



# **Technology industry / Finnish economic outlook March 2024**

# The Finnish technology industry is comprised of five sub-sectors



## **ELEKTRONICS AND ELECTROTECHNICAL INDUSTRY**

ABB, Ensto, Murata Electronics, Nokia, Planmeca, Polar Electro, Suunto, Vacon, Vaisala...



## **METALS INDUSTRY**

Boliden, Componenta, Kuusakoski, Luvata, Outokumpu, Ovako, Sacotec, SSAB ...



## **MECHANICAL ENGINEERING**

Abloy, Cargotec,, Fiskars, Glaston, Kone, Konecranes, Metso, Meyer Turku, Neles, Normet, Oras, Patria, Pemamek, Ponsse, Prima Power, Stala, Valmet, Valtra, Wärtsilä...



## **INFORMATION TECHNOLOGY**

Basware, CGI, Digia, Efecte, Enfo, F-Secure, Fujitsu Finland, IBM, Innofactor, Knowit, Microsoft, Nixu, TietoEVERY...



## **CONSULTING ENGINEERING**

AFRY, A-Insinöörit, Citec, Elomatic, Etteplan, FCG, Granlund, Ramboll, Rejlers, Sitowise, SWECO, WSP...

# The Finnish technology industry is comprised of five sub-sectors



## ELEKTRONICS AND ELECTROTECHNICAL INDUSTRY

- Data communications equipment, electrical machinery, medical technology
- Turnover (2022): 21 billion euros
- Personnel (2022): 40,700



## METALS INDUSTRY

- Steel products, non-ferrous metals, castings, metallic minerals
- Turnover (2022): 19 billion euros
- Personnel (2022): 16,000



## MECHANICAL ENGINEERING

- Machinery, metal products, vehicles
- Turnover (2022): 38 billion euros
- Personnel (2022): 135,800



## INFORMATION TECHNOLOGY

- IT services, applications and programming
- Turnover (2022): 19 billion euros
- Personnel (2022): 83,500



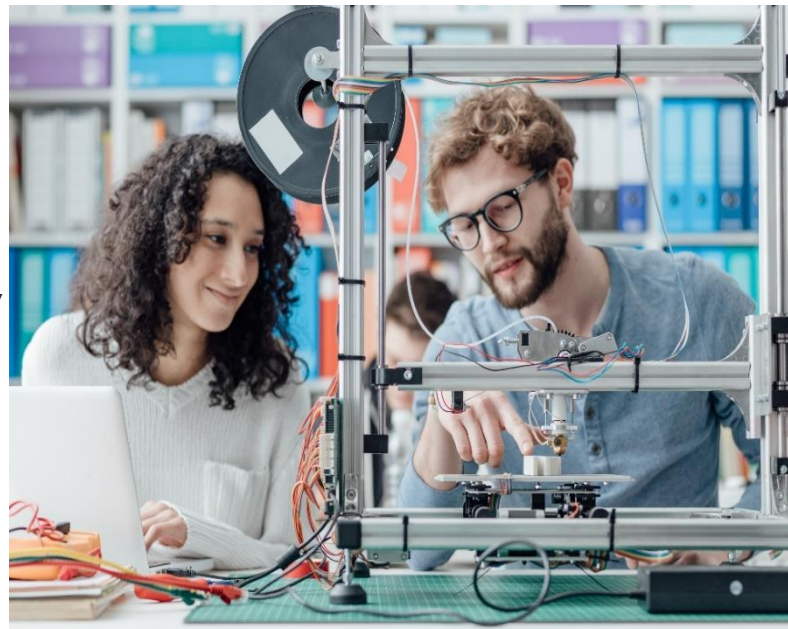
## CONSULTING ENGINEERING

- Expertise for construction industry and infrastructure
- Turnover (2022): 7 billion euros
- Personnel (2022): 54,100

# The technology industry – the largest export sector in Finland



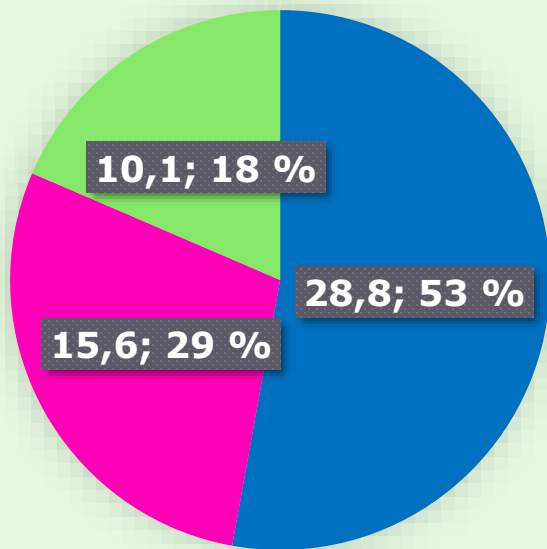
- Over **50 %** of total exports.
- Some **338,000** employed directly in the sector, including indirect effects **720,000** people.
- Effect on value added totaling **€ 63 billion**, or **29% of GDP** value added.
- Bring to Finland **€ 23 billion** tax revenue annually.
- Investments almost **EUR 6.0 billion** annually in Finland.
- **65 %** of private-sector R&D investment.



# Value added to the economy generated by the technology industry is EUR 55 billion, or over 28% of GDP \* (2017)



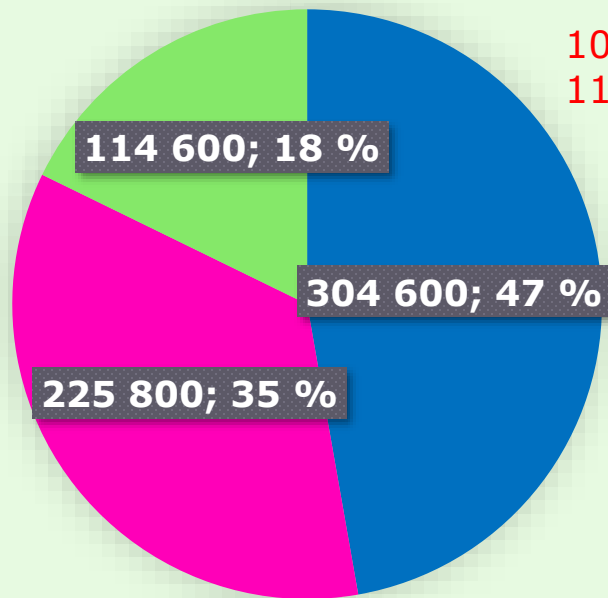
A total of EUR 54.5 billion



- Impact on technology industry (direct influence)
- Impact on other industries (indirect influence)
- Impact on private consumption (income effect)

