



GERMANY

SELECTED ISSUES

July 2024

This paper on Germany was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 1, 2024.

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International Monetary Fund
Washington, D.C.



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July 1, 2024

Approved By
European Department

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OPTIONS FOR CREATING FISCAL ROOM FOR INVESTMENT AND OTHER SPENDING NEEDS¹

Germany needs substantially higher levels of public investment. At the same time, the country is facing rising pension, healthcare, and long-term care expenditures associated with aging, as well as rising defense spending pressures associated with Russia's war in Ukraine. If Germany were eventually to ease moderately its national fiscal rules, as recommended by IMF staff, this would create some fiscal room to accommodate these rising spending pressures through a higher deficit but would not be sufficient on its own.² This chapter therefore explores options for Germany to generate additional fiscal room by reducing its public spending and increasing its revenues, while minimizing the associated costs to the economy. To aid this exploration, this chapter also examines areas where Germany's spending and revenue levels stand out in international comparison. The options for generating fiscal room include: (i) finding efficiencies in healthcare spending; (ii) stabilizing the finances of the social security system; (iii) eliminating environmentally harmful subsidies; (iv) raising revenues from goods and services taxes; (v) raising property taxes and closing loopholes in inheritance taxes; and (vi) earning higher returns on the government's financial assets.

A. Introduction

1. Over the medium term, Germany faces rising spending pressures from aging and defense, as well as a need to expand public investment in transport, energy, communications, and other infrastructure.

- *Aging-related health and pensions spending.* The European Commission's Aging Report 2024 (European Commission 2024) estimates that Germany's public pension and health expenditures will increase by 0.6 and 0.3 percent of GDP, respectively, over the next five years (Figure 1, left), and by 0.9 and 0.7 percent by 2040. Both contributions and federal transfers to the pension system increase quasi-automatically³ when cash reserves in the system are expected to fall below a minimum threshold. Transfers from the federal government to the pension system are therefore projected to increase by €32 billion by 2030 according to the government's Pensions Insurance Report 2023 (Federal Ministry of Labor and Social Affairs 2023), or 0.3 percentage points of GDP using staff's GDP projections.
- *Defense spending.* To meet its NATO targets, Germany's defense spending will also likely rise by 0.3 percent of GDP in the near term. While the special fund for defense will finance some of this,

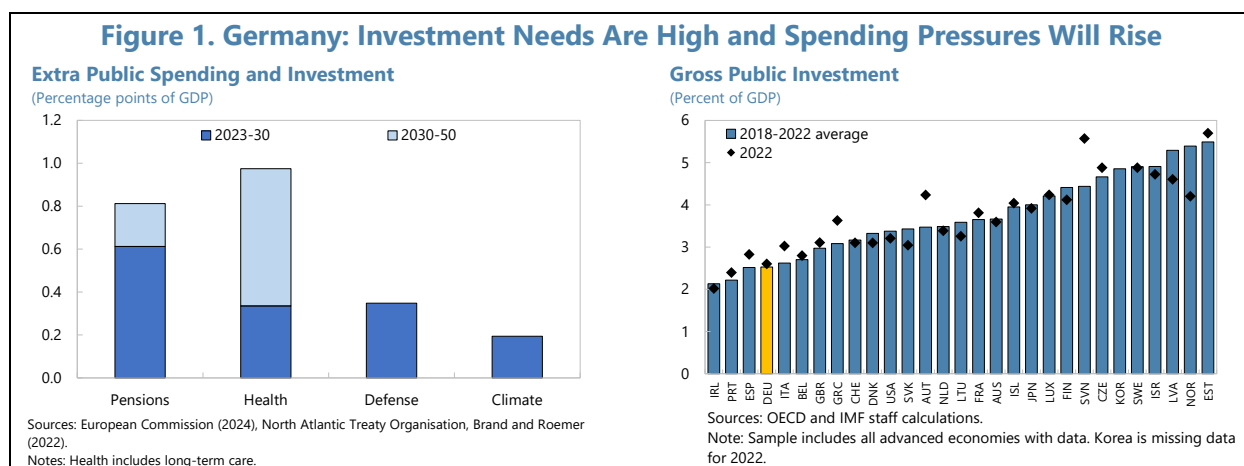
¹ Prepared by Galen Sher.

² "Fiscal room" is used in this chapter to refer to the ability to increase spending or reduce revenue without violating German or EU fiscal rules. This differs from the concept of "fiscal space," which the IMF defines as "the ability to provide fiscal stimulus without jeopardizing the sustainability of the financial position or the stability of the economy" (see, for example, [IMF 2022](#)).

³ The increases are quasi-automatic in the sense that they are specified in Sections 158 and 213 of the *Sozialgesetzbuch VI*, but increases in contribution rates require a regulation to be issued.

two-thirds of the fund are projected to be committed by the end of this year and the fund itself will expire in 2027.

- Public infrastructure investments.** Substantial additional investment is needed to upgrade infrastructure in transportation, energy, communications, and other areas. For example, the latest engineering inspections from September 2018 reveal that [10.4 percent](#) of all bridges on federal highways have damage or defects that affect their structural stability or create unsafe traffic flow, therefore requiring immediate repair and possibly requiring restrictions on use or additional warnings to maintain traffic safety (a rating of between 3.0 and 3.4 as interpreted in Haardt 1999). A further 1.7 percent of such bridges are in even worse condition, with significant structural impairments or creating significant traffic insecurity (a rating of between 3.5 and 4.0).⁴ 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 (Figure 1, right). Public investment would have to increase by around 1 percent of GDP to bring Germany up to the median of advanced economies.⁵



2. To make room for these spending needs, Germany should consider adjusting its debt-brake rule to allow for a higher deficit, as explained in the IMF's accompanying Staff Report (IMF 2024). 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

⁴ Other examples of needed public infrastructure include green energy (i.e., renewable electricity production and electricity grids) and fiber optic connections. Yearly public investment needs to increase by at least 0.2 percent of GDP to meet Germany's climate targets (Brand and Römer 2022). Fiber optic connections have expanded quickly in the last 12 months, but they now only pass 28 percent of households in Germany, compared to 57 percent in the average EU country (IMF 2024).

⁵ Differences in the scope of general government can make such cross-country comparisons somewhat uncertain. 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. Another source of uncertainty, which would increase Germany's estimated need for public investment, is the extent to which the country needs to compensate for years of underinvestment (relative to peer countries) with a period of overinvestment.

debt sustainability risks are low.⁶ Moreover, the debt brake can require excessive adjustment in years like 2024, when the escape clause is not activated for the first time (after several years of activation). The authorities should thus consider increasing somewhat the annual deficit limit, as explained in IMF (2024), which would create room for needed public investment while still keeping the debt ratio on a downward trajectory.

3. Adjusting the debt brake rule, however, would not be sufficient on its own. Adjusting the debt brake, as proposed above, would create significant fiscal room to accommodate rising medium-term spending pressures, but such an easing would not fully address them. Credible medium-term fiscal plans and deficit-reducing reforms are therefore also needed to offset these pressures and reduce policy uncertainty. In the absence of well-crafted fiscal structural reforms, rising spending pressures could crowd out high priority expenditures like public investment and/or require increases in growth-reducing distortionary taxes. Medium-term plans, for example, assume that pension contribution rates will increase substantially (Section D below). Such increases could exacerbate labor market distortions, especially while health insurance contributions increase in parallel.

4. This paper therefore identifies several options to create additional fiscal room through potential expenditure reductions and revenue increases. The resulting menu of policy options is guided by examining areas where Germany stands out in simple comparisons against other advanced economies. The menu is also partly guided by an effort to focus on measures for which (i) economic costs are expected to be limited because the measure either does not strongly distort important economic choices or offsets pre-existing distortions; and/or (ii) the measure helps achieve societal objectives like mitigating climate change or reducing inequality. This paper presents more options than are necessary, meaning that not all of the options need to be adopted. Choices between the various options will depend on social preferences, for example on the size of the government.

B. Germany's Government Revenue and Expenditure Levels in International Comparison

5. Germany has a larger government (relative to its GDP) than most other advanced economies (Table 1). The general government—combining federal, Länder, and municipal governments and the social security system—spent 3.7 percentage points of GDP more than the median advanced economy over the 2015–19 period.⁷ The German government's revenues were even larger, exceeding those of the median advanced economy by 5.2 percentage points of GDP over the same period, which reflects the fact that Germany tends to incur a smaller fiscal deficit. Germany's revenues are larger because of its large welfare state, which means that Germany takes in substantially more social contributions and spends substantially more on social benefits than other

⁶ Germany's current debt sustainability risks are assessed in the accompanying staff report (IMF 2024). The government publishes its own assessment (Federal Ministry of Finance 2024).

⁷ This study follows the IMF's definition of advanced economies. The IMF's list of 41 advanced economies is published regularly in its *World Economic Outlook* report.

advanced economies. Tax revenues, on the other hand, are (1.2 percentage points of GDP) lower in Germany than in other advanced economies, which is driven by lower taxes on goods and services and on property. Germany's welfare state also accounts for its high expenditures compared to other advanced economies. If one looks past social transfers to other kinds of public expenditure, these are almost all lower in Germany than in the median advanced economy. Spending on compensation of public sector employees, for example, is substantially (2.7 percentage points of GDP) below that of the median advanced economy.

