETARY FUND

GERMANY

June 28, 2024

STAFF REPORT FOR THE 2024 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By | European Department

CONTENTS

FUND RELATIONS _______________ 2

FUND RELATIONS

(As of May 31, 2024; unless specified otherwise)

Mission: May 15–28, 2024. The concluding statement of the mission is available at https://www.imf.org/en/News/Articles/2024/05/28/germany-2024-cs.

Staff team: Mr. Fletcher (head), and Messrs. Kemp, Saiyid, and Sher (all EUR).

Country interlocutors: State Secretary at the Federal Ministry of Finance Reuter; Bundesbank Director General Weigert; Director General of the Federal Ministry of Finance Heinen; Director General for Economic Policy in the German Federal Ministry for Economy and Climate Protection Bartsch; Ministerialdirigent in the Federal Chancellery Fabig; officials from the Finance, Economic Affairs and Climate Action, Labor, and Transport and Digital Ministries, the Bundesbank, BaFin, the Federal Employment Agency, the ECB, EIOPA; and representatives from the banking, auto, chemical and real estate sectors, trade unions, employers' and startups' associations, chamber of commerce, academia, credit rating agencies, and think tanks.

Fund relations: The previous Article IV consultation discussions took place during May 2023 and the staff report was discussed by the Executive Board on July 12, 2023. The Executive Board's assessment and staff report are available at https://www.imf.org/en/Publications/CR/Issues/2023/07/14/Germany-2023-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-536350

Membership Status: Joined August 14, 1952; Article VIII.

General Resources Account:	**SDR Million**	**Percent of Quota**
Quota	26,634.40	100.00
IMF's Holdings of Currency	19,768.21	74.22
Reserve Tranche Position	6,887.00	25.86
Lending to the Fund		
New Arrangements to Borrow	0.00	

SDR Department:	**SDR Million**	**Percent of Allocation**
Net cumulative allocation	37,587.04	100.00
Holdings	40,588.15	107.98

Outstanding Purchases and Loans: None

Latest Financial Commitments: None

Overdue Obligations and Projected Payments to Fund[1] (SDR Million; based on existing use of resources and present holdings of SDRs):

		Forthcoming			
	2024	2025	2026	2027	2028
Principal					
Charges/Interest		0.29	0.29	0.29	0.29
Total		0.29	0.29	0.29	0.29

Exchange Arrangements

The currency of Germany is the euro. The exchange rate arrangement of the euro area is free floating. Germany participates in a currency union (EMU) with 19 other members of the EU and has no separate legal tender. The euro, the common currency, floats freely and independently against other currencies.

Germany is an Article VIII member and maintains an exchange system free of multiple currency practices and restrictions on payments and transfers for current international transactions. It maintains measures adopted for security reasons, which have been notified to the Fund for approval in accordance with the procedures of Decision 144–(52/51) and does so solely for the preservation of national or international security.

[1] When a member has overdue financial obligations outstanding for more than three months, the amount of such arrears will be shown in this section.

Statement by Joerg Stephan, Executive Director for Germany,
and David Bruns, Advisor to the Executive Director
July 15, 2024

On behalf of our authorities, we would like to thank Mr. Fletcher and his team for the insightful and constructive discussions, and the well-written report. We largely concur with the analysis presented and thank staff in particular for their valuable advice on longer-term structural challenges for the German economy. The authorities are actively working on all policy areas to address these challenges and bolster longer-term growth prospects while preserving the sustainability of public finances.

Overall, the German economy continues to recover well from major shocks. Output has passed through a phase of weakness, especially during the past year, induced by the shift away from Russian gas and by high inflation. Against this backdrop, real GPD in 2023 contracted slightly. Energy prices have come down significantly on the back of new energy supplies as well as significant conservation and substitution efforts by companies and households. Tight monetary policy and a gradual fiscal consolidation have also helped to bring down inflation. However, it remains above its two percent target.

For 2024, our authorities expect a recovery of consumer demand supported by rising real wages and a brightening of consumer sentiment. A recovery of external demand supported by a pickup in industrial and consumer goods exports should also provide a positive impulse for growth. Output is estimated to have risen in the second quarter of 2024. Overall real GDP growth is expected at a modest 0.3 percent for this year. In 2025 and 2026, output is projected to expand more strongly. However, we agree with staff that additional reforms are needed to boost productivity and potential growth.

