



EUROPEAN CENTRAL BANK

EUROSYSTEM

# The rise in defence spending and the euro area economy

Europe's defence build-up:  
macroeconomic, fiscal and  
financial stability challenges

EEA/ESEM Annual Meetings

Dublin, 17 August 2026

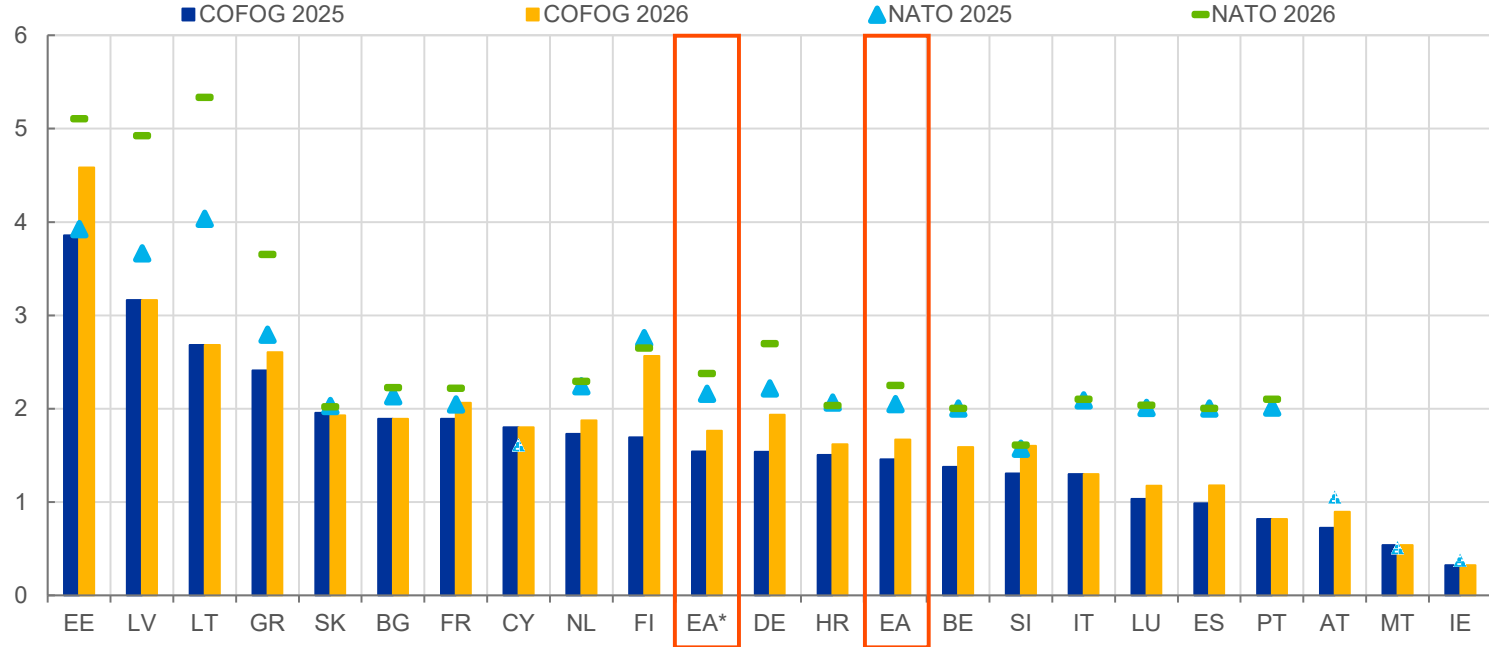


**Philip R. Lane**  
Member of the Executive Board

- 1 Developments in defence spending and its financing
- 2 Financial and funding dimension
- 3 Macroeconomic effects of the increase in defence spending

# Defence spending across euro area countries

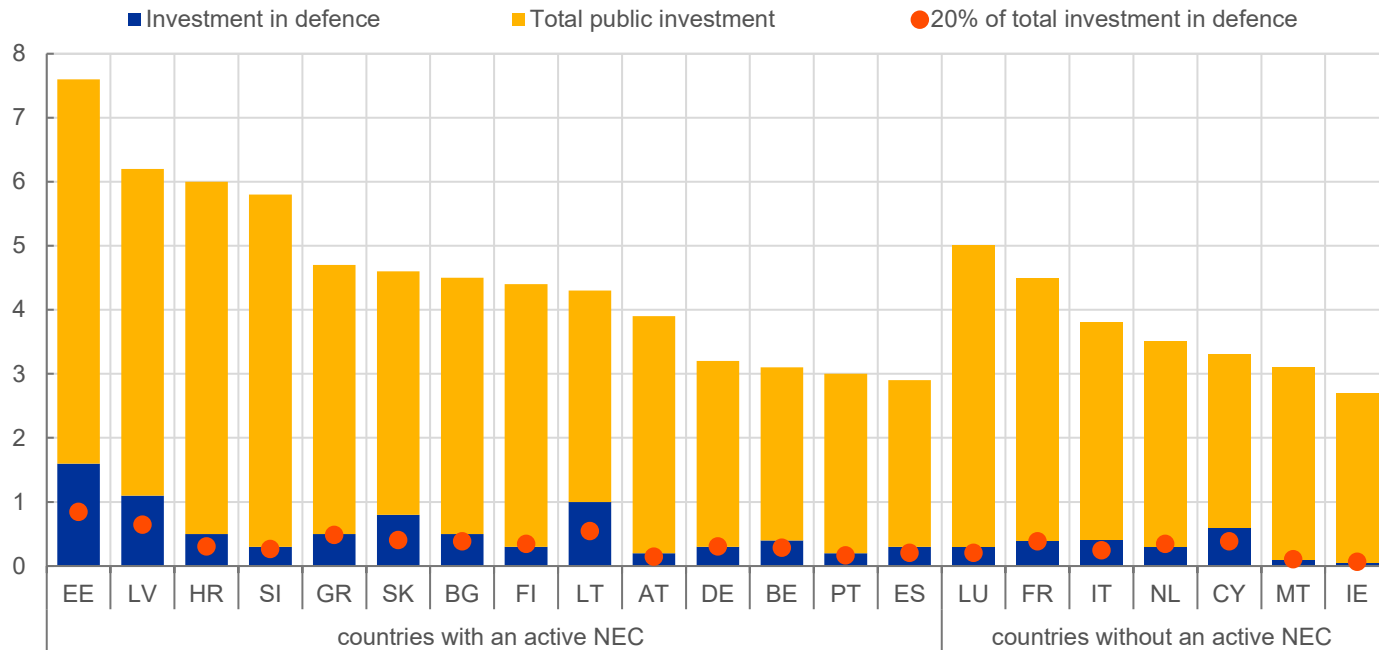
## Defence spending – 2025 and 2026 estimates across different sources (percentages of GDP)



Sources: Eurostat (2026), European Commission Spring 2026 Forecast, North Atlantic Treaty Organization (NATO) (press release 7 July 2026) and European Defence Agency (EDA).  
Notes: Countries are ordered by defence spending as a percentage of GDP in 2025 according to European Commission data (based on the Classification of the Functions of Government (COFOG)). For Ireland, Spain, Italy and the Netherlands, the blue bar shows 2024 data plus the increase in COFOG defence investment from 2024 to 2025. For Ireland, Italy, Cyprus, Latvia, Lithuania and Malta, European Commission data are unavailable for 2026 and defence spending is shown as constant at the assumed 2025 value. For the non-NATO Member States (Ireland, Cyprus, Malta and Austria), 2025 NATO defence spending is approximated by the latest available EDA defence spending data for 2025, shown by the shaded blue markers. Two euro area aggregates are displayed, EA contains all 21 countries, while EA\* contains only the NATO countries. For Ireland, figures are expressed as a percentage of GNI\*.

# Total public and defence investment across euro area countries

## Public investment and investment in defence: 2025 (percentages of GDP)



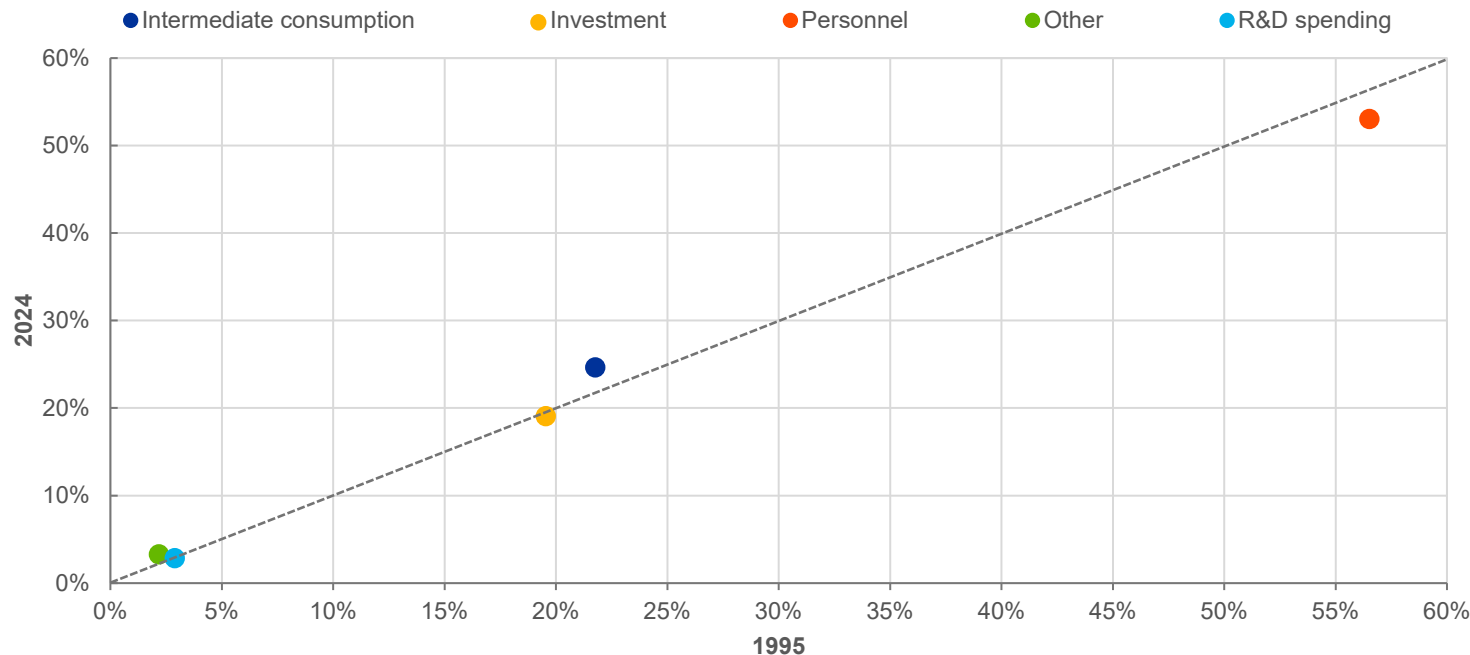
Source: Eurostat (press release 24 April 2026).