Table 1. Germany: Revenue and Expenditure Compared to Other Advanced Economies
(Percent of GDP)

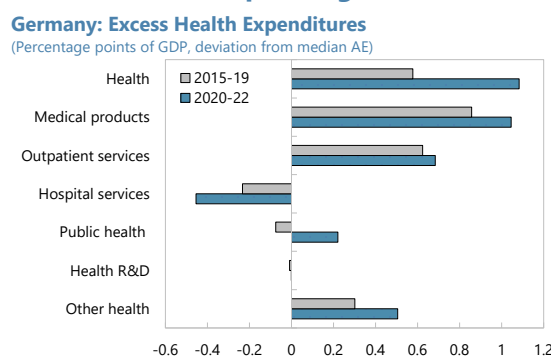
Revenue side	DEU	vs. AEs	Expenditure side	DEU	vs. AEs
Revenue	45.2	5.2	Expense	43.8	3.7
Tax revenue	23.7	-1.2	Compensation of empl.	7.4	-2.7
on inc., profit, cap. gains	12.4	1.6	Use of goods & services	5.0	-0.7
on payroll and workforce	0.0	0.0	Consumption of fixed cap.	2.2	-0.5
on property	0.6	-0.4	Interest expense	1.1	-0.4
on goods & services	10.0	-1.8	Subsidies expense	0.8	-0.2
on int. trade & transact.	0.0	0.0	Grants expense	1.2	0.3
Other taxes	0.6	0.6	Social benefits expense	24.0	8.5
Social contributions	16.9	5.9	Other expense	2.1	-0.4
Other revenue	4.5	-0.3			

Notes: Each country's revenues and expenses within each category are averaged over the 2015-19 period. This period is chosen to abstract from temporary pandemic-related effects. The column "DEU" shows Germany's revenue or expense in percent of GDP. The column "vs. AEs" shows the difference between Germany's revenue or expense, in percent of GDP, and that of the median advanced economy. Differences between German spending levels and those of other advanced economies should be interpreted with some caution, including because the median of advanced economies does not necessarily correspond to an "optimal" level.

C. Option 1: Finding Efficiencies in Healthcare Spending

6. Germany has a high share of (combined public and private) health spending in GDP. In turn, this seems to be driven by the fact that Germany consumes the second-highest volume of healthcare services in the OECD, after the United States (see Figure 3 in OECD, 2020). For example, Germany made use of [9.8 in-person doctors' consultations per person in 2019](#), compared to just 5.9 in France and 3.9 in Denmark.⁸ This high quantity of healthcare

Figure 2. Germany: High Public Health Spending



Source: IMF Government Finance Statistics Database and IMF staff calculations.
Notes: Covers general government. Medical products includes appliances and equipment.
AE = advanced economy; R&D = research and development.

⁸ Similarly, Germany discharged 25 patients per person from hospital in 2019, compared to 17 in France and 15 in Denmark, which illustrates the higher rate of hospital usage in Germany.

consumption in Germany more than outweighs healthcare prices, which are lower in Germany than in the median OECD country (OECD 2020). Furthermore, the high share of German health spending in GDP does not seem to be fully explained by Germany having an older population than most other OECD countries. For example, among a sample of 15 countries where data are available, Germany has the second-highest health spending per person even after adjusting for its older population (Morgan and Mueller 2023).

7. The German government spends more on healthcare, especially medical products and equipment and outpatient services, than most advanced economies. Even before the COVID-19 pandemic, Germany spent more on healthcare than the median advanced economy. It spent around 0.6 percentage points of GDP more over the 2015–19 period, and this excess spending increased to 1.1 percentage points during 2020–22 (Figure 2). Excess healthcare spending reflects excess spending on medical products, appliances, and equipment, as well as outpatient services, even though Germany spends less than the median advanced economy on hospital services. Over the 2015–19 period, spending on medical products, appliances, and equipment was 0.9 percentage points of GDP higher than the median advanced economy, while spending on outpatient services was 0.6 percentage points higher.

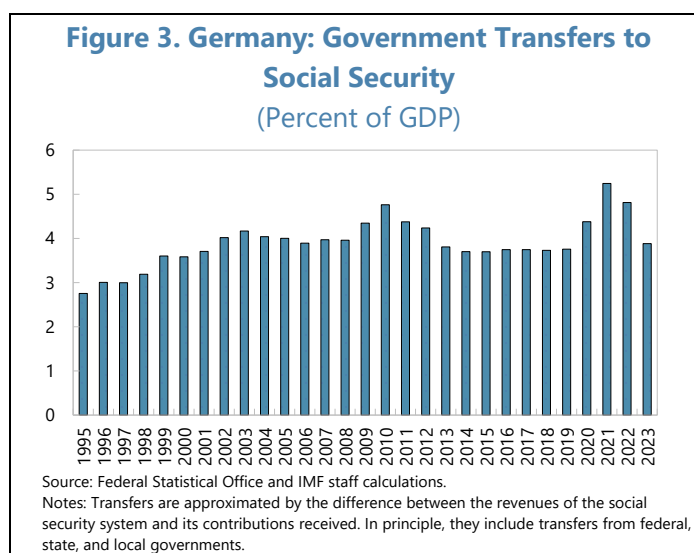
8. Germany’s high public spending on outpatient services could potentially be reduced by reforming pricing structures to disincentivize unnecessary procedures. The Federal Ministry of Health (2024) states that Germany’s system of flat-rate fees for reimbursing hospitals encourages hospitals to maximize the number of patients treated, even in cases where there is no medical justification for treatment. Parliament is currently debating a law (*Krankenhausversorgungsverbesserungsgesetz*) that would change these incentives.

9. The costs of medical products, appliances, and equipment could also potentially be reduced through greater use of joint procurement and digitalization of procurement. Public procurement in Germany amounts to some 15 percent of GDP, which is high and suggests that material savings could be possible. In Germany, procurement is fragmented, with about 30,000 decentralized organizations responsible for procurement. This group includes around 11,000 municipalities, where 58 percent of public procurement takes place. The OECD has recommended that Germany make more use of joint procurement to achieve economies of scale and digitalized procurement to reduce administrative costs (OECD 2019; OECD 2023). These recommendations likely apply to procurement in the healthcare sector as well, even though Germany has several joint purchasing initiatives in this sector already. For example, medical technology products are listed on *Kaufhaus des Bundes*, a federal government platform (OECD 2019), and at the regional level, medicines are purchased jointly by groups including AGKAMED and GDEKK (European Commission 2022).⁹

⁹ Another possible explanation for high public spending on medical goods is drug pricing policy. In Germany, new medicines are paid for by the statutory health insurance system as soon as they come onto market, before prices have been negotiated with the relevant pharmaceutical company. This procedure has the advantage of providing quicker access to new medicines in Germany than in other countries, but at higher cost.

D. Option 2: Stabilizing Social Security Finances

10. Germany's social welfare system is larger than other countries and relies on large transfers from federal, state, and local governments. In the 2015–19 period, social benefits in Germany, including sickness, unemployment, retirement, housing, education, and family benefits, were 24 percent of GDP, compared with a median of 15.5 percent in the median advanced economy, according to the Government Finance Statistics (GFS) database. These relatively high social benefits are only partly financed by higher social contributions. Specifically, while social benefits expenses were 8.5 percent of GDP above the median advanced economy in 2015–19, social contributions revenues were only 5.9 percent of GDP above other advanced economies (16.9 percent in Germany compared with 11.0 percent in other advanced economies). Germany's financing gap of around 3.8 percent of GDP between social security contributions and benefits is covered by federal, state, and local governments, which in turn finance these transfers through taxation and other revenues (Figure 3).



11. Even with government transfers, there is uncertainty around the long-term financial sustainability of Germany's social security system, which creates policy uncertainty.

- The **pension system's** reserves of 1 percent of GDP are expected to be used up by 2028.¹⁰ After reserves are used up, contribution rates are set to increase substantially. For example, the government's *Pensions Insurance Report 2023* projected pension contribution rates to increase from 18.6 to 20.6 percent by 2030 and to 21.1 percent by 2037, based on the assumption that benefit replacement rates would be allowed to rise after 2025 in line with the pension system's sustainability mechanisms. Recent plans to instead keep replacement rates constant until 2039 could put further upward pressure on contribution rates and federal transfers to the system. The government's plan to build up the pension system's assets, which would earn the spread between capital markets and those on German government bonds (*Generationenkapital*), is welcome. However, the government estimates that this scheme would only generate supplementary funding of 0.2 percent of GDP a year from the mid-2030s, which suggests that substantial further reforms are needed.
- At the same time, reserves in the **health insurance system** are set to be exhausted by 2024 and, after increasing by 0.3 percentage points in 2023, contributions to statutory health insurance are

¹⁰ According to the government's *Pensions Insurance Report 2023*.

set to increase “considerably” in the future (Bundesbank 2024). Long-term projections for health insurance contribution rates are not publicly available, which adds to policy uncertainty. Large increases in both pension and health insurance contribution rates could exacerbate labor market distortions.

12. To put social security finances on a sounder footing, a detailed review could be conducted to identify areas where contributions could be raised or benefits reduced. A full review is beyond the scope of this paper, but a few considerations are presented below.