Inflation has been developing favorably in 2024, but core inflation remains persistent and headline inflation is expected to come down more slowly going forward. Rapidly decreasing energy prices have helped to bring headline inflation down. However, core inflation has been stickier due to services inflation. Pressures on core inflation are likely to last for some time given the robust labor market and the strong rise in real wages. Real wages have risen sharply on the back of higher wage settlements, the increase in the minimum wage, and the payout of tax-free inflation compensation premiums.

We agree with staff that risks to the outlook are broadly balanced. The highest uncertainties to the outlook are currently stemming from the external economic environment. A worsening geopolitical situation, especially the ongoing war of Russia against Ukraine, and an escalation of trade conflicts could put a drag on German growth. On the upside, consumer and business confidence recovering more strongly than expected, could provide an additional growth impetus.

Promoting investment and lower excess savings can help with external rebalancing. The German current account surplus is expected to strengthen in 2024, before coming down gradually until 2026 as rising domestic demand leads to stronger imports. We take note of staff's assessment that Germany's external position in 2023 continues to be "stronger than the level implied by medium-term fundamentals and desirable policies". As in the past, we stress that the EBA-Model results should be interpreted with caution, given the model-inherent large unexplained residuals for Germany. The policy gaps identified by staff cannot explain the alleged current account gap for Germany. Therefore, we think that staff's recommendation to promote additional investment via higher fiscal deficits is based on rather weak model results. We also emphasize that fiscal deficits are bound by existing constitutional rules. With this in mind,

we stress that the government has committed itself to record-high public investment with the 2024 federal budget and aims at implementing additional policy measures to incentivize private investment.

The German economy is well integrated in global markets and the government remains committed to support free trade policies and the multilateral rules-based economic order. The German government is convinced that the adaptation to the changing and more risk-prone geoeconomic environment must not lead to economic isolation or decoupling. Germany therefore pursues a strategy of targeted de-risking by diversifying supply chains and understands de-risking as the primary responsibility of market participants. Therefore, the policies focus on (i) improving economic framework conditions, for example by modernizing trade promotion instruments, such as investment guarantees, and (ii) working towards additional trade agreements with partner countries at the EU level, while (iii) carefully protecting against economic security risks where needed.

Germany is a strong supporter of international climate efforts and stands ready to continue supporting low- and middle-income countries as a reliable partner during times of recurring crises. The government has led work on the establishment of the *Climate Club* as well as the *Global Shield against Climate Risks* and is taking a leading role in the *Network for Greening the Financial System*. As one of the largest bilateral donors, the government has again provided substantial support to partner countries in 2023, including for climate change mitigation and adaption. The authorities are strong advocates of well-capitalized multilateral development banks and a strong IMF at the center of the global financial safety net. Germany is an active partner of and a very substantial financial contributor to the Poverty Reduction and Growth Trust and the Resilience and Sustainability Trust.

Fiscal Policy

Germany has returned to its regular debt brake targets in 2024 after four years of exceptional circumstances during the pandemic and the energy price crisis induced by Russia's war against Ukraine. With the 2024 federal budget, the government discontinued the use of emergency loans and adheres to the debt brake rule without resorting to the exemption clause. The same is foreseen for the 2025 federal budget. By doing so, the government is ensuring fiscal solidity and will thus create fiscal room over the medium-term to rebuild fiscal buffers and accommodate rising expenditure pressures. Fiscal buffers have been instrumental in successfully dealing with global crises and geopolitical shocks in recent years. Fiscal room is also required to pay back crisis-related debt from 2028 onwards.

Sustainable and at the same time sound public finances are a key prerequisite for economic stability. Credible fiscal rules ensure the sustainability of public finances and the state's ability to act in an assertive manner if needed. At the same time, the federal government ensures that public investments required to strengthen medium and long-term growth potential can be financed to modernize and upgrade the public capital stock. This will require ongoing spending prioritization.

The debt brake rule has served Germany well as an anchor for sustainable and resilient public finances. It provided sufficient room to strongly expand public investment in recent years and it necessitates expenditure prioritization and a critical review of fiscal revenues at the current juncture. Efficient government spending and revenue systems are very important given the medium-term fiscal challenges presented inter alia by climate change and aging. In this regard, we take note of the options for creating fiscal room for investment and other spending needs presented in the staff report. The existing constitutional rules of the debt brake are binding for our government.