Notes: Countries are ordered by total public investment spending (P.51g in ESA 2010) as a percentage of GDP in 2025. The euro area countries are grouped by countries that have activated the national escape clause (NEC, on the left) and the non-NEC countries (on the right). The additional flexibility for defence spending under the EU fiscal framework is equivalent to 1.5% of GDP from 2025 to 2028. This flexibility can be applied if a Member State requests activation on the basis of their increase in defence spending compared with the selected base year. For most of the 14 euro area countries using the NEC, 2021 serves as the base year, while Bulgaria, Spain and Greece use 2024. For Ireland, figures are expressed as a percentage of GNI\*.

# Composition of euro area defence spending over time (21 countries)

## Defence spending breakdown (1995-2024)

(share of total spending)

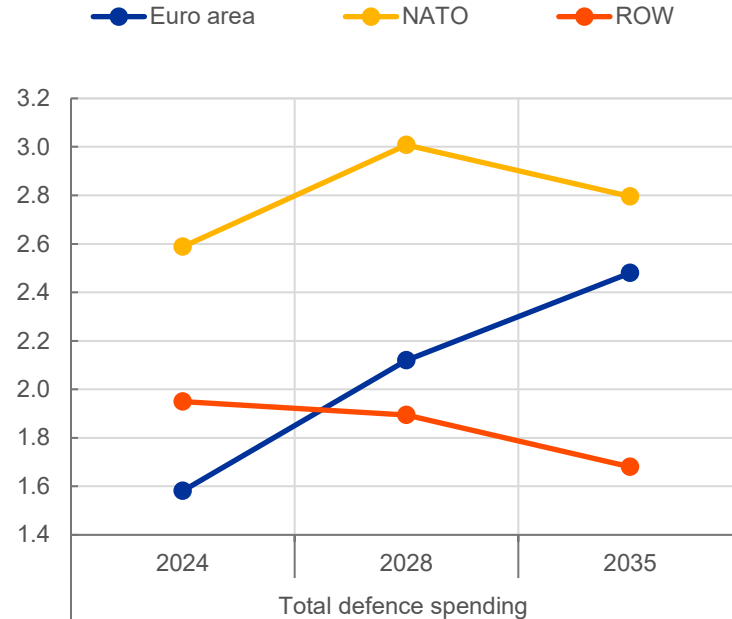


Source: Eurostat (press release 24 April 2026).

Notes: COFOG data. "R&D" defence spending (3% on average) is subtracted from the other components (the biggest share from investment, followed by personnel). "Personnel" denotes the share of compensation of employees plus social benefits (other than social transfers in kind) (here 53% on average, declining share); "intermediate consumption" consists of government use of goods and services, such as fuel, maintenance and other operational inputs, in the day-to-day provision of defence services (24%, increasing share); "investment" denotes gross fixed capital formation, such as the purchase of equipment and infrastructure. The latter category includes military weapon systems, such as warships, submarines, military aircraft, tanks, missile carriers and launchers (19%). "Other" denotes fiscal transfers, including military aid to Ukraine, and other spending (3% on average, increasing after 2021).

# Long-term outlook for defence spending and its composition

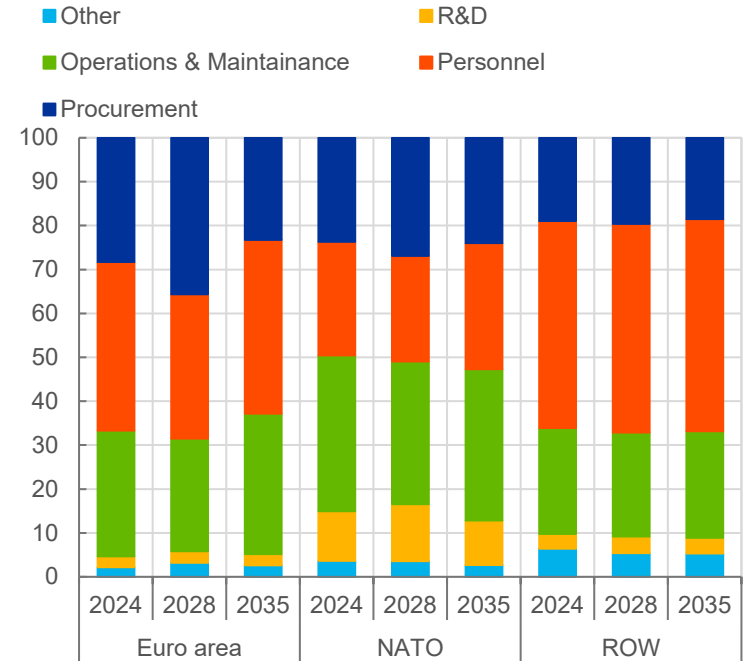
## Total defence spending (percentages of GDP)



Sources: Janes databases and ECB staff calculations for the aggregation.

Notes: ROW stands for rest of the world. The ROW aggregate excludes the NATO countries. The euro area aggregates exclude Malta and Cyprus.

## Spending by functional category (shares of total spending)



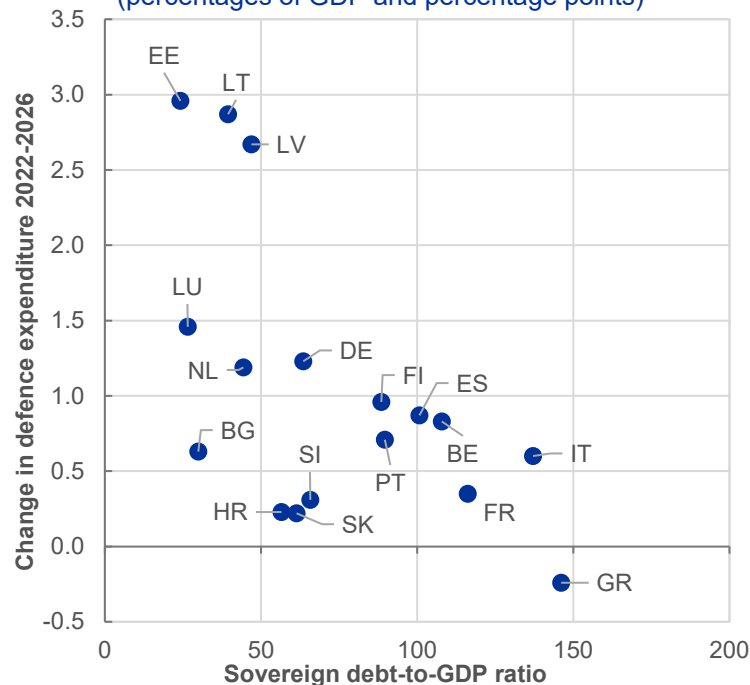
Sources: Janes databases and ECB staff calculations for the aggregation.

Notes: The euro area aggregate excludes Malta and Cyprus. The NATO aggregate excludes the non-NATO euro countries Ireland, Cyprus, Malta and Austria. ROW stands for rest of the world, excluding the NATO countries. R&D stands for research, development, testing and evaluation, according to Janes database classification.

# Defence spending and fiscal positions in euro area countries

## Change in defence expenditure and sovereign debt-to-GDP ratio

(percentages of GDP and percentage points)

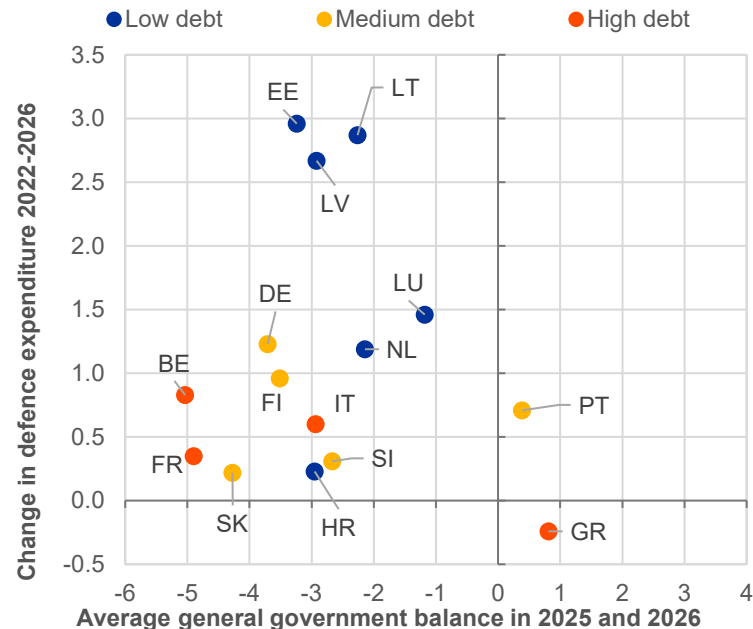


Sources: ECB, NATO and ECB calculations.

Notes: Only euro area countries that are members of NATO are included. The sovereign debt-to-GDP ratio refers to the fourth quarter of 2025.

## Change in defence expenditure and general government balance

(percentages of GDP and percentage points)



Sources: ECB and Eurostat (government finance statistics), European Commission (draft budgetary plans), NATO and ECB calculations.