# Technology industry generates nearly 650,000 jobs in Finland (over 25% of all employees) (2017)

A total of 644 900 employees



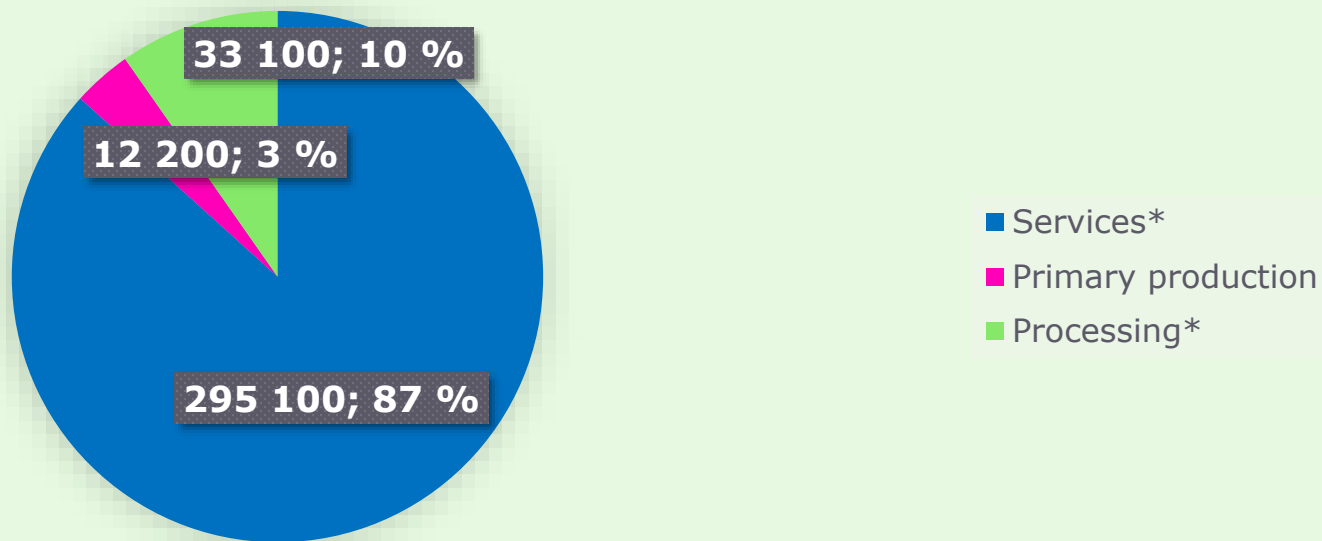
10 jobs in the technology industry bring  
11 jobs to the rest of the economy

- Impact on technology industry (direct influence)
- Impact on other industries (indirect influence)
- Impact on private consumption (income effect)

# Every job in the technology industry generates almost another job in the services (2017)



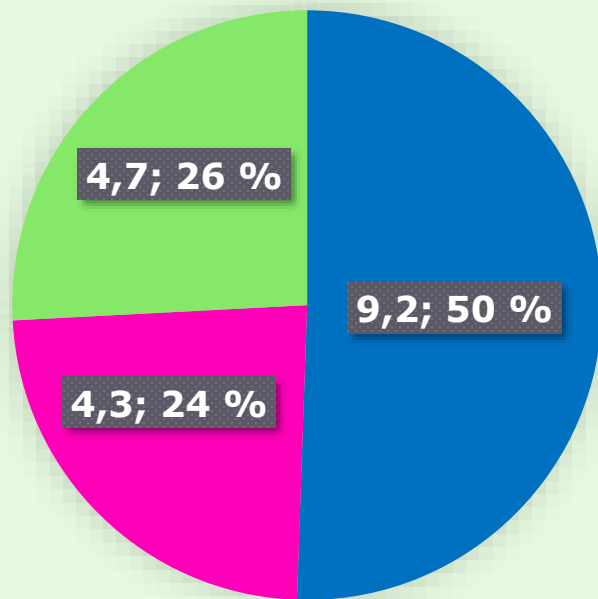
Impact on other industries and on private consumption: 340,300 employees



# Technology industry generates over 18 billion euros in tax revenue annually in Finland (2017)



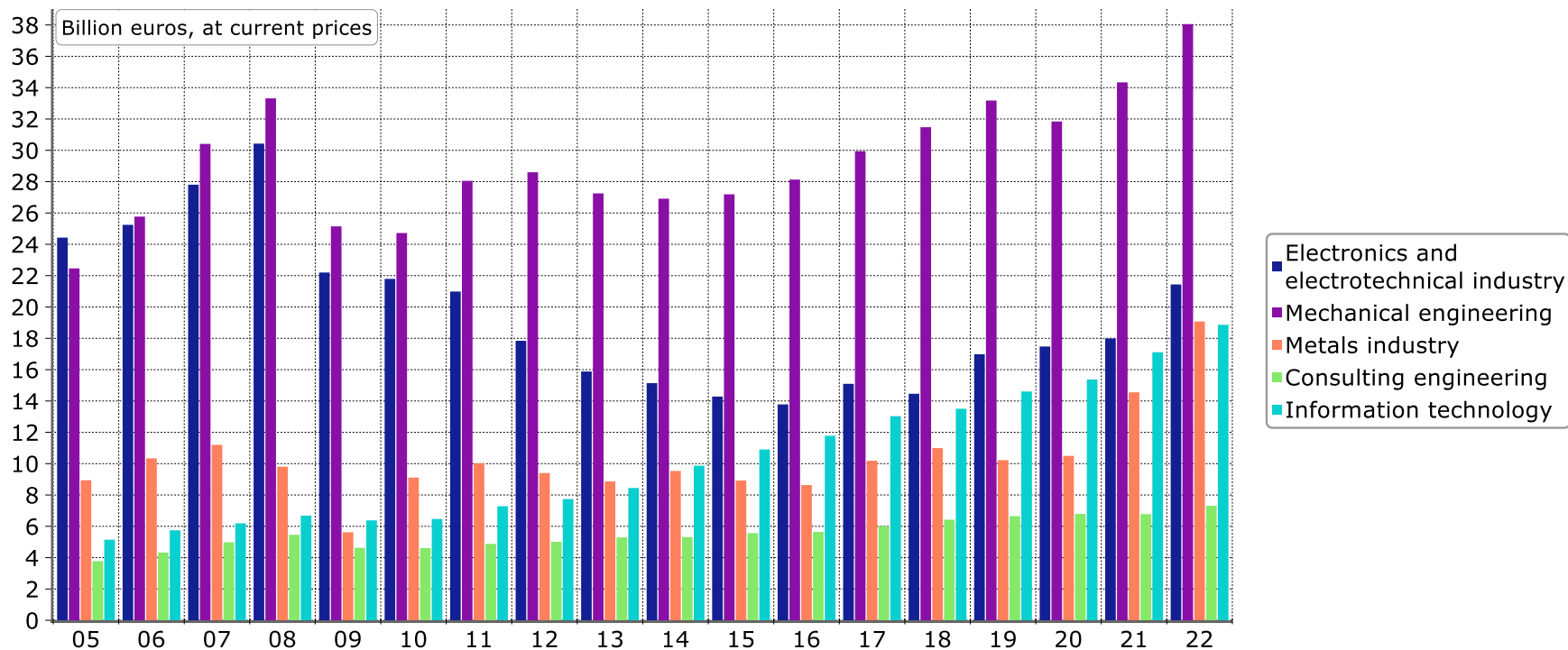
**A total of EUR 18.2 billion**



- Impact on technology industry (direct influence)
- Impact on other industries (indirect influence)
- Impact on private consumption (income effect)