We stress that the 2024 federal budget foresees record investment while staying on a sustainable expenditure path. This is consistent with the moderately restrictive fiscal policy, which also helped support disinflation in line with the IMF's assessment**.** The federal government has set clear priorities for investments and expenditures supporting sustainable growth, for example in the area of digitization and the green transition. The 2024 federal budget includes a record-high investment ratio of 11.1 percent which translates into EUR 53 billion benefiting for example the railway infrastructure, highways, and federal roads. The German government also provided an equity injection to *Deutsche Bahn AG* to further strengthen public transport. Furthermore, a federal loan has been provided to the so-called *Generationenkapital* to introduce a capital-based element in our pension system to provide a strengthened and more resilient financial base. Both transactions are neutral vis-à-vis the debt brake while increasing overall investment to EUR 70.5 billion. In addition to investments foreseen in the federal budget, public investments are also provided through special funds including inter alia the *Climate and Transformation Fund* (CTF). In combination with the CTF, the government provides more than EUR 100 billion in public investments in 2024. Also, gross fixed capital formation for general government in the national accounts has increased to 2.6 % of GDP in 2023 relative to a pre-crisis level of 2.4 % of GDP in 2019. For 2024 and 2025, it is expected to increase even further. When comparing investment volumes in the national accounts with other countries, it is important to consider the differences in the financial delimitation of the general government. For instance, railway investments have so far not been part of general government in Germany; this will likely change this summer due to statistical revisions.

However, as only 10 percent of overall investment in Germany is public, it is an important priority for our government to constantly improve the framework for private investment. In this context, supply-side reforms to address bottlenecks in the availability of skilled labor and clean energy as well as cutting red tape are also important steps to boost private investment. Many of these will already be part of the 2025 federal budget.

Safeguarding Financial Stability

Overall systemic financial risks remain largely unchanged. Capital conditions of the German banking and insurance sectors continue to be robust, with ample excess capital to withstand even larger shocks. However, supervisory authorities are closely monitoring possible vulnerabilities of the German financial system, stemming from the significant increase in interest rates and from the correction in commercial real estate (CRE) markets.

NPLs in the CRE-sector are rising from very low levels. Analyses suggest that risks to the stability of the wider financial system from a potential further sharp correction in CRE prices continue to be contained. Nevertheless, pockets of risk exist, and macro and micro supervisors are carefully monitoring exposures, including those linked to the ongoing correction in the US CRE market. Although CRE NPLs are rising, defaults remain low because banks are inter alia working closely with borrowers to adjust lending terms to keep them current. Further data improvements are envisaged within the *Integrated Reporting Framework* (IReF), which staff has also suggested in the context of CRE. Whether further data collection beyond IReF is feasible and appropriate still needs to be determined.

Against this backdrop prudent macroprudential policies remain important. Our authorities kept the increased countercyclical and sectoral systemic risk capital buffers in place to protect the banking sector against potential systemic stress. On the microprudential level, authorities are continuously monitoring the adequacy of banks' CRE-related risk management and encourage them to remediate identified deficiencies

including by timely provisioning for losses from their CRE business. Both supervisory authorities (BaFin and Bundesbank) have intensified their activities by conducting on-site inspections and dedicated deep dives. Bundesbank is also currently concluding a new top-down macroprudential CRE stress test for systemic and large systemic institutions. As far as the completion of the macroprudential toolbox for residential real estate is concerned, the coalition agreement includes a commitment to add income-based measures.

We expect bank profitability to ease somewhat from elevated levels in 2023, as deposit rates are catching up with the broader interest rate environment. We agree with staff that current profits might mask a need to further improve the sector's profitability. However, it is up to banks to decide on how to achieve this if necessary. Cost reduction via digitalization and automation as well as continuous consolidation of the banking landscape in Germany are all viable options to achieve this aim.