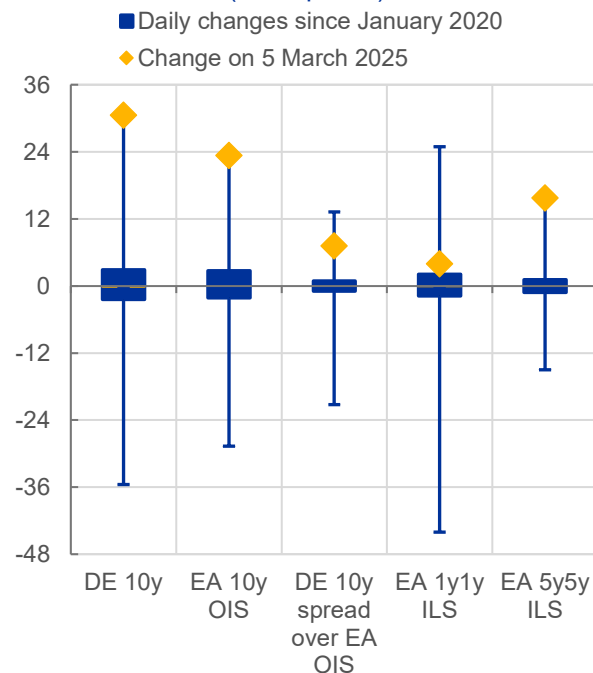
Notes: Low debt means a debt-to-GDP ratio below 60%, medium debt a ratio between 60% and 100% and high debt a ratio above 100%. The chart shows the average of the actual general government balance in 2025 and draft budgetary plans for 2026. Spain is missing from the chart as it has not submitted a draft budgetary plan for 2026. Bulgaria is missing as it had not yet joined the euro area in 2025 and was therefore not required to submit a draft budgetary plan for 2026.

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# Financial market impact of German announcement on defence spending increases

## Cross-market reaction to 5 March German fiscal announcement

(basis points)

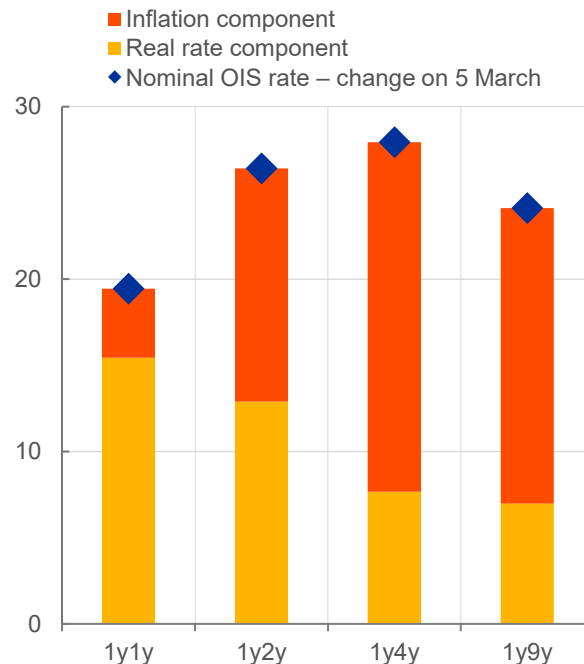


Sources: Bloomberg, LSEG and ECB calculations.

Notes: The chart shows the one-day changes in key financial market indicators on 5 March 2025 following the German fiscal announcement. Box plots are based on daily changes since 1 January 2020 and show the minimum, the 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles, and the maximum of the respective historical distributions. The latest observations are for 13 August 2026. DE stands for Germany, EA stands for euro area, OIS for overnight index swap, and ILS for inflation-linked swap.

## Reaction of euro area OIS rates to German fiscal announcement

(basis points)

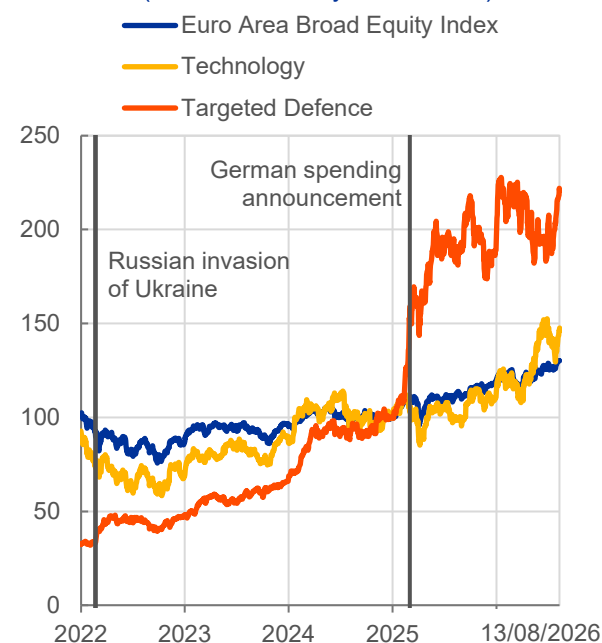


Sources: Bloomberg, LSEG and ECB calculations

Notes: The chart decomposes the one-day change in the respective nominal euro area overnight index swap (OIS) forward rates on 5 March 2025 into the contributions from the real rate component and inflation compensation. The real rate component is calculated by subtracting the inflation-linked swap rate from the nominal OIS rate.

## EA equity market performance: broad index, technology, defence

(index: 1 January 2025 = 100)

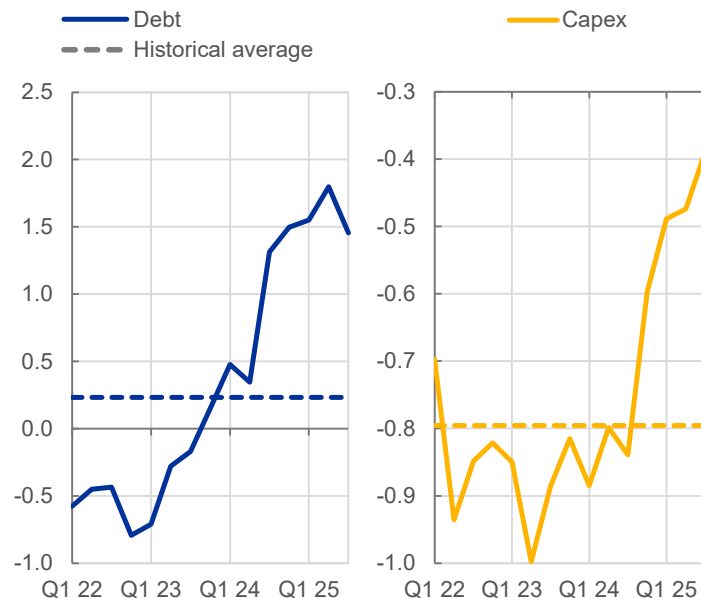


Sources: LSEG and ECB calculations.

Notes: Values are normalised to 100 on 1 January 2025. Vertical lines mark the days before the "Russian invasion of Ukraine" on 24 February 2022 and the "German spending announcement" on 5 March 2025, respectively. The latest observations are for 13 August 2026. EA stands for euro area.

# Effects of exposure to defence on corporate financing and investment

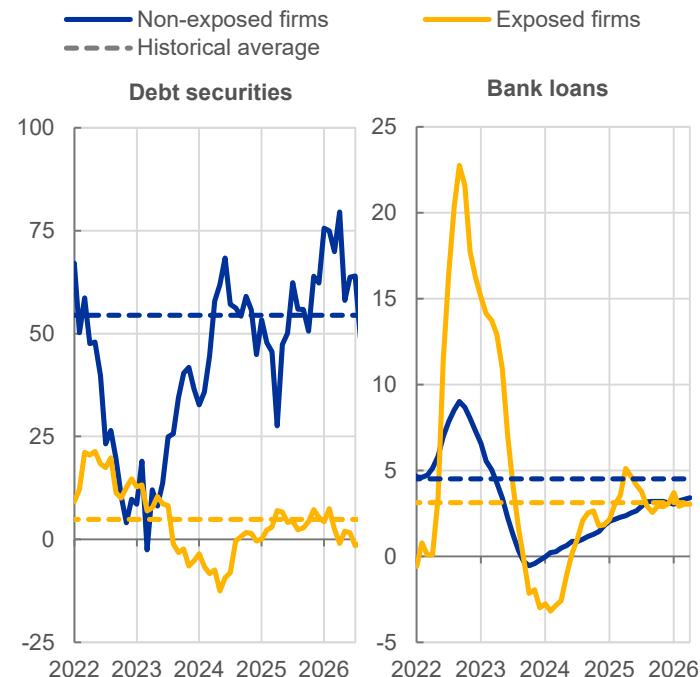
## Difference in debt and investment between firms exposed and not exposed to defence (percentage points)



Sources: LSEG, NL Analytics and ECB calculations.

Notes: The latest observations are for the third quarter of 2025 for LSEG and fourth quarter of 2025 for NL Analytics. Exposure of euro area firms to defence and infrastructure spending is derived from the frequency with which they mention related expressions in earnings calls. Exposed firms made up 7% of the total number of listed firms in the second quarter of 2025.

## Debt by exposure to defence and infrastructure (left panel: 12-month trailing sum of net issuance; right panel: percentages per annum)



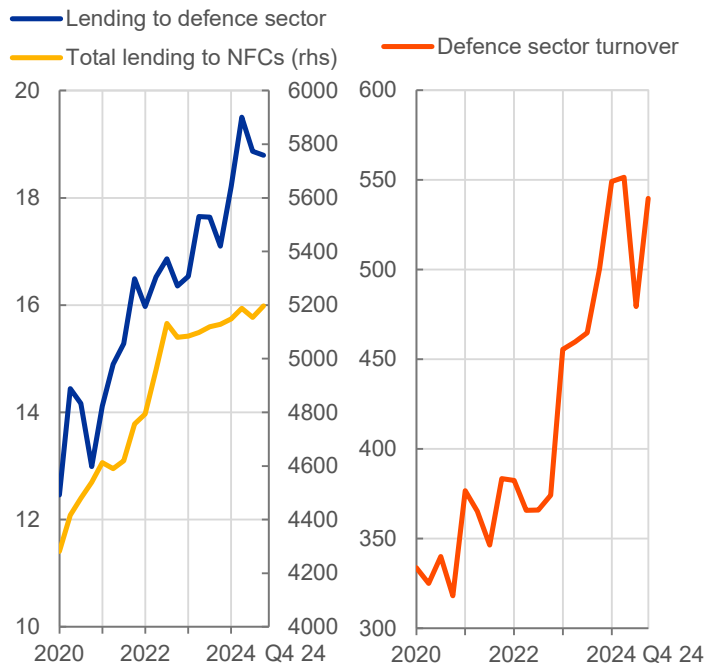
Sources: ECB (AnaCredit, Centralised Securities Database (CSDB)), NL Analytics and ECB Calculations

Notes: A firm is defined as exposed to defence if a related keyword has been contained in at least one of its earnings calls since second quarter of 2022. Historical averages start in 2018 and 2020 respectively for the CSDB and AnaCredit for reasons of data availability for the exposed firms. Bank loan growth is smoothed using a five-month centred moving average. The latest observations are for April 2026 for Anacredit and July 2026 for the CSDB.