13. Social benefits could be reviewed to identify those that are especially costly and create adverse incentives. For example, given the substantial challenges that Germany faces due to population aging and a shrinking workforce (see IMF 2024), a review of social benefits could focus on identifying any that might discourage labor supply. In a December 2023 [survey](#) of 126 economists, more than half said that savings could be identified in social welfare, and they pointed most frequently to basic income and the basic child allowance. Simple cross-country comparisons of Germany’s social benefits reveal the following patterns:

- **The social benefits where Germany stands out most relative to other countries are health benefits, followed by old age benefits and then survivors’ benefits.** 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 (Figure 4, top left panel). Within old age and survivors’ benefits, the gaps against peer countries are driven by gaps in old age and survivors’ *pensions* specifically, rather than other old age or survivors’ benefits like early retirement pensions, residential care, or funeral expenses (Figure 4, top right panel). High levels of pension spending mainly reflect Germany’s relatively elderly population, as pension replacement rates are relatively low and the standard retirement age is relatively high compared to other OECD countries (Figure 4, middle panels).
- **Pension reforms could therefore improve the system’s sustainability.** Annual increases in pensions, for example, could be linked to inflation rather than wages,¹¹ as this would yield fiscal savings (assuming real wages rise over time) without undermining the pension system’s role as a safety net against old-age poverty (because pensioners would maintain a constant real income during retirement). Such a reform may also be progressive, as higher-income individuals tend to live longer and hence benefit more from the current system of rising real pensions in retirement. Furthermore, linking retirement ages to life expectancy, as recommended previously by IMF staff (IMF 2019), could also help in the longer term and increase elderly labor force participation, though retirement ages are already set to increase to 67 by 2031. Studies find that both reforms could help limit future increases in contribution rates (German Council of Economic Experts 2023; Scientific Advisory Board of the BMWi 2021).

¹¹ See German Council of Economic Experts. 2023. “Population Aging Surge and Pension Reforms.” Chapter 5, Annual Report 2023/24.

- **German provides a comparatively high level of in-kind social benefits.** The gap between Germany's social benefits and those of other advanced economies is accounted for mostly by social benefits in-kind, which were 8.5 percent of GDP in Germany, compared to 2.5 percent in the median advanced economy. Germany ranks second-highest in advanced economies in terms of these benefits (Figure 4, bottom left panel). Education accounted for the largest share, followed by hospital services, and then physician services and pharmaceuticals (Figure 4, bottom right panel). Social benefits that are paid in cash were also above the median advanced economy, but less so. In the 2015–19 period, they amounted to 8.5 percent of GDP, compared to 6 percent in the median advanced economy, resulting in excess spending of 2.5 percentage points of GDP.

E. Option 3: Eliminating Environmentally Harmful Subsidies

14. Germany could save over 1 percent in GDP a year by eliminating subsidies that are environmentally harmful, especially in the transport sector (Table 2). Environmentally harmful subsidies include government spending or tax exemptions that distort prices in favor of fossil fuels, which boosts greenhouse gas emissions. Several of the environmentally harmful subsidies are also regressive, meaning that they exacerbate income inequality. A full assessment of Germany's environmentally harmful subsidies appears in Burger and Bretschneider (2021). Environmentally harmful subsidies in Germany are concentrated in the transport sector, and the following three transport-related subsidies account for around half the cost of all environmentally harmful subsidies in Germany:

- *Tax exemptions for kerosene fuel in the aviation industry.* In Germany, kerosene fuel used in commercial aviation is exempt from energy tax, with the explicit objective of boosting the competitiveness of the domestic aviation industry (Federal Ministry of Finance 2023). This exemption makes air travel cheaper for passengers and thereby encourages them to choose air travel, rather than other modes of transport with lower emissions, like road or rail.¹² Similarly, it reduces financial incentives that would otherwise exist for the aviation industry to invest in fuel efficiency. Burger and Bretschneider (2021) estimate that this tax exemption costs the German government €8.4 billion a year and results in extra greenhouse gas emissions equivalent to 26 million tons of carbon dioxide a year.¹³

¹² A small part of this disincentive to use road or rail transport, in favor of air transport, is offset by the air traffic tax (*Luftverkehrsabgabe*).

¹³ The government's Federal Subsidy Report (Federal Ministry of Finance 2023) calculates a smaller value for this subsidy (€584 million 2024) because, unlike Burger and Bretschneider (2021), it uses a narrower definition that does not factor in kerosene sold in Germany and used for international flights. The authorities' decision to increase the air traffic tax by its estimate of the kerosene fuel subsidy (around €580 million a year), from May 2024, will help to reduce slightly the competitive advantage that the tax rules give to aviation over road and rail transport, but because it is small overall and not linked directly to each company's consumption of kerosene, it will not create new financial incentives for companies to invest in fuel efficiency.

Table 2. Germany: Environmentally Harmful Subsidies, 2018

Measures	€ billion
Tax exemption for kerosene fuel in the aviation industry 1/	8.4
Energy tax concession for diesel fuel	8.2
Distance allowance - a tax deduction for commuting to work 2/	6
Lower VAT on meat and other animal products	5.2
Lower concession electricity and gas charges for public spaces	3.6
Favorable tax treatment for privately used company cars 2/	3.1
Electricity and energy tax reductions for the manufacturing and agriculture sect.	2.9
Relief from electricity and energy taxes for certain energy-intensive processes a	1.3
Concessions for energy-intensive industry regarding electricity grid fees	0.6
Exemption of agricultural vehicles from the vehicle excise duty	0.5
Tax concession for agricultural diesel fuel	0.5
Total	40.3
<i>in percent of GDP</i>	<i>1.2</i>

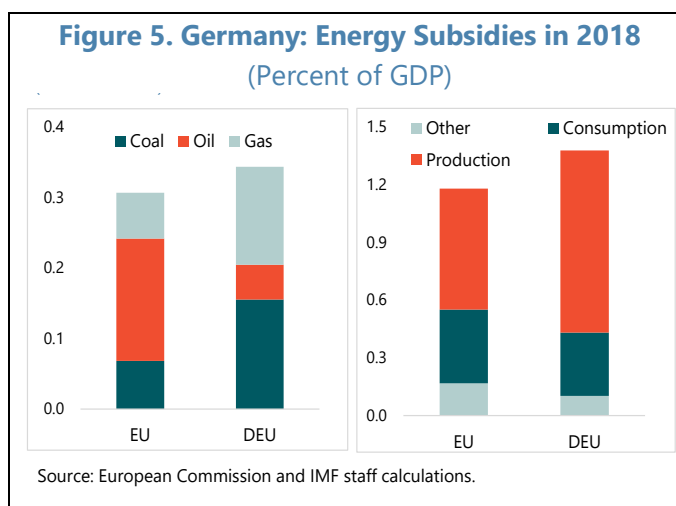
1/ Including international flights taking off or landing in Germany.
2/ This measure does not exclusively support fossil fuels (for example, electric cars can also benefit from the measure). However, the allowance is estimated to contribute to
3/ Including reimbursements of the peak equalization charges for manufacturing companies.
Source: OECD

- *Tax exemptions for diesel fuel.* Germany taxes diesel at a lower rate than it taxes gasoline (65.45 cents a liter for gasoline, compared to 47.04 cents a liter for diesel, under [Section 2 of the Energy Tax Act](#)). This exemption makes it cheaper for consumers to drive diesel-fueled cars, which produce more greenhouse gas emissions than gasoline-fueled cars (see, for example, ICCT 2019). Burger and Bretschneider (2021) estimate that this tax exemption costs the German government €8.2 billion a year and results in extra greenhouse gas emissions equivalent to 3.7 million tons of carbon dioxide a year.¹⁴
- *The distance allowance (Entfernungspauschale).* The distance allowance is a tax deduction that employees can use to offset their cost of commuting to work. The allowance is environmentally harmful because it favors car transport over other modes of transport with lower greenhouse gas emissions, like rail, bus, cycling, or walking—the allowance for car transport is uncapped, whereas it is capped at €4,500 for other modes of transport. While drivers of electric vehicles also benefit from the allowance, the allowance primarily benefits combustion engine vehicles, because these make up most of the existing fleet. The allowance is also environmentally harmful because it favors longer commutes, which emit more greenhouse gases than shorter commutes, and favors more expensive modes of commuting, which typically emit more greenhouse gases (e.g., car transport rather than walking). Burger and Bretschneider (2021) estimate that the distance allowance costs the German government €6 billion a year and results in extra greenhouse gas emissions equivalent to 2 million tons of carbon dioxide a year. Beyond its high financial costs to the government and unwanted greenhouse gas emissions, the distance allowance also exacerbates inequality, because it is larger for households with higher marginal

¹⁴ There is some discussion in Germany about the extent to which the favorable tax treatment of diesel fuel is offset by the higher tax rates on the sale of new diesel vehicles, but fuel taxes can be expected to be more efficient at reducing emissions than vehicle taxes, because fuel taxes are more closely linked to emissions themselves.

tax rates (which are higher-income households) and it is larger for households that commute further (which also tends to favor higher-income households).

15. Relatedly, Germany could save about 0.4 percent of GDP by cutting fossil fuel subsidies (Figure 5). The government greatly increased fossil fuel subsidies (through, for example, VAT exemptions and the gas price brake) during the energy crisis of 2022–23. The estimated savings here of 0.4 percent of GDP are what is expected to remain *after* those temporary, crisis-related relief measures are phased out.¹⁵ More up-to-date reporting of the government’s fossil fuel subsidies would be helpful.