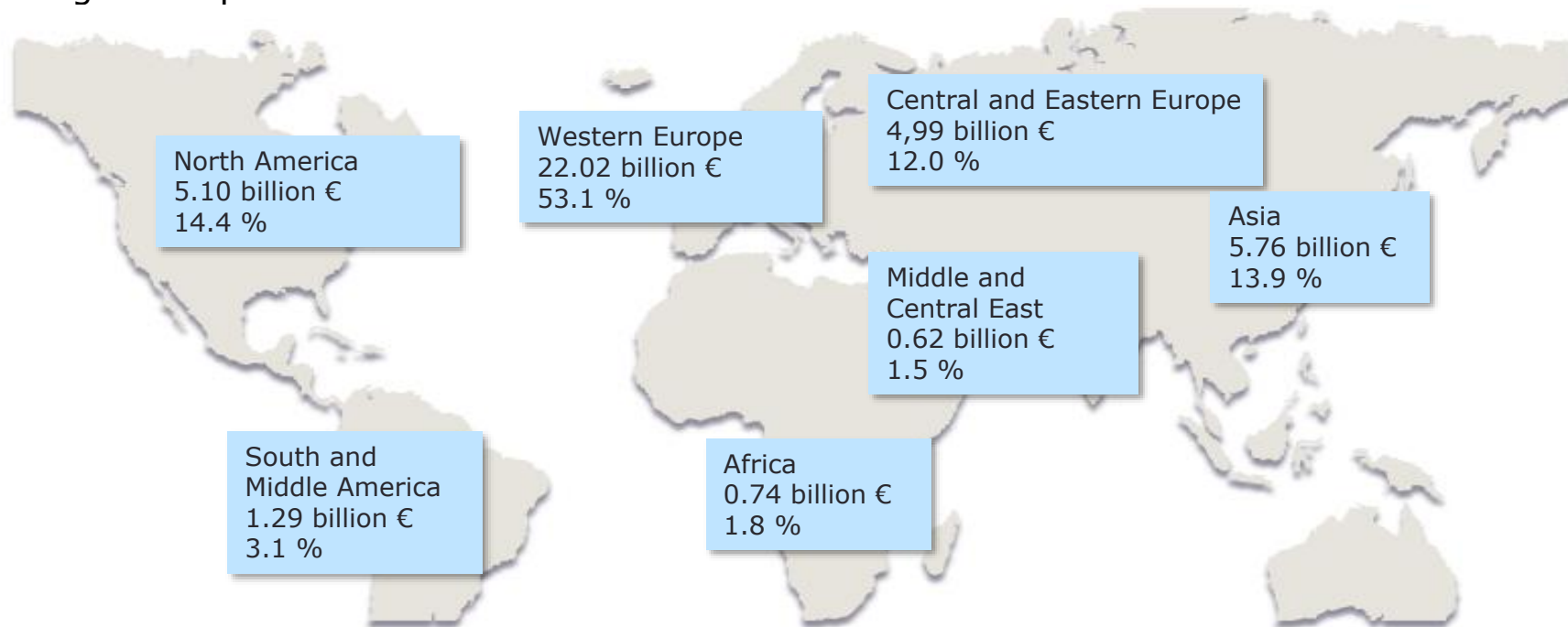


# Turnover of the technology industry in Finland

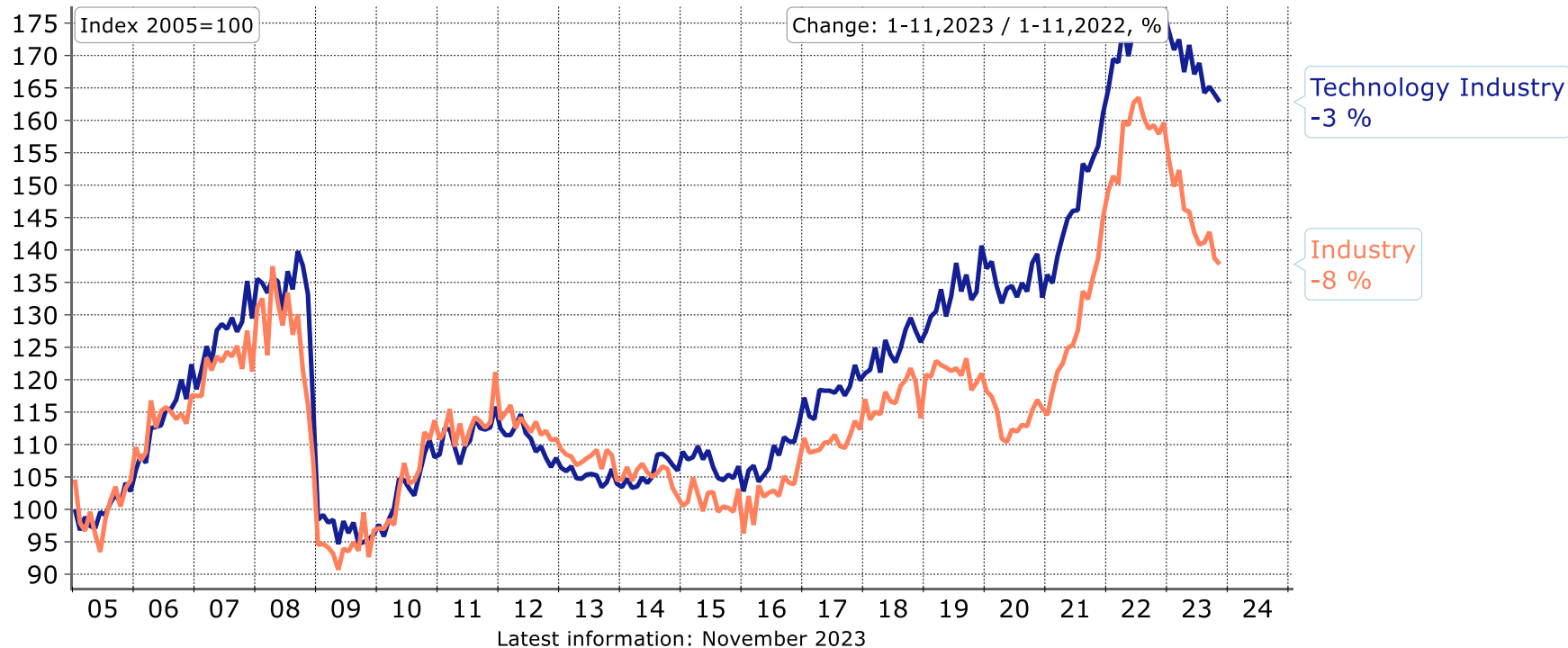


# Export of technology industry goods from Finland by area in 2023

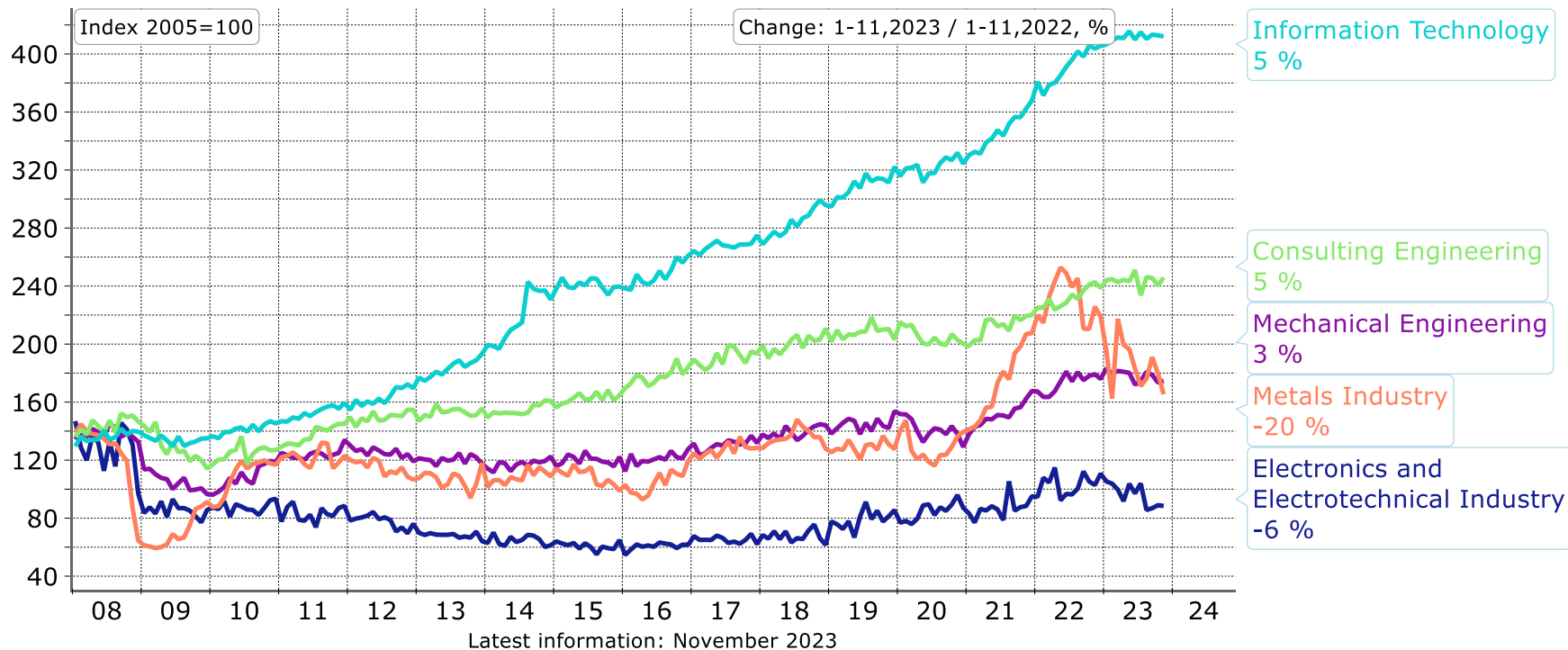
Total goods exports 41.50 billion euros\*