# Euro area bank exposures to the defence sector

## Lending to the defence sector and total turnover in the defence sector

(EUR billions)

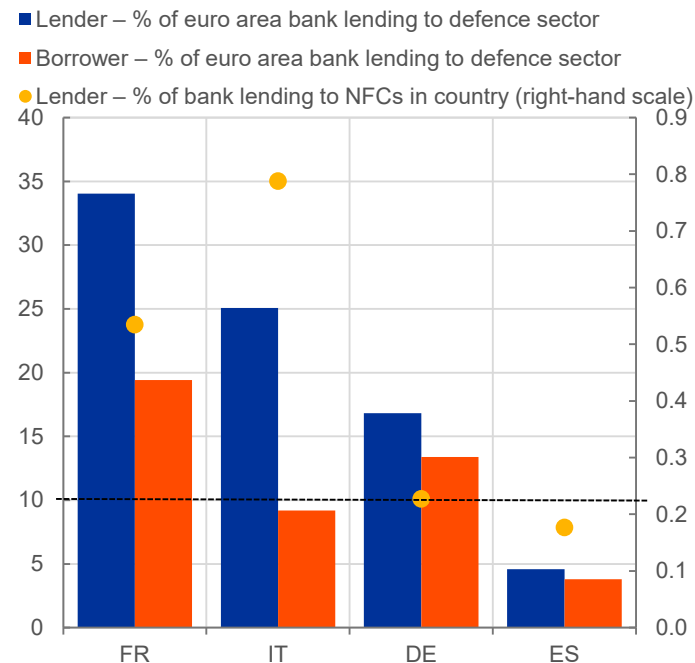


Sources: ECB (AnaCredit), ECB calculations.

Note: Turnover values refer to defence-sector firms that borrow from euro area banks and therefore the figure does not represent total turnover of the entire defence sector. NFC stands for non-financial corporations.

## Share of defence sector lending – lenders and borrowers

(percentages in 2024)



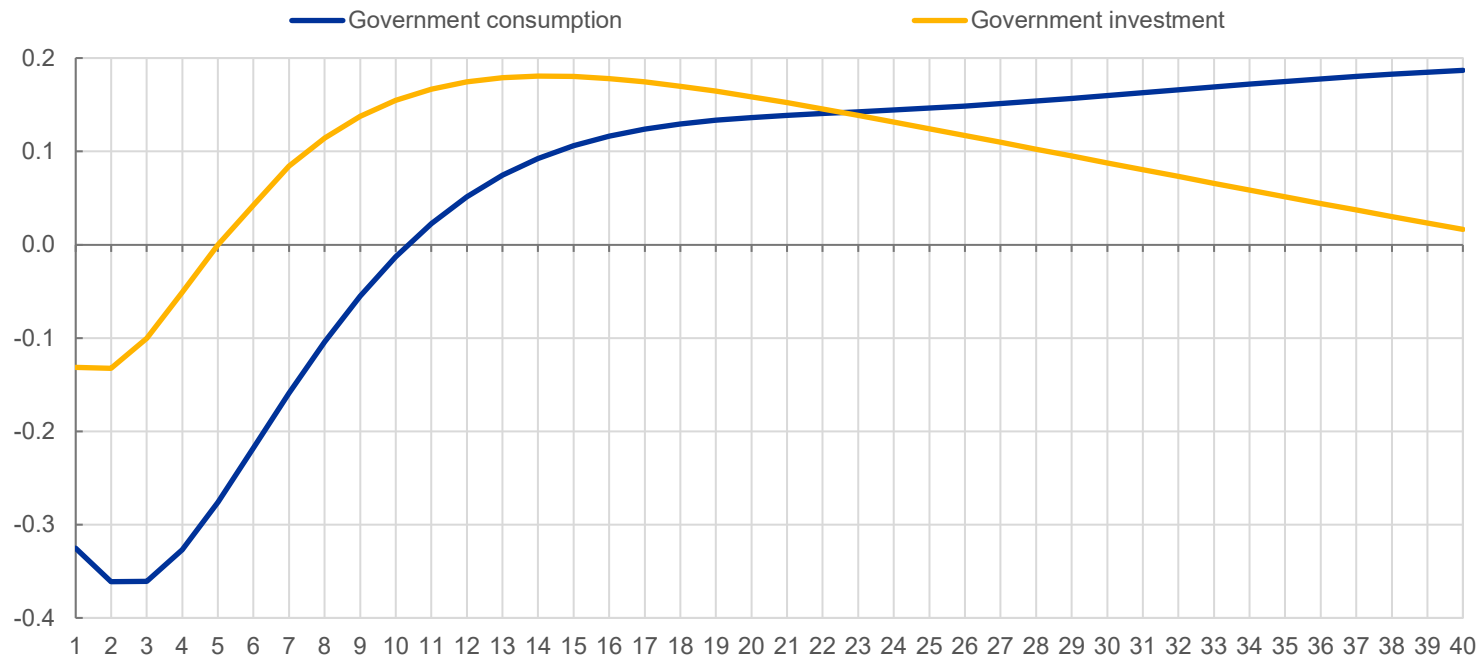
Sources: ECB (AnaCredit), ECB calculations.

Note: The horizontal line indicates the average share of lending to the defence sector in total lending by euro area banks to NFCs. NFC stands for non-financial corporations. 2024 data.

# Effects of defence spending on the real interest rate

## Effects of different types of defence expenditure on the real interest rate

(horizontal axis: quarters after the increase in spending, vertical axis: percentage points)

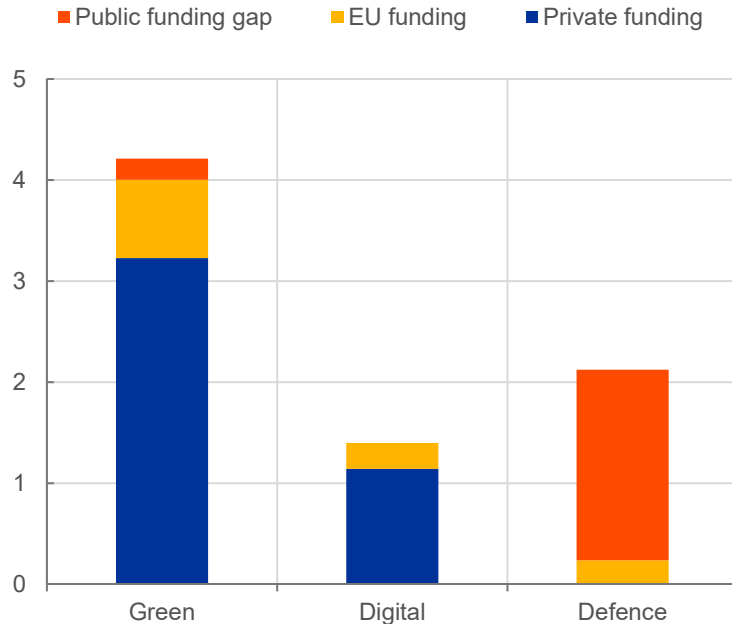


Sources: ECB staff calculations. Notes: Effect of a 1% of GDP government consumption increase in the euro area lasting 25 years in a version of the EAGLE model (Gomes et al., 2012). The model is extended to include preferences over safe assets as in Rannenberg (2021) and Rannenberg (2025). This feature introduces long-run effects of a fiscal expansion on the real interest rate by lowering the response of private consumption to higher current and expected future real interest rate increases, and introduces a wealth effect from the supply of government bonds on consumption. Government consumption enters household utility as a complement as in Clancy et al. (2016). Without this feature, the long run (ten-year) effect of the fiscal expansion on the real interest rate would be slightly more than half as big. The result for government investment differs because government investment raises productive capacity while having a smaller effect on private demand. In order to raise private demand correspondingly, the real interest rate has to eventually decline.

# Funding gap for strategic investment

## Estimated annual spending needs in defence and other strategic investment

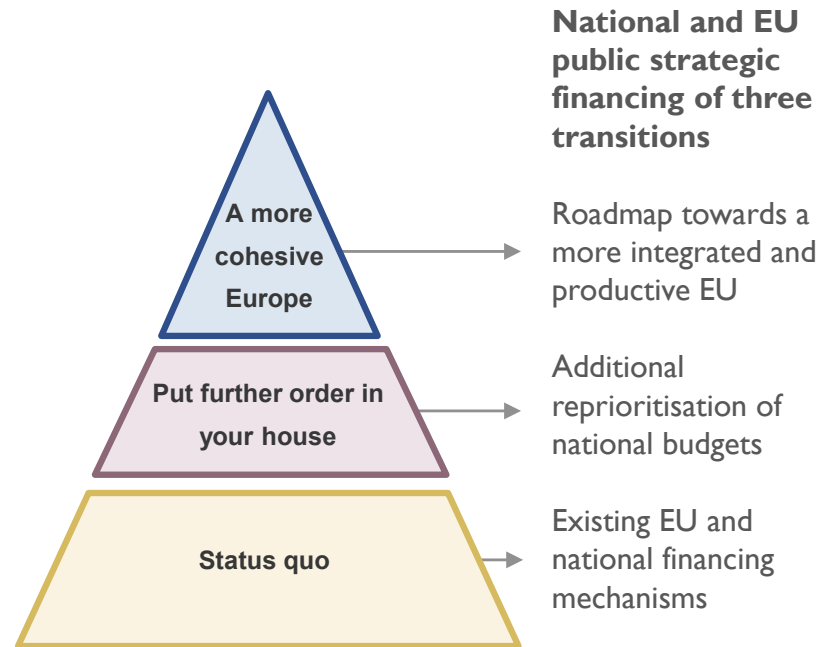
(percentages of GDP)



Sources: European Commission, European Parliamentary Research Service, NATO, European Investment Bank and ECB staff calculations.

Note: Based on Bouabdallah et al. (2025). Defence, green and digital investment needs in the EU, expressed as a percentage of 2024 GDP and broken down into private funding (blue bars), already existing EU funding (yellow bars), and the public funding gap (red bars).

## Multi-pronged approach for public financing of strategic investment needs



Source: Bouabdallah et al. (2025).