F. Option 4: Raising Revenues from Goods and Services Taxes

16. Germany collects less goods and services tax revenue than other advanced economies. Germany’s goods and services tax revenues are 10 percent of GDP, which is 1.8 percentage points of GDP below those of the median advanced economy (Table 1 and Figure 6, left panel). This gap existed even before the COVID-19 pandemic, although it widened during the pandemic and subsequent energy crisis as VAT rates were lowered to provide relief to households and businesses.

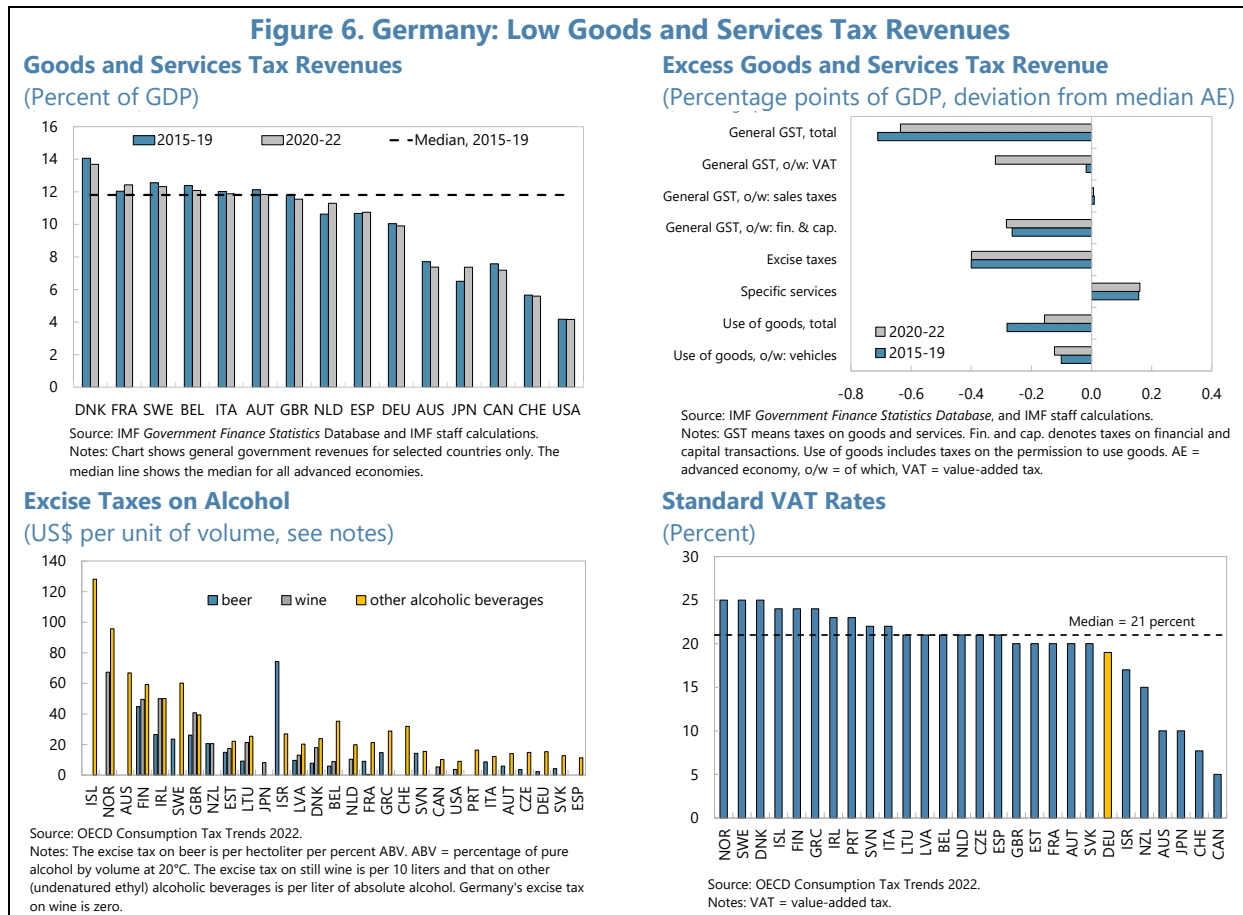
17. The gap in goods and services tax revenue seems to be driven by excise taxes, taxes on financial and capital transactions, and taxes on the use of goods. Looking within goods and services tax revenues in more detail, the gap seems to be driven by a combination of excise taxes, where revenues are 0.4 percentage points of GDP below those of the median advanced economy, taxes on financial and capital transactions¹⁶ (0.3 percentage points below), and taxes on the use of goods or the permission to use goods (0.3 percentage points below). Within the category of excise taxes, Germany’s excise tax rates seem relatively low on beer, wine, and other alcoholic beverages

¹⁵ The fossil fuel subsidies in Figure 5 are likely to overlap with the environmentally harmful subsidies in Table 2. Figure 5 and Table 2 come from different data sources.

¹⁶ These are taxes on the purchase/sale of financial or non-financial assets, including real estate, stocks, and bonds. They do not include capital gains taxes or inheritance/gift taxes.

(Figure 6, bottom left).¹⁷ Within the category of taxes on the use of goods, taxes on the use of vehicles are 0.1 percentage points of GDP below those of the median advanced economy.¹⁸

18. In addition, standard value-added tax (VAT) rates are lower in Germany than in other advanced economies. Looking within goods and services tax revenues in more detail, VAT revenues were similar to those of the median advanced economy before the pandemic.¹⁹ Nevertheless, there is scope to raise VAT revenues to close the goods and services tax revenue gap, because the standard VAT rate is 19 percent in Germany, 2 percentage points below that of the median advanced economy (Figure 6, bottom right).



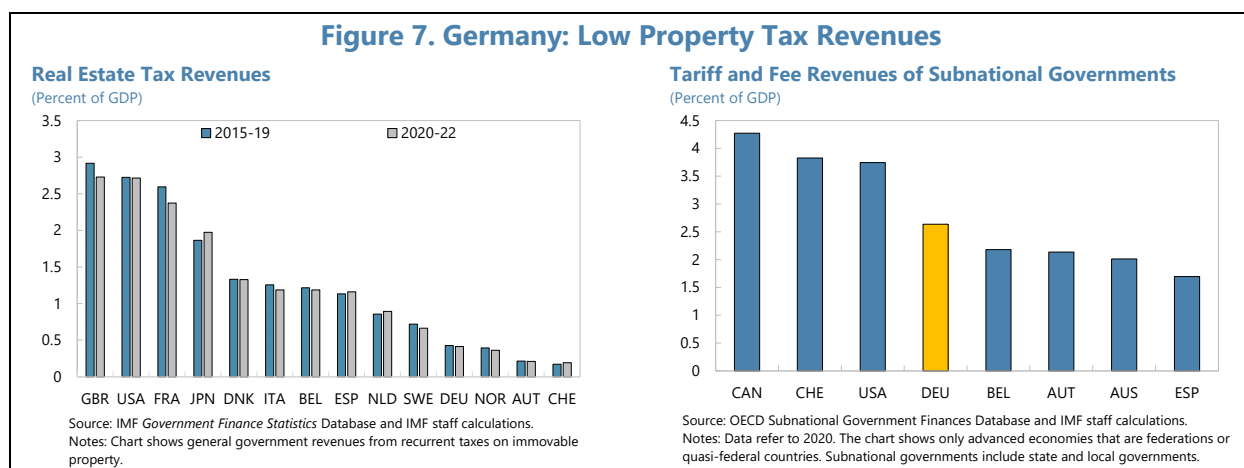
¹⁷ By contrast, Germany's excise tax rates for cigarettes and heating fuel oil appear to be near the median of those for advanced economies, and those for gasoline and automotive diesel seem to be at the high end of those for advanced economies.

¹⁸ These exclude road tolls or vehicle property taxes.

¹⁹ During the pandemic and energy crisis, VAT revenues fell below those of the median advanced economy (Figure 1, right panel), but this gap is likely to close as temporary relief associated with the pandemic and energy crises phases out.

G. Option 5: Raising Property Taxes and Closing Loopholes in Inheritance and Gift Taxes

19. Germany could increase its collection of taxes on real estate. It is a well-known result in economics that land value taxes are relatively efficient because they are difficult taxes to avoid by changing economic behavior and thus do not significantly distort economic activity—unlike personal income taxes, for example, which discourage labor supply.²⁰ Land value taxes are also highly progressive (as landowners tend to be wealthy) and thus can help reduce inequality. However, Germany does not make full use of land value taxes and other recurring real estate taxes. In both the 2015–19 and 2020–22 periods, Germany collected 0.4 percent of GDP in recurring real estate taxes, compared with 0.8 percent in the median advanced economy. (In a reform of its real estate tax, Germany is updating the taxable values of all real estate to ensure that these values are current. However, this reform will not result in new revenue because average property tax rates will be lowered to make the reform revenue-neutral. The new property tax comes into force in [January 2025](#).) This undercollection in real estate taxes drives undercollection in the broader category of “property taxes,” which includes also taxes on net wealth, estates, inheritances, and gifts. In the 2015–19 period, Germany only collected 0.6 percent of GDP in property taxes, compared with 1 percent of GDP in the median advanced economy. In the 2020–22 period, Germany collected 0.7 percent and the median advanced economy collected 1.1 percent.