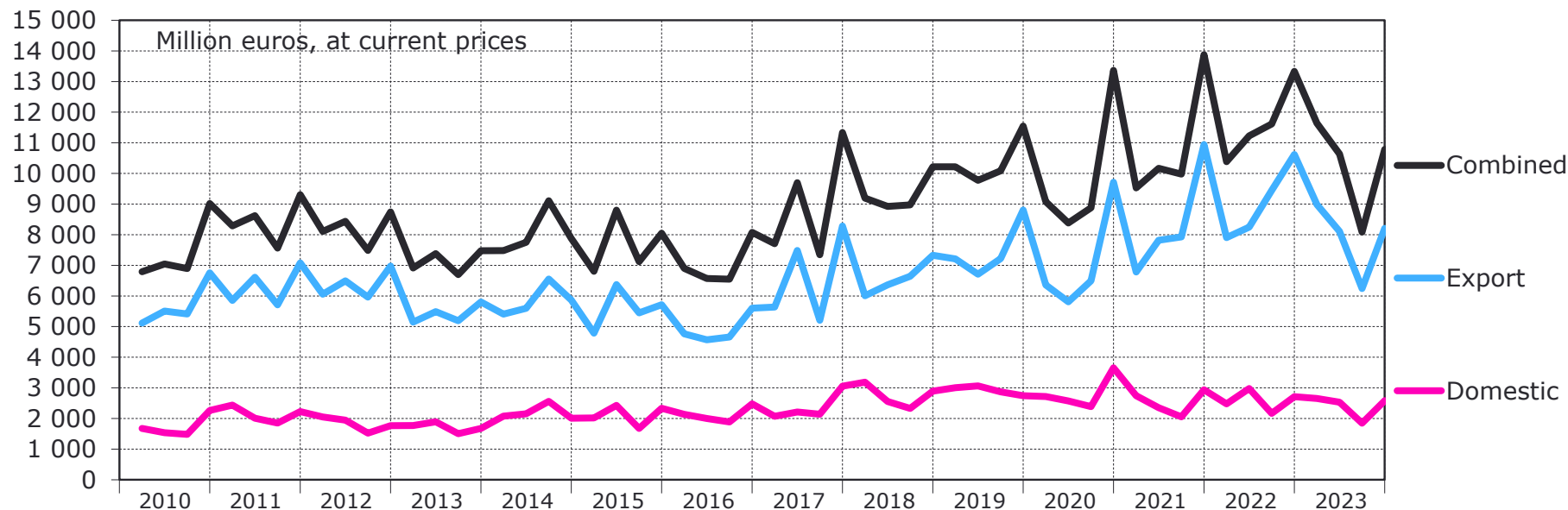
# Turnover of the industry and technology industry in Finland



# Turnover of the technology industry in Finland



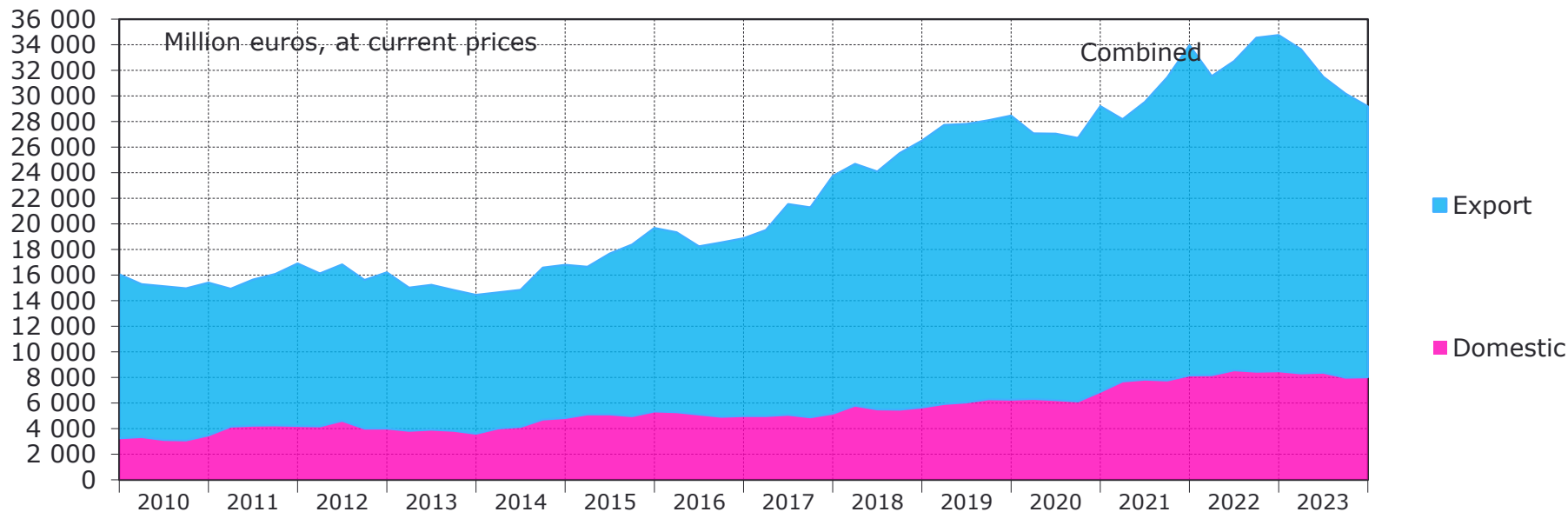
# Value of new orders in the technology industry\* in Finland