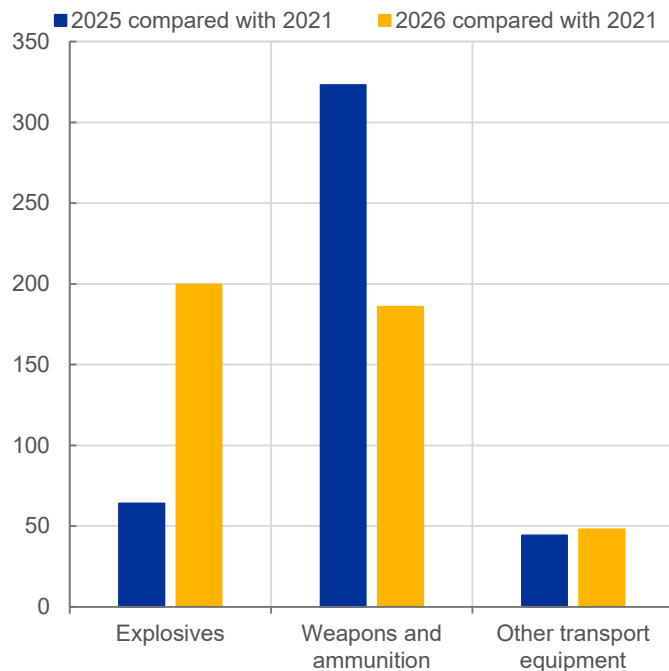
Note: Financing of the three transitions at EU and national level.

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# Expansion of activity in different defence sectors in Germany

## German domestic manufacturing orders

(percentage changes compared with 2021 levels)

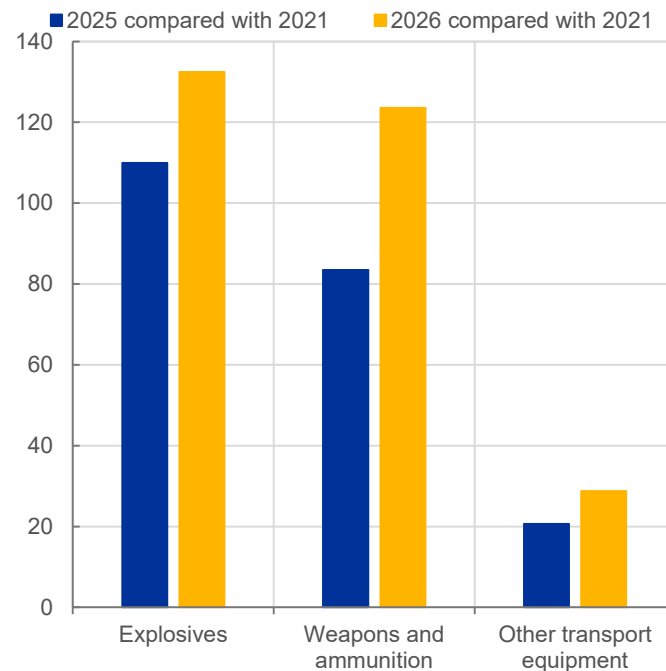


Sources: Federal Statistical Office and ECB staff calculations.

Notes: Orders refer to domestic orders. "Other transport equipment" includes military fighting vehicles, alongside ships, aircraft and rail equipment. Chart shows the percentage change in the average domestic order volume index for 2026 and 2025 compared with 2021. 2026 values are based on January-June data. The latest observations are for June 2026.

## German manufacturing production

(percentage changes compared with 2021 levels)



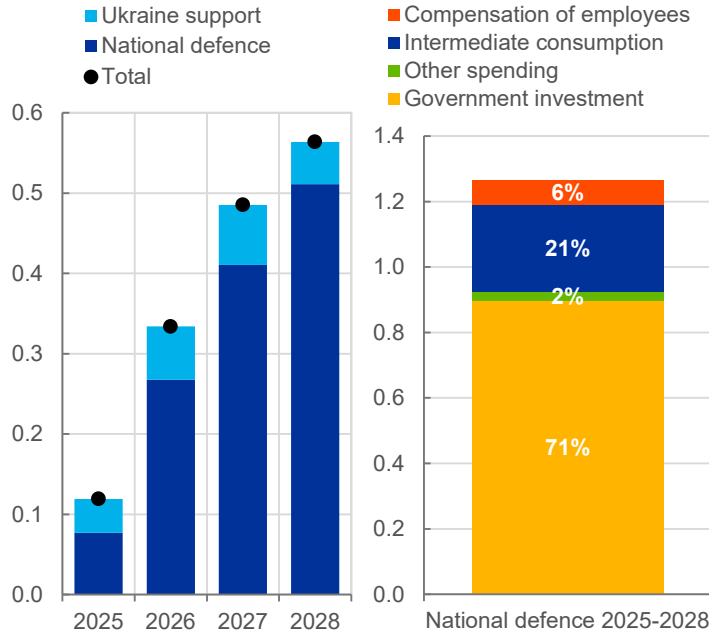
Sources: Federal Statistical Office and ECB staff calculations.

Notes: Chart shows the percentage change in the average production index for 2026 and 2025 compared with 2021. 2026 values are based on January-June data. The latest observations are for June 2026.

# Baseline: Effects of additional defence spending since 2025 Munich Security Conference

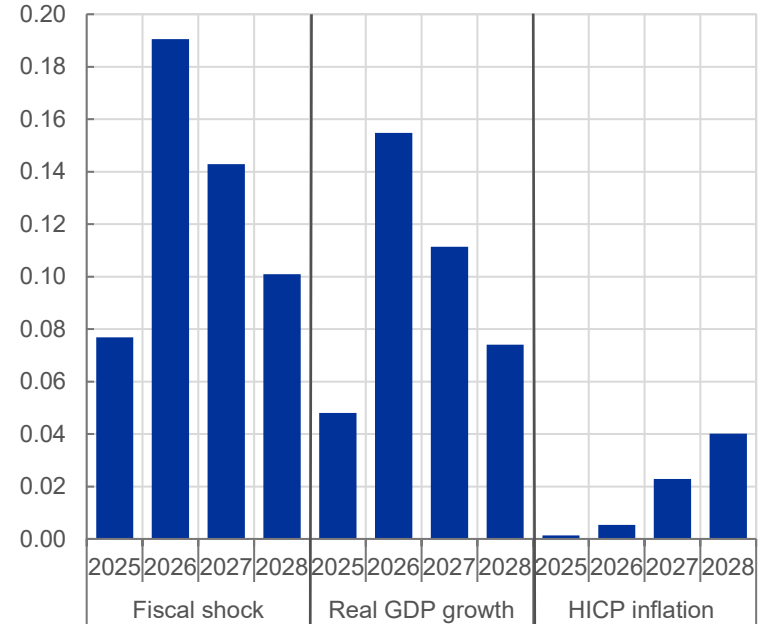
## Euro area additional defence spending and composition since February 2025

(left-hand scale: percentages of GDP; right-hand scale: percentage of GDP, component shares, percentages)



## Estimated macroeconomic effects of the additional national defence spending

(fiscal shock: percentage points of GDP; macroeconomic effects: percentage points)



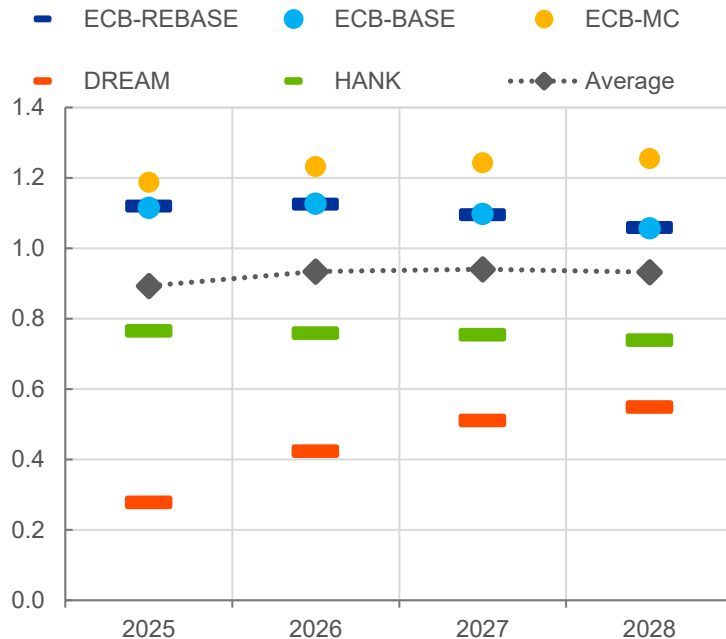
Sources: Eurosystem staff macroeconomic projections for the euro area, June 2026, and ECB calculations. Forthcoming in Checherita-Westphal, C., Rodríguez-Vives, M., Lalinsky, T. and Parker, M. (2026).

Notes: Fiscal shock in the RHS chart defined in marginal terms, that is, annual change of the levels of additional *national* defence spending shown in LHS chart (dark blue bars) (defence spending on Ukraine support is assumed not to have a direct macroeconomic impact on the euro area economy). The macroeconomic effects are aggregated at the euro area level on the basis of country-specific estimates produced using simulation models of the Eurosystem national central banks. They are expressed as a percentage point deviation from a baseline without the additional defence spending, keeping monetary policy, exchange rate and financial spreads fixed at their baseline values.