20. Germany could also generate revenue by closing unnecessary and distortionary loopholes in the treatment of property within income and corporate taxes. For example, real estate companies are exempted from local corporate taxes (*Gewerbesteuer*), costing the government around €5 billion a year in foregone revenues (OECD 2023).

21. Germany’s additional tariffs and fees related to real estate do not seem out of line with those of peer countries. When comparing recurring real estate taxes across countries, it is also important to compare non-tax tariffs and fees at the local government level, which can vary substantially across countries. In Germany, municipalities charge (fees, *Gebühren* and contributions,

²⁰ See, for example, Schwerhoff and others (2022).

Beiträge) for services including waste and wastewater removal, upgrades to local infrastructure like canals, and street cleaning. These fees do not include fees for utilities like electricity, heat, and water. German state and local government revenues from tariffs and fees are 0.2 percentage points of GDP higher than those of the median advanced economy with a federal governance structure (Figure 7, right panel).²¹ These slight excess revenues seem to be driven by state governments, because at the local government level, they are in line with the median peer country. Given that data are only available for a few countries, this 0.2 percentage point excess is somewhat uncertain and does not seem significantly different from the median economy.

22. Germany has scope to close loopholes in inheritance and gift taxes. Overall revenues from inheritance and gift taxes in Germany seem broadly in line with those of other advanced economies. Germany collected similar revenues (relative to GDP) as the median advanced economy in the overall category of estate, inheritance, and gifts. Like many other countries, Germany phased out its taxes on net wealth, [in 1997](#). However, Germany has scope to raise revenue by eliminating loopholes in its inheritance and gift tax rules, which can also help address Germany's relatively high wealth inequality (OECD 2023). Closing loopholes also reduces distortionary incentives in the tax code and can therefore be a relatively growth-friendly way to increase tax revenues. For example, inheritance and gift tax exemptions for business assets cost up to €10 billion a year (OECD 2023). These include instances where the recipient of large business assets is fully exempt from the tax to avoid having to liquidate the assets (*Verschonungsbedarfsprüfung*). An alternative approach, followed for example in Denmark, could be to allow recipients to pay the tax in instalments over 30 years, instead of fully exempting them (OECD 2023).

H. Option 6: Earning Higher Returns on the Government's Assets

23. Germany also earns less income on its assets than other advanced economies. Germany only earned 0.6 percent of GDP in 2015–19 on average in “property income revenue,” which includes revenue from interest, dividends, profit withdrawals from quasi-corporations, and rent,²² compared to a median of 1 percent across advanced economies. (In the 2020–22 period, Germany earned 0.4 percent of GDP on average, and the median advanced economy earned 0.7 percent.) This gap of 0.3–0.4 percentage points of GDP in property income is driven by a gap in dividend income of 0.2 percentage points and a gap in interest income of 0.1 percentage points, which was the same in both the 2015–19 and 2020–22 periods.²³ In the 2015–19 period, for example, Germany earned

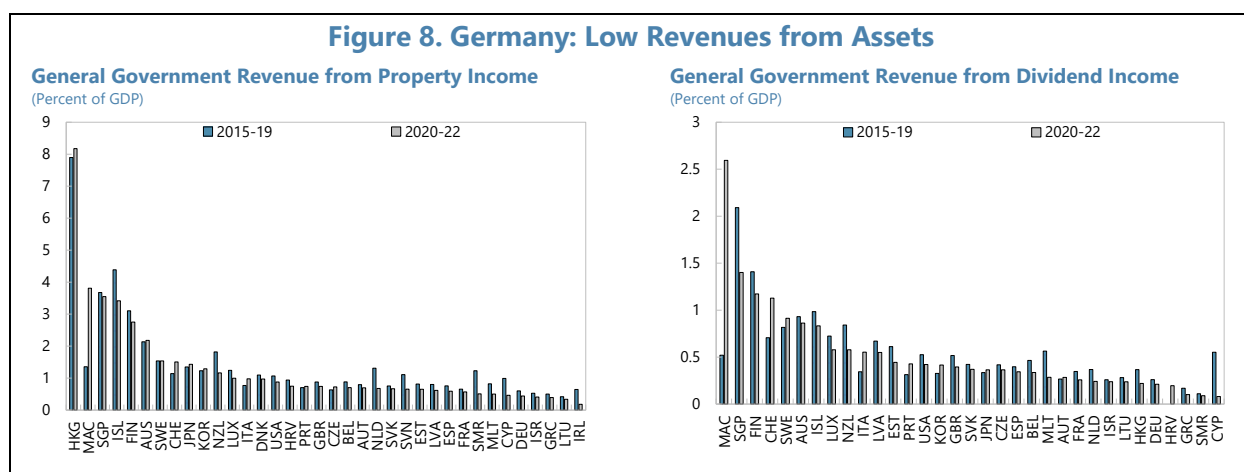
²¹ Countries with a non-federal governance structure obtain less revenue from subnational government tariffs and fees. Compared to all advanced economies, Germany generates 1.2 percentage points of GDP more revenue from subnational tariffs and fees.

²² Property income revenue is revenue on earned from publicly held assets. It is not a form of tax revenue and therefore should not be confused with revenue from property taxes.

²³ The main driver of the gap in property income is slightly obscured by the fact that Germany and most other advanced economies do not report income in one of the subcategories of property income: income from withdrawals from quasi-corporations. Quasi-corporations are any entities, like in some cases post offices or railways, which sell products and services in the market and have their own financial statements, but are run out of a ministry or other public agency and are thus not strictly speaking incorporated as companies in the legal sense.

dividend income of 0.3 percent of GDP, compared to the median advanced economy which earned 0.5 percent of GDP. In turn, the lower dividends in Germany can be explained by a combination of:

- *Smaller equity investments.* Germany had equity investments of 17.9 percent of GDP on average over the 2015–19 period, compared to 23.2 percent in the median advanced OECD economy, according to OECD data.
- *Lower dividend yield on those investments.* Germany's dividend income of 0.3 percent of GDP, divided by its equity asset holdings of 17.9 percent of GDP, gives a dividend yield of 1.7 percent a year. The equivalent figure for the median advanced economy is approximately 2.2 percent. These lower dividend yields may reflect lower profitability of state-owned entities in Germany (see, for example, Asatryan and others 2022). Further analysis could examine the source of this low profitability and whether policy changes might be able to address it.



I. Conclusion

24. This paper has explored a number of options for fiscal measures and reforms that could generate substantial fiscal room in Germany. These measures and a moderate easing of the debt-brake's limits could help generate substantial fiscal room for higher public investment and other priority spending needs, as well as for growth-enhancing tax reforms. The appropriate choices among these measures and other options will depend on public preferences across various dimensions, including distributive preferences and views about the appropriate size and role of the state.

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FINANCIAL STABILITY RISKS FROM COMMERCIAL REAL ESTATE¹

This paper estimates the impact on solvency of German financial institutions, including banks and insurers, from recent and projected deterioration in their exposures to commercial real estate markets globally. It also offers the authorities some policy recommendations aimed at reducing financial stability risks.

A. Introduction

1. Structural change in demand and higher interest rates have contributed to weakness in the pricing of commercial real estate (CRE) globally. The global pandemic ushered in a period of accelerated structural decline in demand for certain types of commercial real estate, particularly offices and retail spaces in urban areas globally. It exacerbated an ongoing decline in demand for physical retail spaces brought on by technological change, particularly due to the rise in online shopping. With monetary policy tightening in several advanced economies in the aftermath of the pandemic, borrowers against CRE collateral were faced with higher refinancing costs and lower valuations for their collateral. In Germany, many of these borrowers, particularly those with lower-than-expected earnings in the slow-growth environment, are now facing difficulties in servicing principal and interest payments on CRE loans from banks, and banks' non-performing loans (NPLs) related to CRE have risen substantially during 2023. This has raised some concerns about credit and market risks for banks and insurers.