Change:	IV,2023 / IV,2022	IV,2023 / III,2023
Export:	-23 %	31 %
Domestic:	-5 %	40 %
Combined:	-19 %	33 %

\*) Excl. metals industry, game industry and data center companies

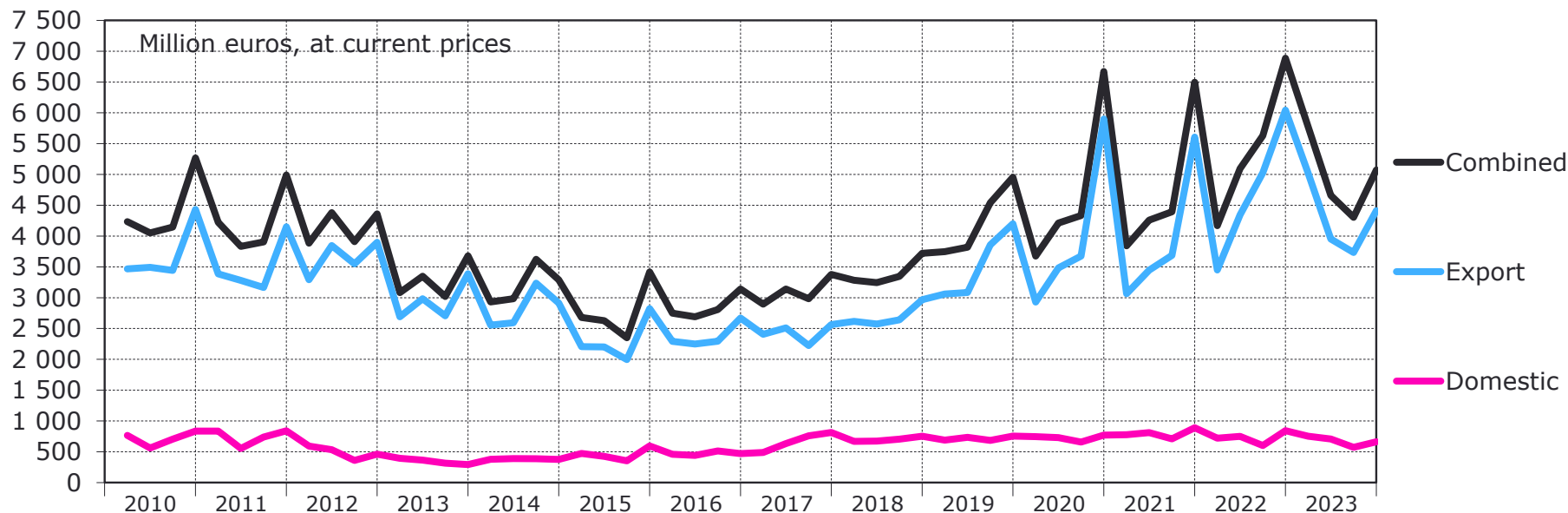
# Value of order books in the technology industry\* in Finland



Change:	31.12.2023 / 31.12.2022	31.12.2023 / 30.9.2023
Export:	-19 %	-5 %
Domestic:	-5 %	0 %
Combined:	-16 %	-3 %

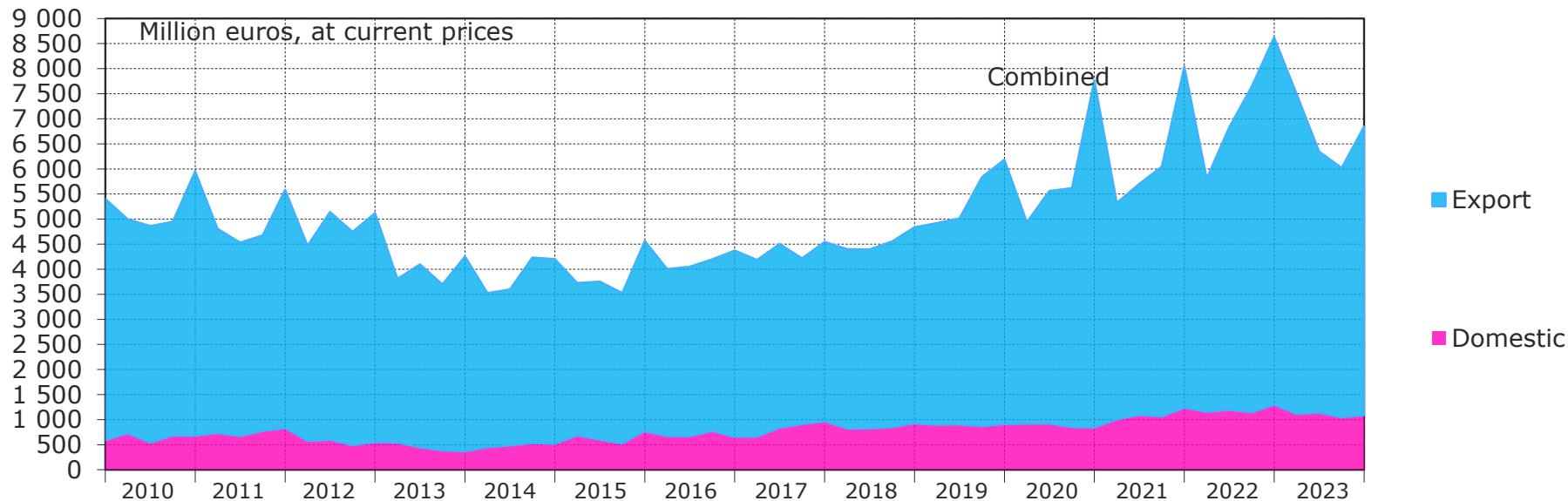
\*) Excl. metals industry, game industry and data center companies

# Value of new orders in the electronics and electrotechnical industry in Finland



Change:	IV,2023 / IV,2022	IV,2023 / III,2023
Export:	-27 %	18 %
Domestic:	-21 %	16 %
Combined:	-26 %	18 %