# Macroeconomic impact of a gradual fiscal expansion – multipliers in projection models

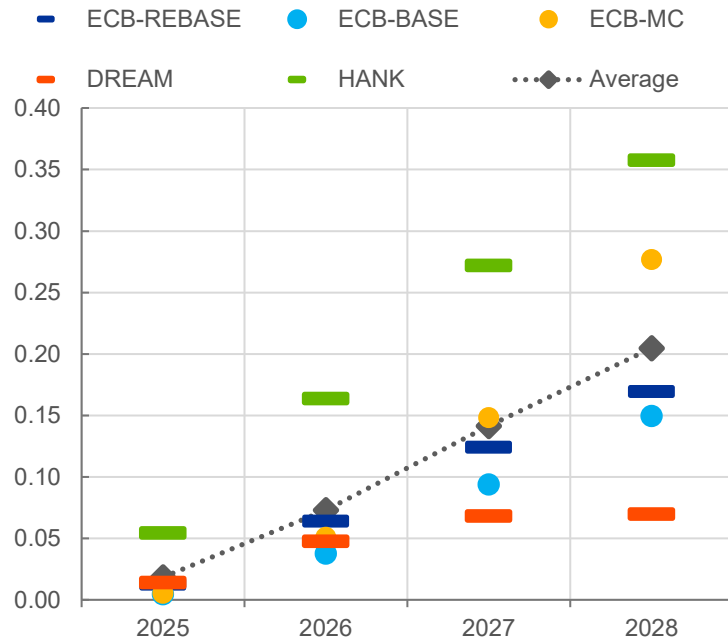
## Euro area GDP multiplier

(change in GDP per unit of change in government defence spending in percentage points)



## Euro area HICP inflation

(annual average deviation from baseline growth in percentage points)



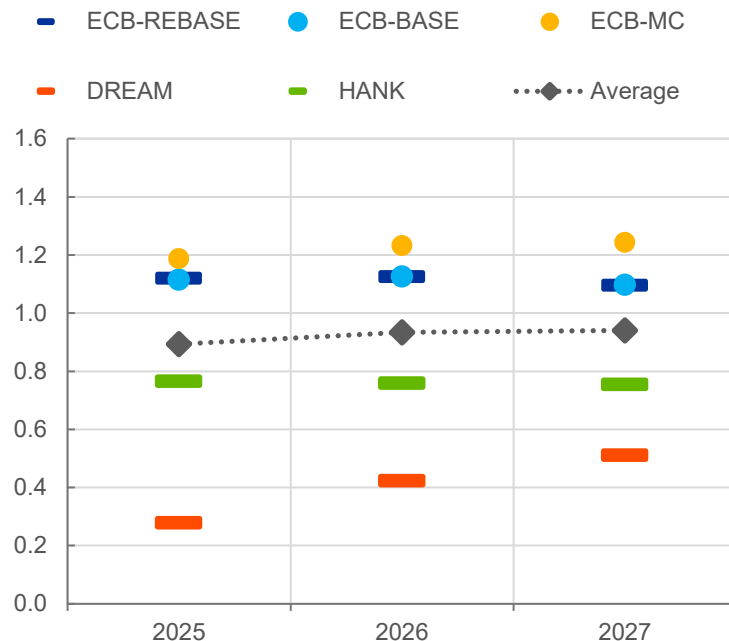
Sources: Bokan, N., Jacquinot, P., Lalik, M., Müller, G., Priftis, R. and Rigato, R. (2025), "Macroeconomic impacts of higher defence spending: a model-based assessment", *Economic Bulletin*, Issue 6, ECB.

Notes: The charts report the estimated impact of an increase in defence-related expenditure from 2% of GDP in 2025, gradually building up until the target of 3% is reached at the beginning of 2028, and then remaining constant over the medium term. The instrument is government consumption purchases. Monetary policy and exchange rates are active to facilitate model comparison.

# Macroeconomic impact of defence spending – multipliers in projection models

## Euro area GDP multiplier: across models

(change in GDP per unit of change in government defence spending in percentage points)

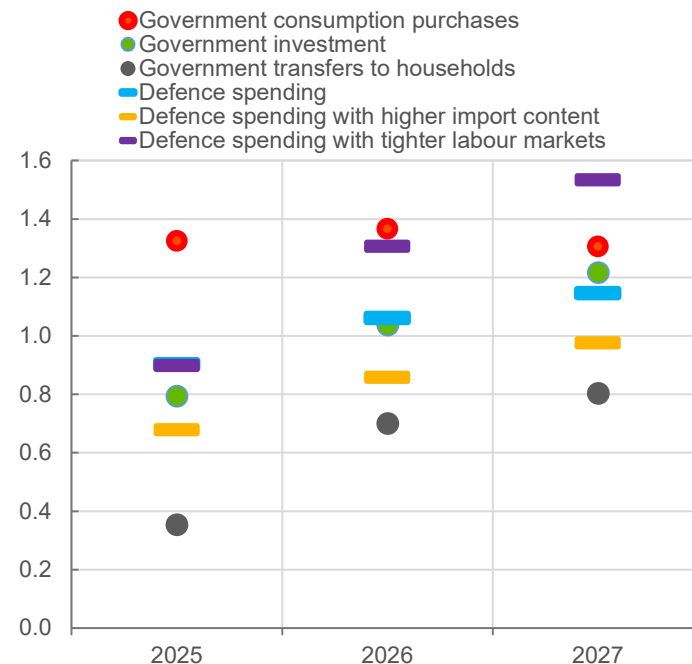


Sources: Bokan, N., Jacquinot, P., Lalik, M., Müller, G., Priftis, R. and Rigato, R. (2025), “Macroeconomic impacts of higher defence spending: a model-based assessment”, *Economic Bulletin*, Issue 6, ECB.

Notes: The spending instrument is government consumption purchases. Monetary policy and exchange rates are active to facilitate model comparison. The charts report multipliers from an increase in defence-related expenditure from 2% of GDP in 2025, gradually building up until the target of 3% is reached at the beginning of 2028, and then remaining constant over the medium term.

## Euro area GDP multiplier: state-dependencies and different instruments

(change in GDP per unit of change in gov. spending in percentage points)



Sources: Checherita-Westphal, C., Huber, C., Rodríguez-Vives and Müller, G. (2025).

Notes: All simulations with ECB-BASE at fixed monetary policy and fixed exchange rates. Government consumption purchases only: same multiplier as in the left-hand side chart. Defence spending composition assumes spending to be distributed across public consumption (40%), investment (40%), compensation (15%) and transfers (5%). “Higher import content” assumes that the import content of all spending is 50% instead of 16% as in the benchmark calibration. “Tighter labour markets” assumes a steeper slope of the wage Phillips-curve and a stronger correlation of private sector with public sector wages than in the benchmark.

# Modelling the sensitivity of macroeconomic impact of a gradual fiscal expansion

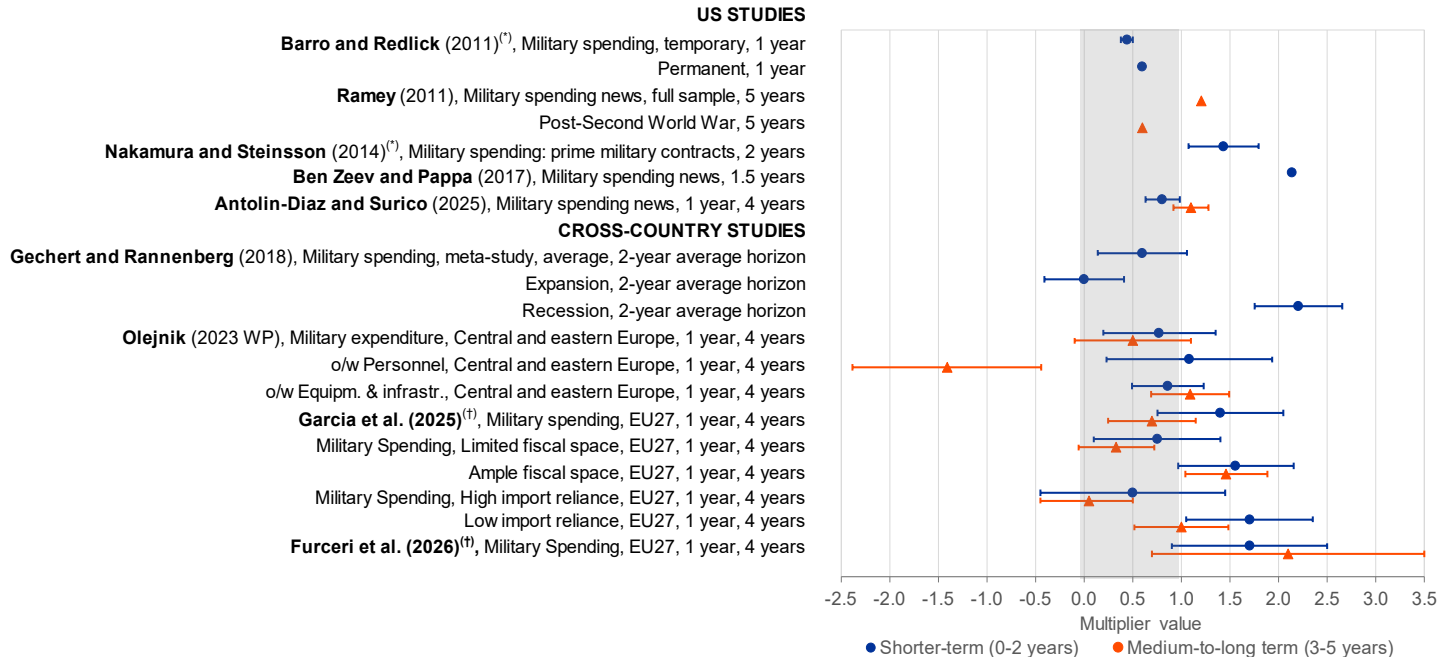
|                                                         | GDP multiplier | Household consumption | Business investment |
|---------------------------------------------------------|----------------|-----------------------|---------------------|
| a) Higher share of public investment                    | ↑↑             | ↑↑                    | ↑↑                  |
| b) Spending with close complementarity to private goods | ↑↑             | ↑↑                    | ↑↑                  |
| c) Spending targeted at low-income sectors              | ↑              | ↑↑                    | ↓↓                  |
| d) Higher import content                                | ↓              | ↓                     | ↓                   |
| e) Anticipation of future monetary policy tightening    | ↓              | ↓                     | ↓↓                  |
| f) Anticipation of tax hikes to finance budget deficits | ↓↓             | ↓↓                    | ↓                   |

Sources: Bokan, N., Jacquinot, P., Lalik, M., Müller, G., Piftis, R. and Rigato, R. (2025), "[Macroeconomic impacts of higher defence spending: a model-based assessment](#)", *Economic Bulletin*, Issue 6, ECB.

Notes: (a) Fiscal expansion via government investment instead of government consumption purchases in ECB-MC. (b) Increase in the elasticity of substitution of private and public goods in DREAM. (c) Higher demand for low-skilled workers in HANK. (d) Increase in the share of imported goods related to the provision of the government consumption goods in DREAM. (e) Comparing forward-looking expectation hypothesis in the yield curve with a backward-looking setting using ECB-(RE)BASE. (f) Assumption that deficit is fully financed by increases in labour taxation in ECB-REBASE.

# Substantial uncertainty surrounding fiscal multipliers of defence spending

## GDP fiscal multipliers of military spending in empirical studies



Sources: Checherita-Westphal and Særkjær (2025) and updates.