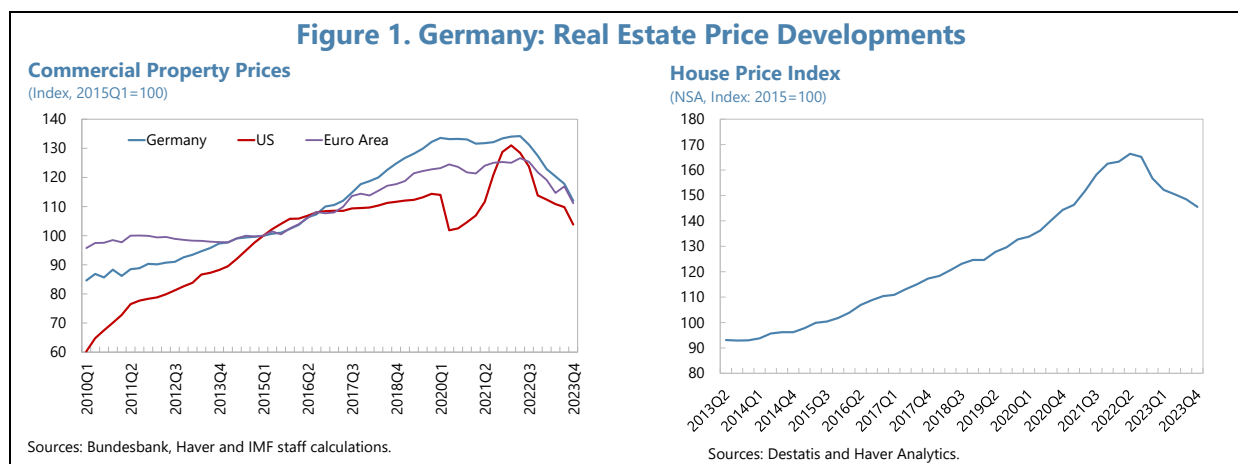
2. This paper attempts to estimate risks from CRE-related exposure of German financial institutions, focused on banks and insurers. It finds that systemic risks are contained but some individual institutions may be at risk of capital loss, which could push them near minimum capital requirements. There are some uncertainties regarding the estimates due to various assumptions used in the analysis. These include, for example, the exclusive focus on real estate as a source of credit and market risks for financial institutions, which could be optimistic if there is wider contagion to corporates and households. Some caution is thus warranted, such that it is important for the authorities to continue to closely supervise financial institutions with CRE exposures, ensure adequate provisions against potential loan deterioration, maintain macroprudential buffers, and take steps to review and test financial safety arrangements. Longer-term, there may be scope to bolster earnings of the banking system, which would help to support capital buffers if reinvested.

B. Real Estate Developments

3. CRE markets are under pressure globally, including in Germany. The CRE index is down about 21 percent from its peak in early 2022 for the US, about 17 percent for Germany, and about 12 percent for the euro area as whole. The US CRE market appears to be weakening more strongly

¹ Prepared by Mustafa Saiyid.

in recent data (Figure 1). These broad indexes for commercial real estate mask some variation in performance across different types of real estate—office and retail properties, for instance, are facing weaker demand, while multi-family residential housing remains in demand. In Germany, the demand for multi-family housing, particularly in urban areas, is being supported by strong immigration in recent years. While the German house price index has declined some 10 percent from its peak, this has come after significant appreciation of more than 60 percent over the past decade.

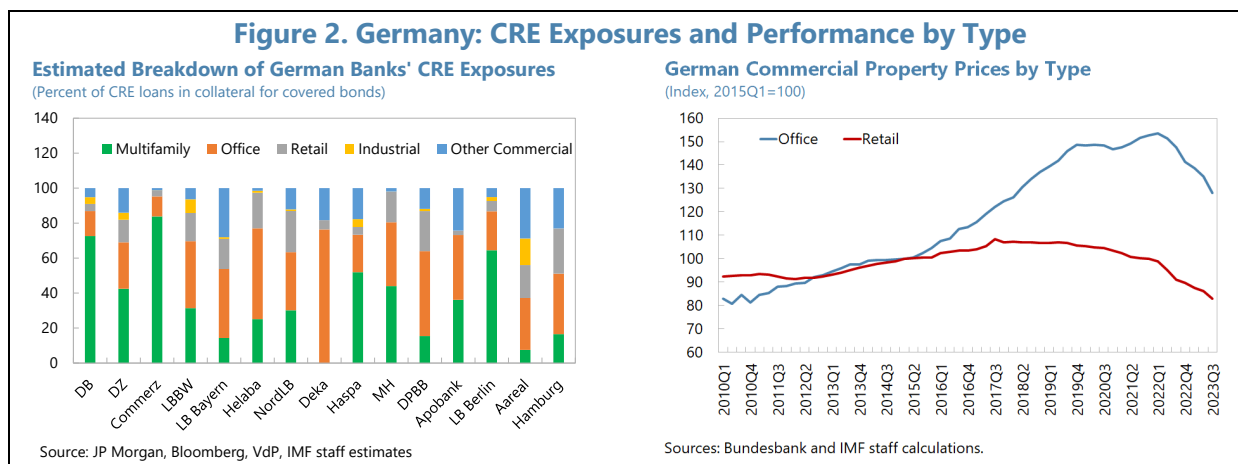
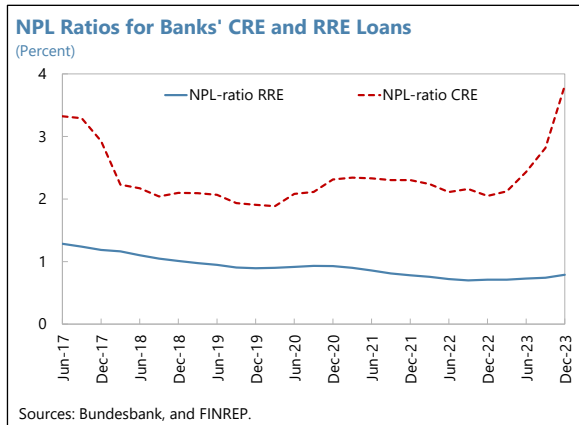


4. Nevertheless, cross-country comparisons of CRE performance are complicated by several factors:

- **Index composition.** While CRE, in general, encompasses a variety of different types of properties, including offices, retail shops, shopping malls, warehouses, factories, and multi-family apartment buildings, there are differences in the mix of these properties in the indexes for US, German, and other CRE—US CRE loans, for instance, tend to have a higher mix of loans for offices, which have experienced higher vacancy rates than in Germany.
- **Index construction methodology.** Some indices are based on actual transactions. In a slowing market, this means that CRE valuations are based on fewer transactions that may or may not represent the wide variety of properties that are encompassed. Other indices are based on rental yields from properties, which will adjust upward in response to rising rents, regardless of whether there has been an actual change in the pricing of CRE properties based on actual transactions.
- **Nature of CRE loans.** The duration of CRE loans and the pace of their principal amortization in one market may be different versus another, which may affect the pace of refinancing, the payment burden, and corresponding exposure to higher interest rates.

5. Delinquencies are rising on CRE loans of German banks while those on residential real estate (RRE) loans are stable. With refinancing costs rising, there has been a pickup in delinquencies of borrowers on CRE loans from banks, with NPL ratios rising sharply to 3.8 percent by

end-2023 from about 2 percent at the start of the year. Meanwhile, NPL ratios on German banks' CRE loans in the US have risen to 10 percent by end-2023. German banks' CRE loans in the US also have smaller collateral cushions than German banks' CRE loans in Germany, as evidenced by higher average loan-to-value (LTV) ratios, of about 80 percent, on US CRE loans, versus 65 percent on German CRE loans, as reported by banks in their filings. However, there is significant variation in individual banks' NPLs from CRE. While delinquencies on CRE loans have risen, defaults have not yet increased correspondingly as banks have worked with borrowers to keep loans current by extending loan maturities or adjusting loan terms and conditions.



6. Rising CRE NPLs have raised some concern about financial stability implications in Germany as elsewhere. This has prompted a review of the exposures of financial institutions to CRE both in Germany and abroad. Data gaps and inconsistencies in the definition of CRE make it difficult to assess exposures consistently. Following a pickup in market concerns about banks' CRE exposure in the latter half of 2023, many German banks took steps to identify such exposure in their year-end filings. The table below shows data reported by the top 15 German banks with CRE exposure, which represent about half of the banking system's CRE loans.²

² Note that the sample excludes German subsidiaries of foreign banks.

Text Table 1. Germany: Real Estate Exposures of Selected German Banks^{1, 2}

	Assets (bn eur)	ROE (percent)	CET1 Ratio (percent of RWA)	RWA (bn eur)	Gross Loans (bn eur)	Loan Loss Allowance (percent of loans)	RRE (bn eur)	CRE (bn eur)	CRE share (percent of loans)	Germany (percent of CRE exposure)	US	Other
Landesbank Bayern	273	8.3	19.3	65	171	0.7	N/A	66	20	85	4	11
Landesbank Hessen-Thuringen	202	4.8	14.7	61	230	0.5	7	44	19	70	8	22
Landesbank Baden-Wuerttemberg	333	6.7	14.9	92	358	0.5	22	43	12	68	8	24
Deutsche Bank	1312	7.5	13.7	350	479	1.1	166	38	8	32	43	25
Aareal Bank	47	1.6	19.4	14	33	1.3	N/A	33	99	8	31	61
Deutsche Pfandbriefbank	51	3.0	15.7	18	49	1.2	6	27	54	43	16	41
DZ Bank	645	8.8	15.5	152	205	1.1	65	26	13	63	10	27
Norddeutsche Landesbank	112	3.4	15.2	41	72	1.0	N/A	17	24	61	5	35
Deutsche Apotheke Aertzte Bank	51	3.1	16.7	16	34	1.4	9	17	50	58	2	40
Deka Bank	85	11.8	19.2	30	73	0.5	N/A	12	16	51	N/A	49
Muenchner Hypotheken Bank	54	5.5	16.5	11	47	0.5	36	10	21	80	2	18
Commerzbank	517	7.7	14.7	175	124	2.7	101	9	7	100	N/A	N/A
Hamburg Commercial	32	6.3	19.5	17	19	2.0	1	7	42	76	4	20
Hamburger Sparkasse	60	3.2	13.4	28	37	4.3	18	5	14	92	N/A	8
Landesbank Berlin	49	4.9	19.0	14	15	2.8	12	2	12	100	-	-
Aggregate	3821	7.2	15.1	1082	1,944	1.0	443	355	18	66	11	23

Sources: Banks' filings as of Q4 2023, FitchConnect, and IMF staff estimates.