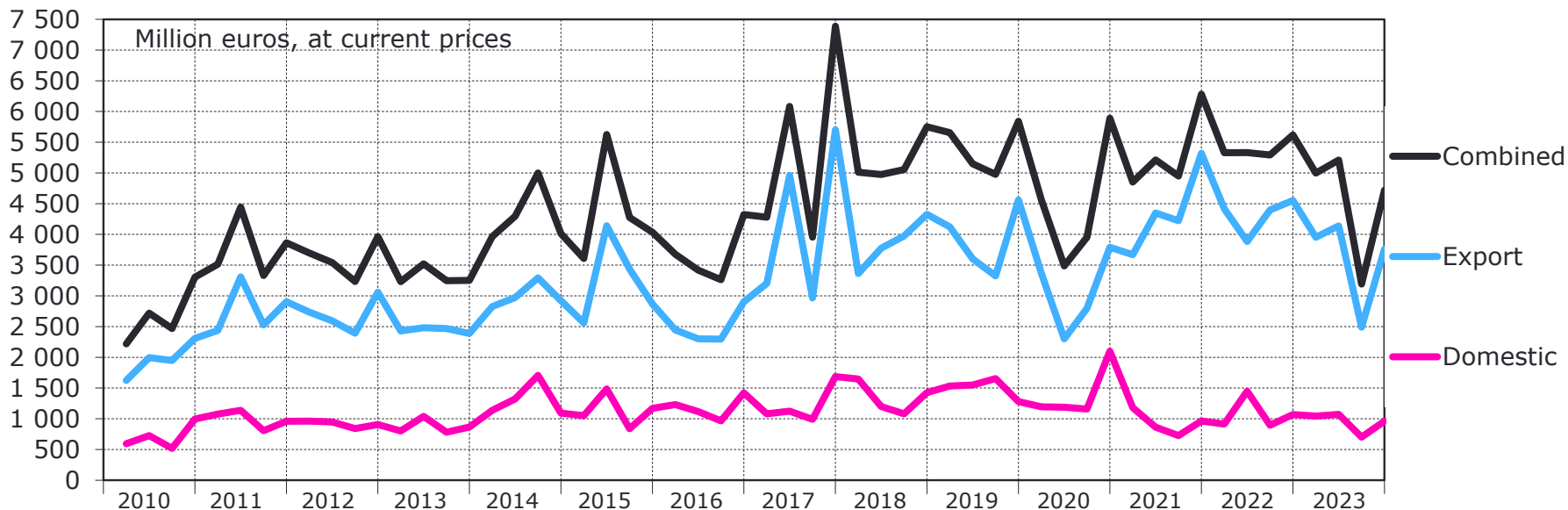
# Value of order books in the electronics and electrotechnical industry in Finland



Change:	31.12.2023 / 31.12.2022	31.12.2023 / 30.9.2023
Export:	-21 %	16 %
Domestic:	-16 %	4 %
Combined:	-21 %	14 %