Notes: The dots represent the (main) estimate of the cumulative defence spending multiplier, and the bands indicate one standard deviation when available or readily calculated. When multiple results were available, the selection was made based on the original author's preferred specification to ensure a relevant comparison with the other studies, and for a one and four-year horizon (centre of the shorter and medium to long-term horizons respectively). Multipliers shown measure an increase in GDP from a one unit (e.g. USD 1 or EUR 1) increase in defence spending. For the studies marked with (\*), the multiplier measures the percentage point increase in the GDP growth rate following a 1 percentage point increase in the defence-spending-to-lagged GDP ratio. For the studies marked with (†), the multiplier measures the percentage point increase in GDP relative to trend from a 1% increase in defence spending relative to trend GDP. Other studies have used military spending (news) as an instrument for more general government spending.

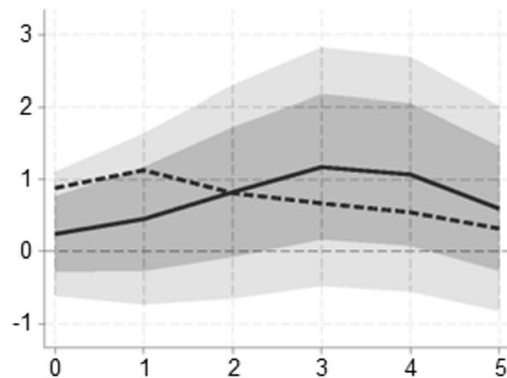
# GDP and price effects: empirical evidence across EU countries over 1999-2025

## Cumulative impact of total defence spending

(bold line: with "adjusted" capital spending component to improve timing of the fiscal shock by accounting for delays in delivery of large equipment; dashed line: not "adjusted" as per COFOG recording of capital spending in national accounts)

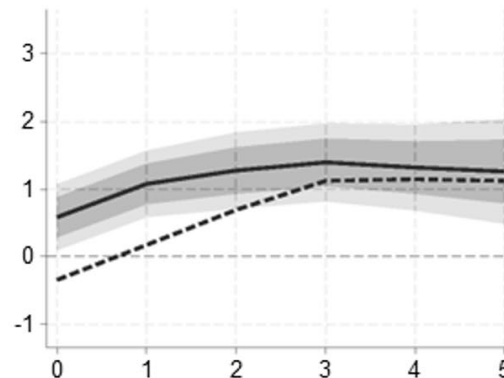
### GDP

(y-axis: cumulative effects over a 5-year horizon of 1% trend GDP increase in defence spending, percent deviation from trend GDP; x-axis: horizon in years)



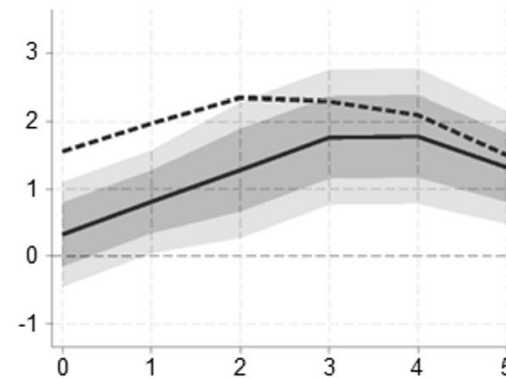
### HICP inflation

(y-axis: cumulative effects over a 5-year horizon of 1% trend GDP increase in defence spending, percentage points; x-axis: horizon in years)



### GDP deflator growth

(y-axis: cumulative effects over a 5-year horizon of 1% trend GDP increase in defence spending, percentage points; x-axis: horizon in years)



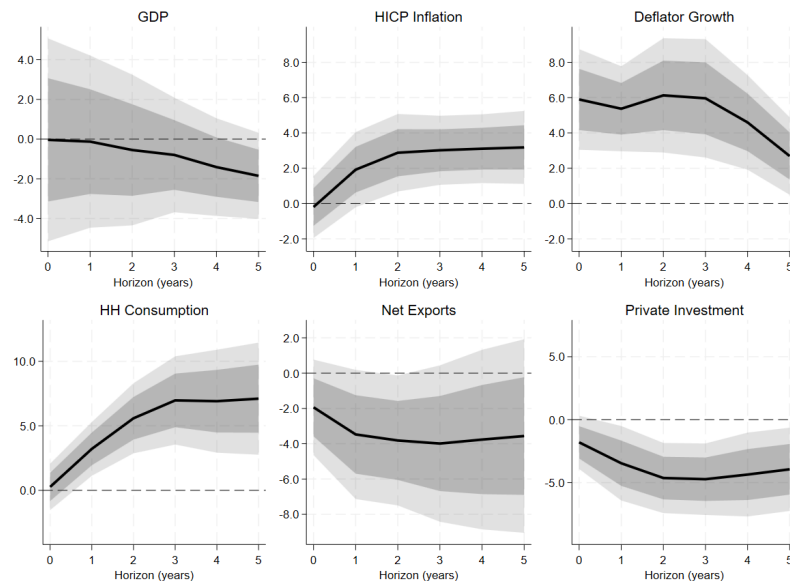
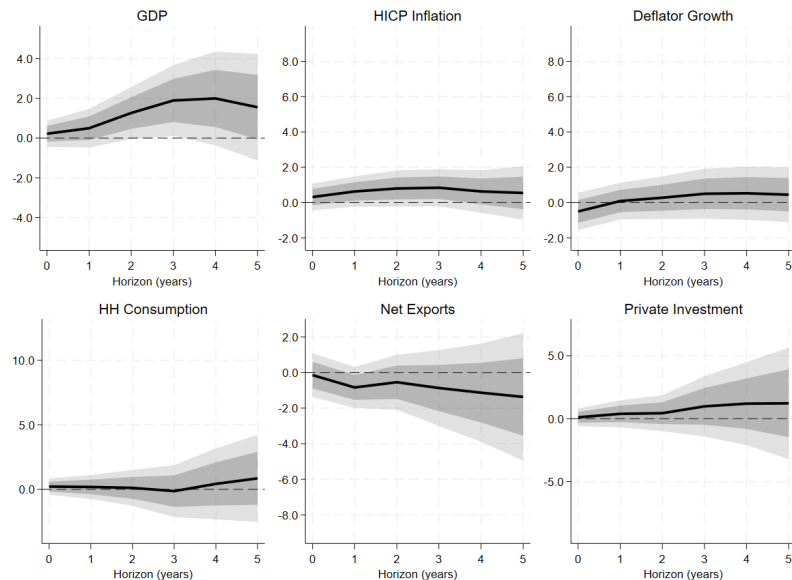
Notes: Estimates for the sample of the 27 current EU Member States over 1999-2025 from Checherita-Westphal and Særkjær (2026) using the panel local projection (LP) method of Jordà (2005). The charts show cumulative effects over a five-year horizon after a defence spending increase by 1% of trend GDP (fiscal shock in year 0). The cumulative (real) GDP multiplier shown follows the specification of Ramey and Zubairy (2018). The "adjusted" capital defence spending is aimed at improving the timing of the fiscal shock by "leading" the capital component of COFOG defence spending data using a country-specific "delivery time delay" proxy constructed on the basis of the SIPRI Arms Transfer Database (ATDB). The GDP variable is expressed in constant prices and effects are shown in percent deviations from (lagged) trend GDP. The effects for the HICP inflation and (GDP) Deflator growth are in percentage points. The baseline control variables include four lags of non-defence government expenditure, government revenue, trade openness (imports plus exports), the real effective exchange rate and gross public debt, as well as four lags of the dependent variable and defence spending variable. Country and year time effects are used throughout. Confidence bands: grey 68% and light grey 90%. Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

# GDP and price effects of different defence spending categories

## Cumulative impact of "adjusted" capital spending

## Cumulative impact of personnel spending

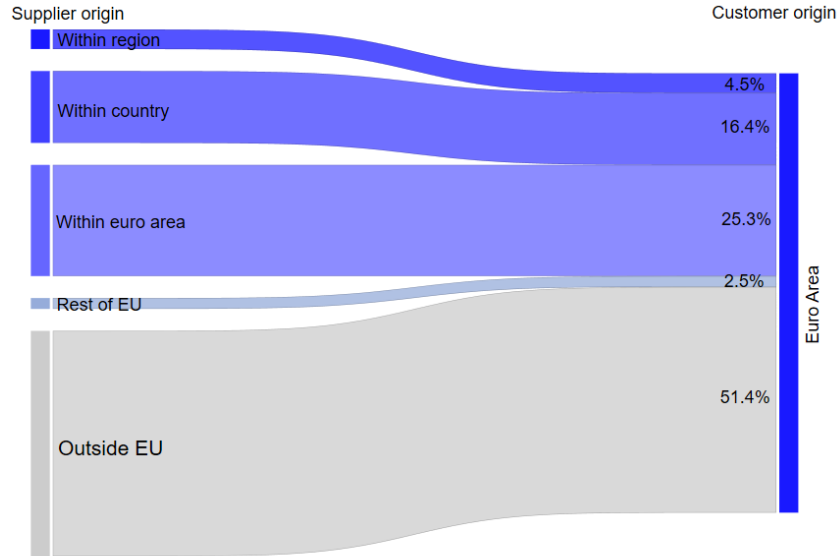
(percent of trend GDP for all variables, apart from HICP inflation and GDP deflator growth, where the effects are expressed in percentage points)



Notes: Estimates for the sample of EU27 Member States over 1999-2025 from Checherita-Westphal and Særkjær (2026) using the panel local projection (LP) method of Jordà (2005). The charts show cumulative effects over a 5-year horizon after a 1% of trend GDP increased defence spending on capital, adjusted (left-hand side chart) and personnel spending (right-hand side chart) (fiscal shock in year 0). The cumulative GDP multiplier follows the specification of Ramey and Zubairy (2018). The "adjusted" capital defence spending is aimed at improving the timing of the fiscal shock by "leading" the capital component of COFOG defence spending data using a country-specific "delivery time delay" proxy constructed on the basis of the SIPRI Arms Transfer Database (ATDB). The variables (apart from prices) are normalised to lagged trend GDP. The effects are shown as percent of trend GDP for all variables apart from HICP inflation and GDP deflator growth (percentage points). The baseline control variables include four lags of non-defence government expenditure, government revenue, trade openness (imports plus exports), the real effective exchange rate, and gross public debt, as well as four lags of the dependent variable and defence spending variable. Country and year time effects are used throughout. Confidence bands: grey 68% and light grey 90%. Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinsky and Parker (2026).