1/ Top 15 German Banks by CRE exposure, excluding foreign subsidiaries.

2/ Abbreviations are as follows: Return on Equity (ROE), Risk Weighted Assets (RWA), Residential Real Estate (RRE), and Commercial Real Estate (CRE)

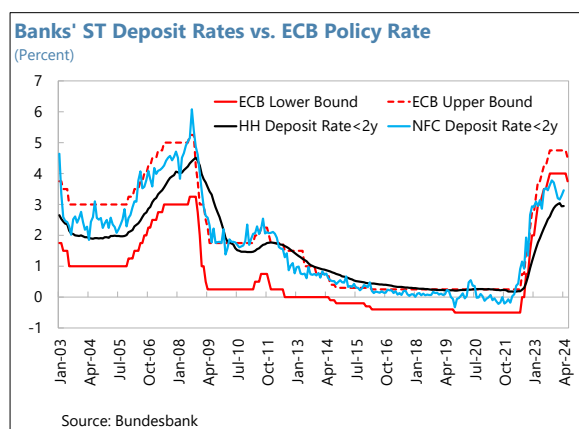
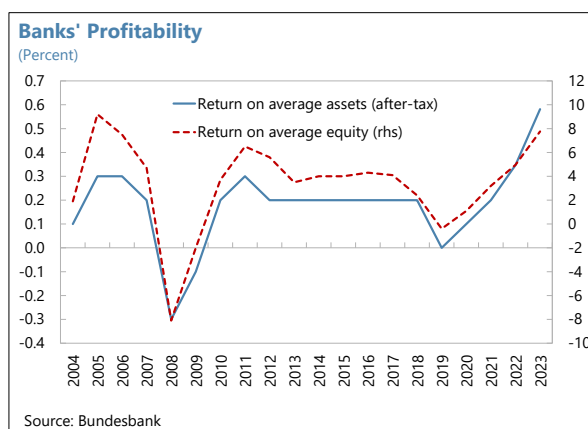
C. Exposure of German Financial Institutions to CRE

7. German banks carry significant loan exposure to CRE in Germany as well as abroad, principally in the US. For the 15 German banks in the sample above, exposure to CRE amounts to 18 percent of their loan books on average, and nearly $\frac{2}{3}$ of this exposure is in Germany (Text Table). These banks also carry significant exposure to US CRE amounting to nearly 11 percent of their CRE loan books on average; however, this exposure is concentrated in a few large banks. On the other hand, the CRE loan books of the large universal German banks seem to have higher exposure to safer multi-family housing loans compared with offices based on available data (Figure 2). The regional Landesbanks and some of mid-range banks and specialized lenders tend to have more exposure to office properties compared with multi-family loans. The banks' choices of locations for CRE loans also matter—for example, the performance of CRE in Germany's largest cities has been somewhat different from that in the rest of the country.

8. Insurers have less CRE exposure, and it is mainly to physical assets, held long-term. Insurers carry less exposure to CRE, which amounts to 8 percent on average of their asset portfolios. In addition, insurers typically have physical holdings of CRE rather than loan exposures. As such and depending on how long they have held these physical assets, insurers may still be sitting on long-term capital gains, despite recent price declines. Applying a stressed impact of some 25 percent decline in CRE prices to insurers' holdings, suggests a 2 percent decline in asset valuations, other factors being constant, which has a modest impact on the high solvency ratio of insurers, both life and non-life, of 330 percent. Insurers may also hold equity assets or corporate bonds issued by CRE-related firms, and this exposure and the extent of its price deterioration is harder to judge given available information on exposure.

D. Solvency Stress Analysis

9. A simplified stress analysis of CRE credit risk carried out by IMF staff shows that it has limited systemic impact on German banks, although some individual banks could face a small capital hit. For an adverse scenario *over a 1-year horizon*, in which the NPL ratio for all German banks rises to 10 percent on German and other European Union CRE and 15 percent on US CRE, with all NPLs going into default, and a 30 percent reduction in banks' 2023 earnings (Text Figures), three banks out of 15 face a capital hit, but still remain reasonably capitalized (Figure 3).³ This result is net of banks' provisions and earnings are assumed to be fully reinvested. This scenario also assumes that recovery on defaulted loans occurs swiftly. Legal and operational costs associated with the foreclosure process are assumed somewhat conservatively to be 30 percent of the foreclosure price largely to reflect interest payments missed on the original loan during the foreclosure process. LTV buffers on CRE loans are assumed to be 80 percent on German CRE loans and 85 percent on US CRE loans—both higher than figures reported by banks to account for the possibility of valuations, the “V” in LTV, not having been updated or marked appropriately or for the possibility for further near-term CRE price declines. This scenario is just intended to be illustrative of possible risks and should not be interpreted as either a baseline or a worst-case scenario.

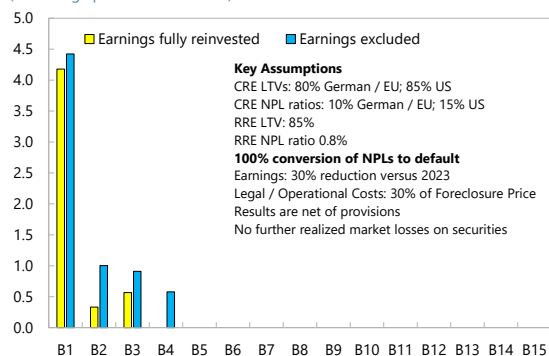


³ The assumption on banks' earnings is partly to adjust for the record profits generated by banks during 2023, which was mainly due to the policy rate tightening environment—banks increased lending rates swiftly but were slower to adjust deposit rates. There has been some increase in deposit rates during 2024, including as households switch from sight to time deposits, but the full-year effect of these higher funding costs will not be realized until 2024—and there is still some scope for deposit rates to catch up with policy rate tightening (Text Figure).

Figure 3. Germany: Potential CRE Stress Impact

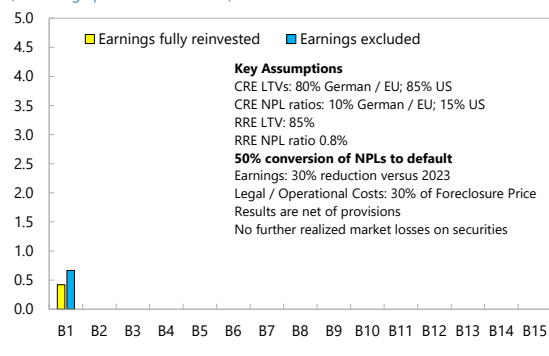
Adverse Capital Impact for Selected Banks 1/

(Percentage points of CET1 ratio)



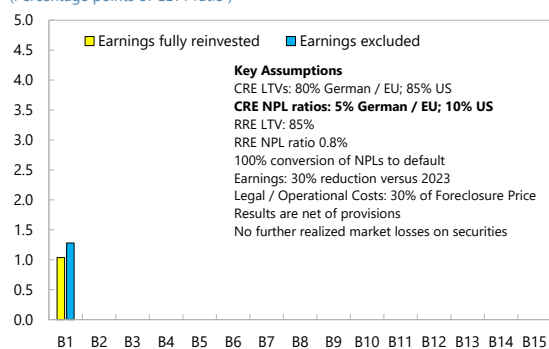
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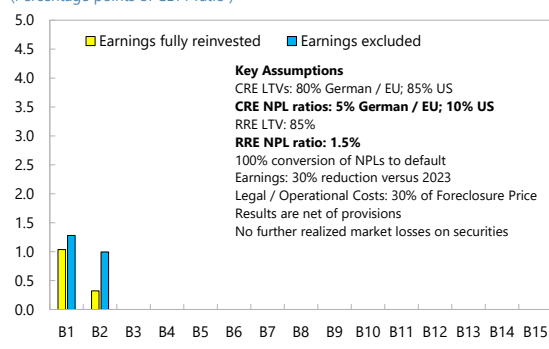
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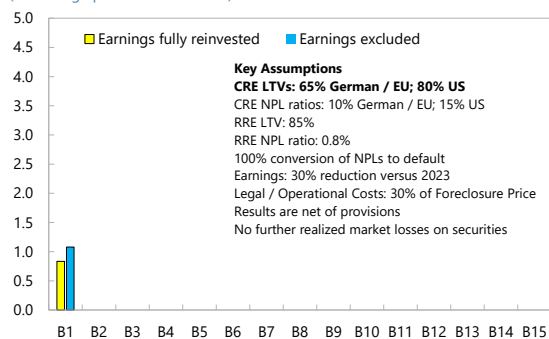
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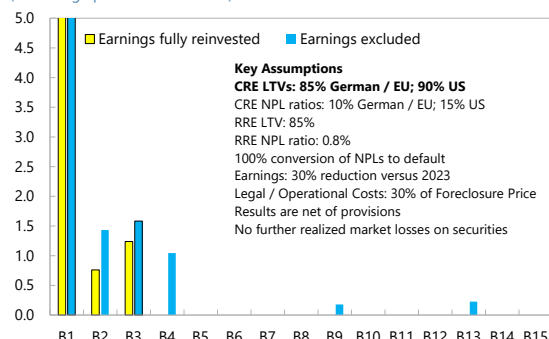
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Adverse Capital Impact for Selected Banks 1/

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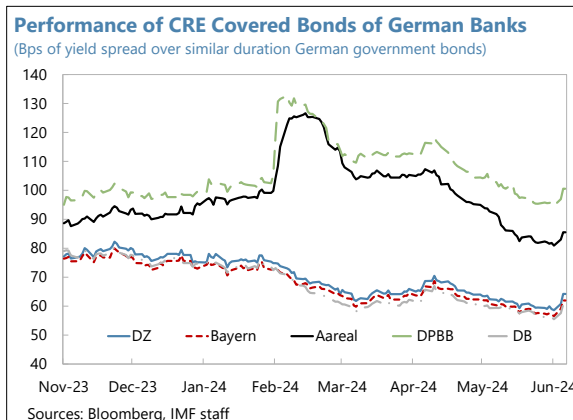


Sources: Bank filings, Bundesbank, and IMF staff estimates.