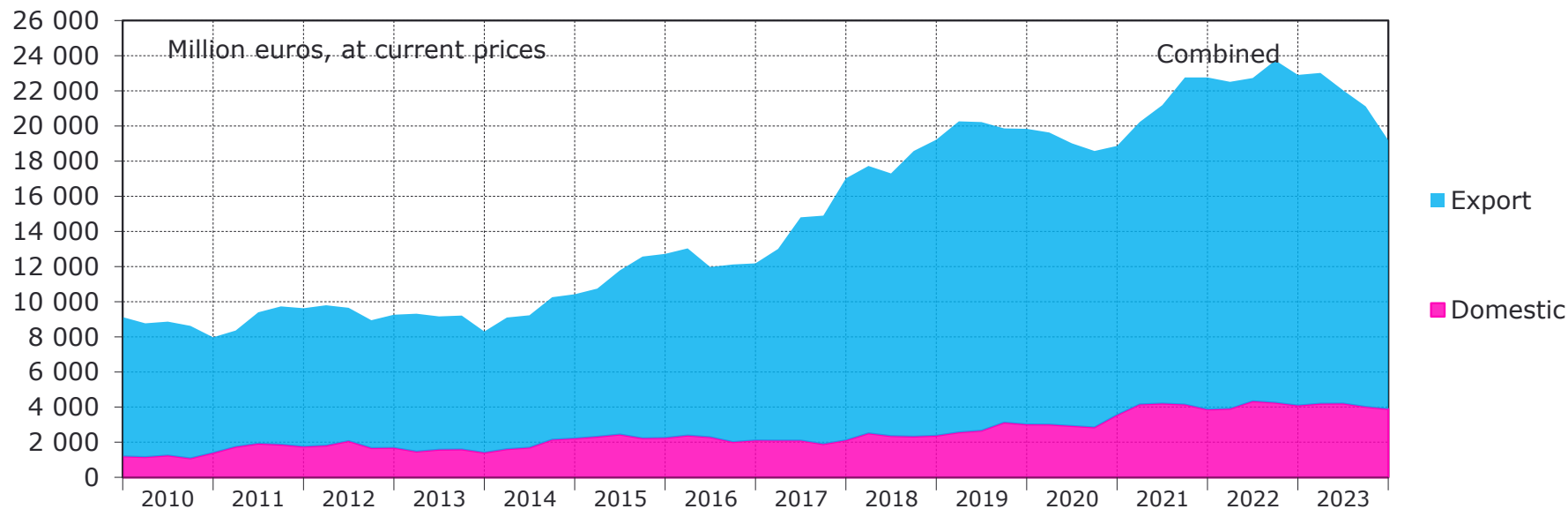


# Value of new orders in the mechanical engineering in Finland



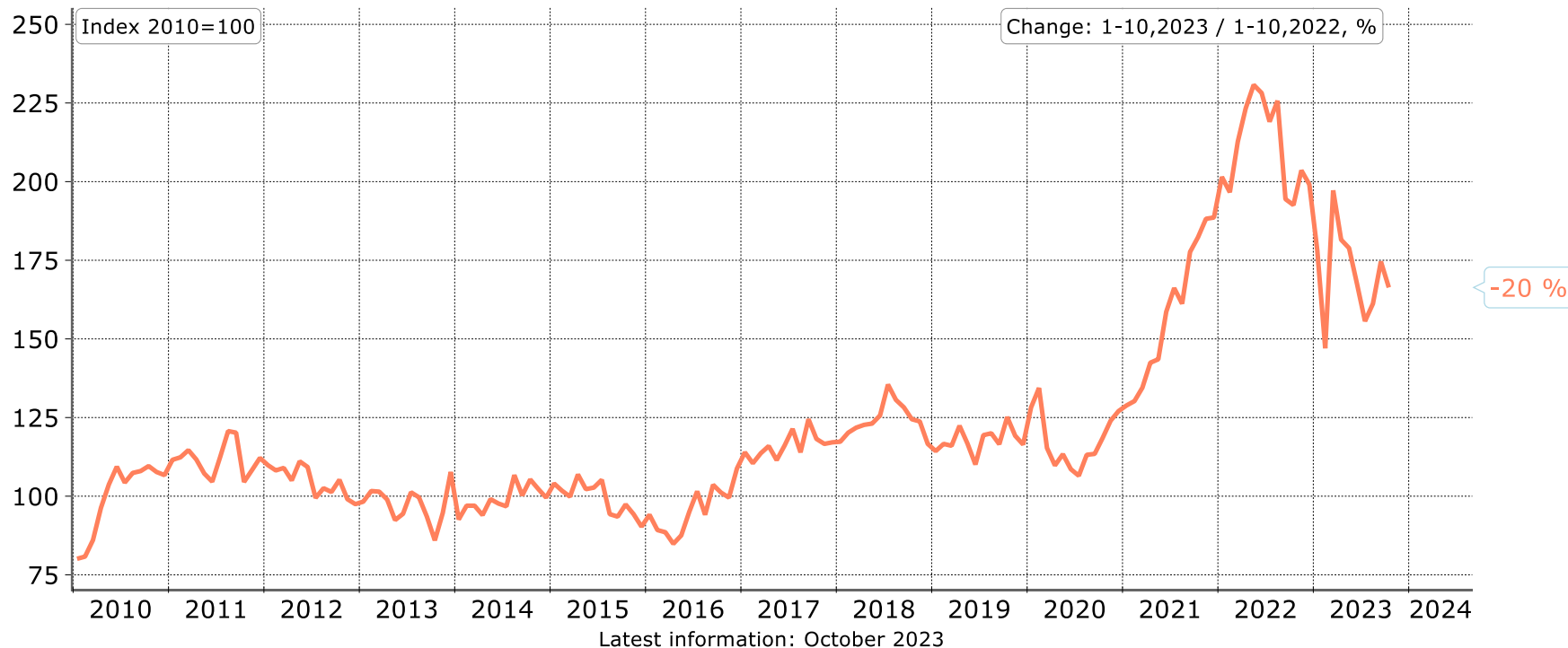
Change:	IV,2023 / IV,2022	IV,2023 / III,2023
Export:	-17 %	51 %
Domestic:	-10 %	37 %
Combined:	-16 %	48 %

# Value of order books in the mechanical engineering in Finland

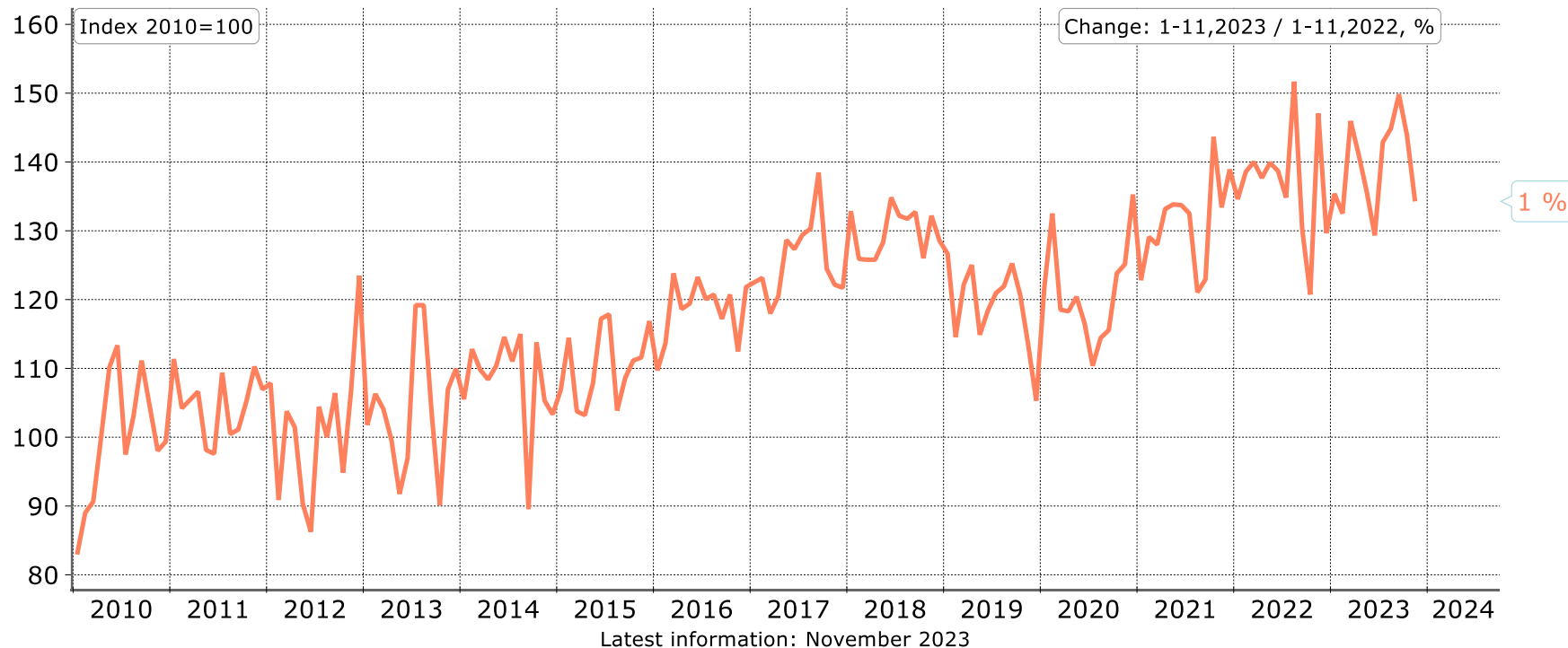


Change:	31.12.2023 / 31.12.2022	31.12.2023 / 30.9.2023
Export:	-19 %	-11 %
Domestic:	-5 %	-3 %
Combined:	-16 %	-9 %

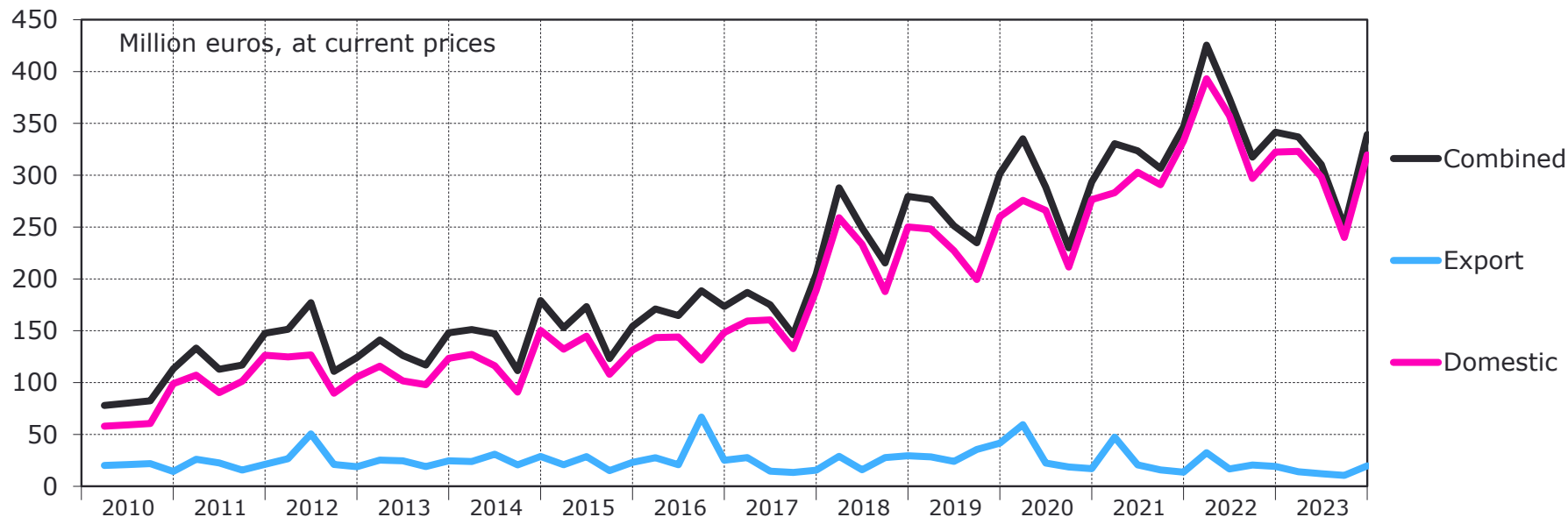
# Turnover of the metals industry in Finland