Lifting Productivity via Entrepreneurship, Innovation, Digitalization, and Upskilling

The German federal government is implementing a comprehensive set of initiatives and supply-side oriented reforms to boost innovation, productivity and entrepreneurship and lift medium-term growth. It has introduced various measures to relieve the economy from bureaucratic burden with a volume of approximately EUR 3 billion annually (*Meseberg package*). At the same time, we agree with staff that further progress is needed to improve data sharing and reduce duplication of reporting requirements. As mentioned before, boosting investment and innovation is a priority for the German government. The *Growth Opportunity Act* supports this aim by simplifying the tax system and providing tax relief for businesses, and SMEs in particular, as well as companies investing in R&D. The government is putting a strong emphasis on promoting the take-up of emerging technologies, including artificial intelligence. This is also reflected by Germany's strong ranking as one of the top-three countries in the IMF's AI Preparedness Index.

Furthermore, the government is striving to improve the growth conditions for start-ups and SMEs. It has established a EUR 10 billion *Future Fund* which complements private investments and thus strengthens financing opportunities for start-ups during the capital-intensive scaling phase. With the *Future Financing Act*, the government aims at improving the access to financing via the capital market for start-ups by facilitating the procedures for going public and easing the tax rules for employee share ownership. The Ministry of Finance together with the *Kreditanstalt für Wiederaufbau* (KfW) are also supporting the venture capital (VC) market to mobilize additional growth capital for startups by bringing together a diverse group of institutional investors. Under the so-called *WIN-Initiative*, the government is seeking financing commitments from institutional investors for innovative sectors. Moreover, it is addressing regulatory and tax related hurdles that might keep institutional investors from becoming more active participants in the VC-sector. Germany is supporting a closer integration into the European Capital Markets Union not least to leverage much needed financing opportunities for innovative businesses across Europe.

Stabilizing the Labor Force

The authorities agree with staff's recommendation that boosting labor force participation and increasing working hours is necessary to increase labor supply. It is thus of high importance to set better incentives for labor force participation of women and the elderly, to enhance the attractiveness of the German labor market for skilled immigration, and to better and more quickly integrate refugees. To further improve labor market participation of women, the government aims at improving the availability of flexible and reliable childcare. The federal government has granted significant financing to support the federal

states in providing adequate childcare. Notably, this has helped to achieve a tripling of available childcare places for children under the age of three since 2006. Furthermore, changes to the taxation of married couples are planned. These are expected to strengthen work incentives of second earners. To leverage the potential of elderly workers on a voluntary basis, the government has abolished pension-related limits on additional earnings during retirement. In order to help refugees to enter the labor market faster, the government has launched the so-called *Job-Turbo*. This initiative supports on-the-job-training for refugees to enable earlier employment while also acquiring the necessary language skills to attain sustainable and qualification appropriate employment over the medium-term. Furthermore, a skills development benefit has been introduced for the workforce. It is intended to replace 60 or 67 percent of net salary during a period of qualification and help people adjust their skills set to structural changes in the economy. This is expected to improve the availability and matching of skillsets in the labor force.

Tackling Climate Change and Enhancing Energy Security

The German government is on track to achieve its 2030 emissions reduction targets. In 2023, Germany made strong progress in reducing its greenhouse gas emissions and has decreased its emissions significantly from 750 to around 674 million tons of CO2 equivalents, which is a reduction of around 10% compared to the previous year. The German government remains committed to take decisive climate action and reach carbon neutrality by the year 2045. Comprehensive measures have been taken by the government to boost renewable electricity generation and expand the electricity grid. The CFT is providing funds to finance the decarbonization of industries, modernize buildings, and support the market ramp-up of the hydrogen economy as well as the expansion of electromobility. It is expected that the energy production from coal will be phased out by 2038 at the latest. Carbon pricing remains one of the central elements in the government's toolbox of climate action instruments. It sends clear price signals and thus achieves more cost-efficient allocation of emissions reductions across different sectors of the economy.

Fighting Transnational Corruption and Strengthening AML/CFT

The German government further intensified its fight against transnational corruption, money laundering and terror financing. Our authorities have launched a comprehensive reform package in response to the August 2022 *Mutual Evaluation Report* by the FATF. Most importantly, a new *Federal Financial Crime Agency* (FFCA) is envisaged to bring together all aspects of the fight against money laundering and terror financing under one roof. Our authorities remain committed to addressing all remaining recommendations of the FATF report. They are looking forward to the establishment of the new EU anti-money laundering authority in Frankfurt. This institution will further enhance the European and Germany's anti-money laundering-framework.