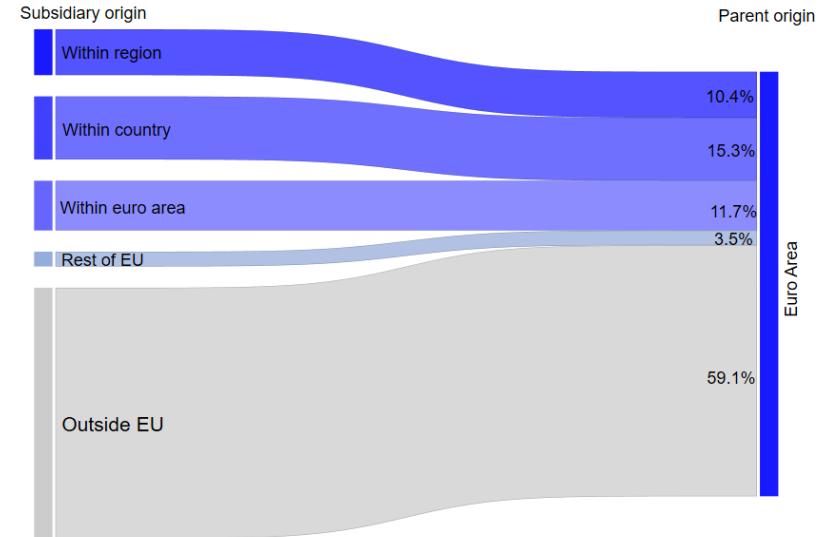
# Top euro area defence firms' linkages with suppliers and subsidiaries

## Location of suppliers (percentages)



Sources: ECB staff calculations based on Bloomberg and Orbis.  
Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

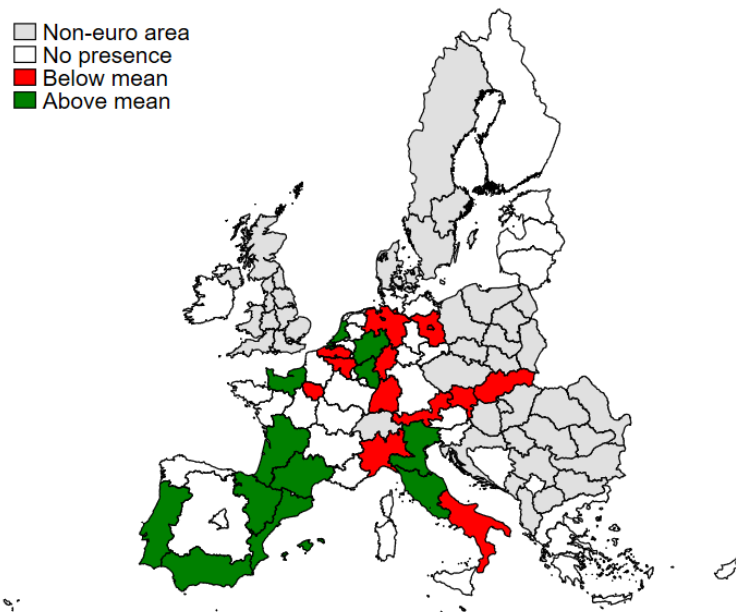
## Location of subsidiaries (percentages)



Sources: ECB staff calculations based on Bloomberg and Orbis.  
Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

## Relative productivity of top defence firms

(ratio of mean value added per employee of top defence firms to that of all manufacturing firms)

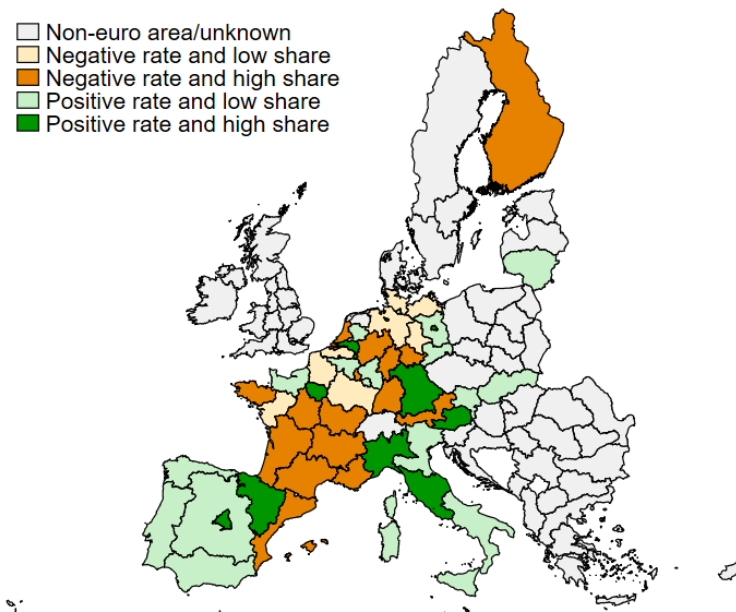


Sources: ECB staff calculations based on Orbis and Eurostat. Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

Notes: Mean value added per employee in top defence firms and their subsidiaries operating in the manufacturing sector over mean value added per employee in the manufacturing sector in NUTS1 regions in 2023. Below (above) mean represents productivity ratio below (above) mean productivity in the manufacturing sector.

## Automotive industry vs defence

(net job creation 2018-2023 in automotive sector vs defence sector share of employment)

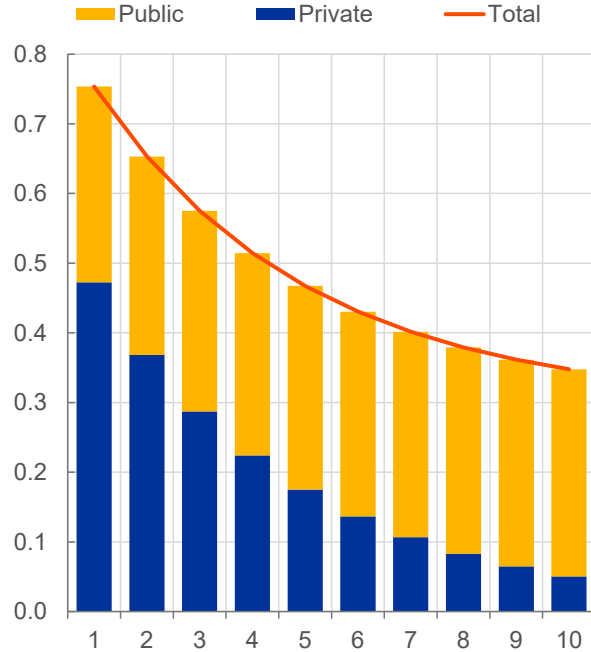


Sources: ECB staff calculations based on Orbis and Eurostat. Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

Notes: Net job rate calculated as the difference between the within-region job creation rate and job destruction rate in firms from the automotive industry in the period between 2018 and 2023. Low and high shares indicate whether employment in top defence firms, including their suppliers and subsidiaries, accounted for a below-median or above-median share of total employment in the region in 2023, respectively.

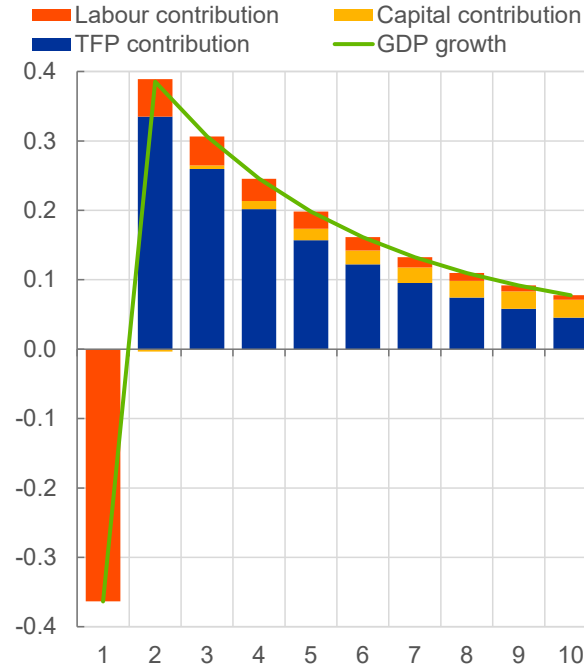
# Economic impact of matching US levels of public sector defence R&D

## Change in R&D spending (percentage points of GDP)



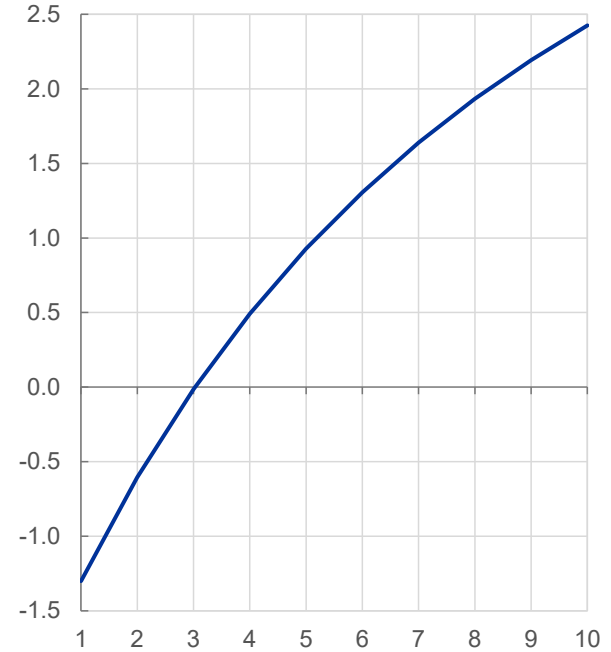
Source: Eurosystem estimates based on [Domínguez-Díaz et al \(2025\)](#).  
Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

## GDP growth and contributions (percentage point deviations from steady state and percentage points)



Source: Eurosystem estimates based on [Domínguez-Díaz et al \(2025\)](#).  
Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).  
Note: TFP stands for total factor productivity.

## Cumulative R&D multiplier (euro of GDP per euro invested in public R&D)



Source: Eurosystem estimates based on [Domínguez-Díaz et al \(2025\)](#).  
Forthcoming in Checherita-Westphal, Rodríguez-Vives, Lalinský and Parker (2026).

# Citations of relevant ECB research

- Bouabdallah, O., Dorrucchi E., Nerlich C., Nickel C., Vlad, A. (2025), "[Time to be strategic: how public money could power Europe's green, digital and defence transitions](#)", *The ECB Blog*, ECB, 25 July.
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- Checherita-Westphal, C., Huber, C., Rodríguez-Vives, M. and Müller, G. (2025), "[Fiscal aspects of European defence spending: implications for euro area macroeconomic projections and associated risks](#)", *Economic Bulletin*, Issue 5, ECB.
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