1/ Note that the banks' numbering above does not correspond to asset size.

10. Banks have faced little market risk from holding covered bonds issued on CRE collateral or from issuing such bonds for funding. Holders of covered bonds are not exposed to

the credit risk of the CRE loans, as long as the issuer is not in default (i.e., any shortfalls in the principal and interest payments relative to scheduled payments from the underlying collateral loans are fully “covered” or made whole by the issuer). If the issuer were to default, then covered bond holders would be protected from bail-in with respect to the issuer and have full recourse to the underlying collateral. Covered bonds are legally required to have at least two percent more in the nominal amount of loans



collateral versus the par value of covered bonds issued. CRE loans are only eligible as collateral up to 60 percent of a property’s lending value (“Beleihungswert”). Banks typically also carry an additional collateral cushion, often as much as 20–30 percentage points more than the two percent requirement. Banks frequently, though not always, diversify the collateral for covered bonds across both residential and commercial real estate loans and are also required to add high-quality liquid assets for liquidity protection. Spreads on covered bonds, which had widened out for some banks during February–March 2024 have largely recovered through early June (Text Figure). Correspondingly market losses on banks holding such securities have reversed.

11. The results from some adjustments to assumptions in the stress scenario are presented in Figure 3. If the assumption on all NPLs going into default is relaxed to allow only half of NPLs to go into default, due as a result of banks working out loan extensions or other proactive restructurings with borrowers to keep them current on loan payments, then the capital impact on banks is less severe, with only one bank facing a capital hit, which is marginal. Other assumptions that lead to different estimates of potential loan losses and corresponding capital impact include those related to the LTV cushion on German and US CRE, the peak NPL impact that occurs on German banks’ exposure to CRE, and potentially higher RRE loan losses.

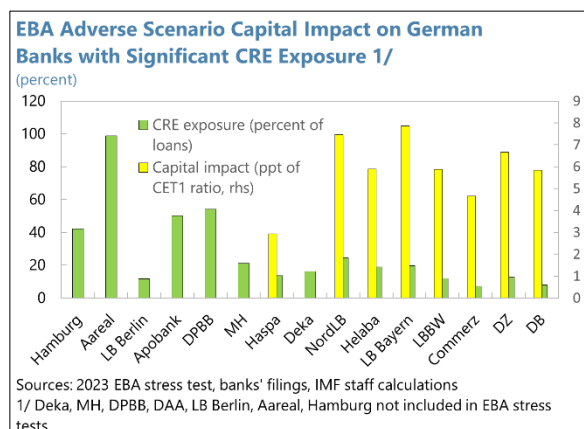
12. The analysis above is subject to several important caveats.

- **Losses on other types of loans.** It should be noted that within the scenario described above, there is no assumption of deterioration in the NPL ratio for other household or corporate loans beyond those directly for real estate. If further deterioration in the CRE sector leads to knock-on effects on related industries or is part of a broader downturn in economic activity and higher unemployment, then banks’ loans to those firms could also come under pressure.
- **Securities losses.** The analysis above does not assume additional losses realized on banks’ holdings of securities either. On the securities side, the Bundesbank in its 2023 FSR noted that nearly $\frac{2}{3}$ of banks had unrealized losses on securities, amounting to 15 percent of par, which were due to higher interest rates but had not been realized due to reclassifications of some types of securities as long-term assets. During Q1 2024, the Bundesbank estimates that banks’

unrealized losses from securities have declined to 1/3 of its earlier estimate because many securities have gained in market value as they have approached maturity (the a “pull-to-par” effect). In addition, the 1-year horizon may be viewed as rather severe for the scenario, as this allows only one year of earnings to provide a buffer against loan losses associated with CRE deterioration.

- **Contagion.** Banks could also face contagion risks from other entities, such as insurers or asset management subsidiaries, from within the same banking group.
- **Funding pressures.** The scenario assumes some decline in earnings from their high levels in 2023, but it does not assume a dramatic increase in funding costs, which could arise for some banks in highly adverse scenarios.

13. The more comprehensive 2023 EBA stress test had significant hypothetical impact on German banks supervised by the ECB. This test featured a highly adverse hypothetical 3-year scenario for Germany, in which GDP falls cumulatively by 6.4 percentage points, inflation rises by 21 percentage points, unemployment rises by 4 percentage points, and residential and commercial real estate prices fall by 26 and 33 percent respectively. In this scenario, German banks *included in the test* lose about 6 percentage points in their CET1 capital ratios, which fall to about 9 percent on average at the end of the scenario horizon. Such an impact would erode existing macroprudential and systemic institution buffers for most of the banks included in the test. It is uncertain what impact it would have on other banks, not included in the test, especially those with high exposures to CRE. While such a scenario is far from the baseline, it highlights the importance of the capital buffers that have been put in place since the Global Financial Crisis and the need for a continued prudent approach to capital conservation.



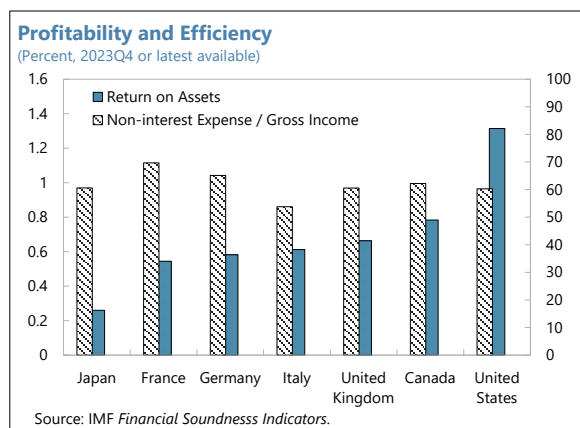
E. Policy Recommendations

14. Given the uncertainties in CRE stress analysis, the authorities should remain cautious and monitor CRE-related risks closely. The following key areas would seem appropriate:

- **Continued close micro-prudential supervision.** Close supervision of banks with high CRE exposure, including in the US, remains appropriate. The authorities should ensure that banks' provisions remain adequate for potential losses. Banks should be conservative with capital distributions, and the authorities should exercise their prerogative to restrict such distributions as warranted by potential losses in relation to existing provisions and buffers.

- **Review of financial safety arrangements.** The authorities should review and test mechanisms for addressing problem banks swiftly, which could include, for instance, taking prompt corrective action, establishing bridge bank and protocols for public communication, or ensuring timely payout arrangements for deposits. Similarly, there may be a case for facilitating swift debt restructuring mechanisms for troubled developers, possibly by deploying online technology to link debtors and creditors.
- **Assessment of macroprudential buffers.** The authorities should also continue to maintain existing macroprudential buffers, including the CounterCyclical Capital Buffer (CCyB) and the Sectoral Systemic Risk Buffer (SSyRB) for loans secured by RRE. Adding income-related borrower-based measures, such as debt-to-income (DTI) and debt service-to-income (DSTI) ratios for RRE, to the macroprudential toolkit would also be welcome. It is also critical to close gaps in CRE data collection with respect to credit underwriting assessments and exposures.
- **Conversions of CRE to other uses.** In some countries, such as the United States, where the CRE market is under pressure, there has been a push for conversions of CRE properties to residential use, which remains in demand.⁴ This poses several technical, legal, and operational challenges: for example, plumbing and ventilation systems have to be retrofitted to match the residential use and there can be legal zoning restrictions. While recognizing these challenges, the authorities could help support private sector initiatives aimed at such conversions by reducing the burden of administrative and legal requirements, for example in relation to zoning restrictions.

15. Over the medium term, the authorities should continue to take steps to strengthen financial stability. Efforts made to strengthen structurally low profitability of banks would also have positive impact on financial stability generally. In this regard, there may be ways to reduce the operational overhead associated with physical offices of many small banks, for example by digitalization of banking services or consolidation. The latter could also have benefits for banks by increasing opportunities for income diversification. A capital markets union (CMU) across the European Union increase savings from economies of scale and might create opportunities for banks to expand sources of non-interest income, for example from investment banking or asset management services.



⁴ See, for instance, the October 2023 US government measures to support conversions of CRE to residential use: <https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/27/fact-sheet-biden-harris-administration-takes-action-to-create-more-affordable-housing-by-converting-commercial-properties-to-residential-use/>

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