# Production volume of the metals industry in Finland

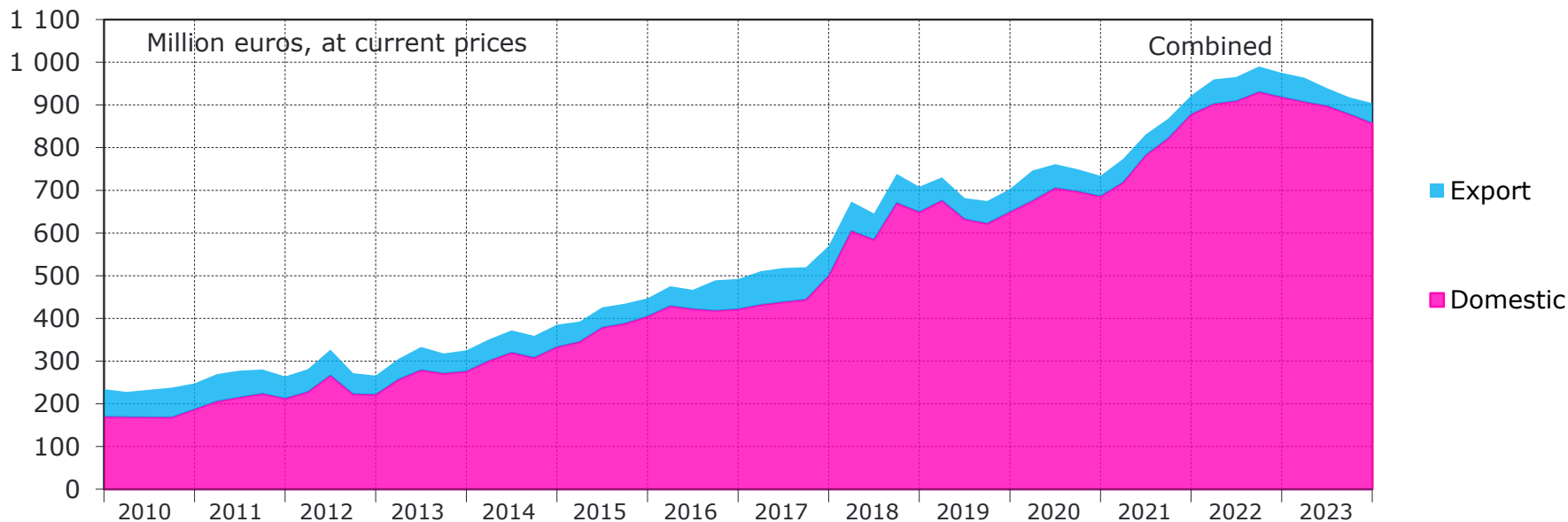


# Value of new orders in the consulting engineering in Finland



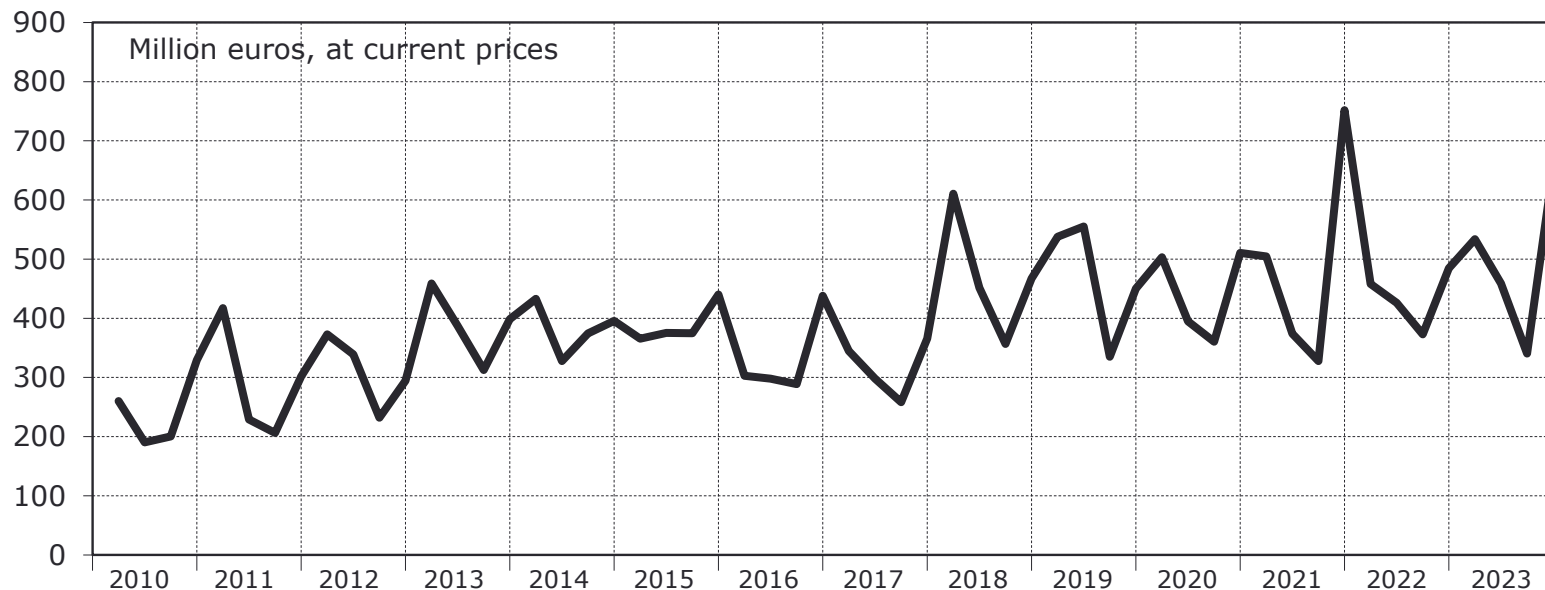
Change:	IV,2023 / IV,2022	IV,2023 / III,2023
Export:	2 %	88 %
Domestic:	-1 %	33 %
Combined:	-1 %	35 %

# Value of order books in the consulting engineering in Finland



Change:	31.12.2023 / 31.12.2022	31.12.2023 / 30.9.2023
Export:	-17 %	20 %
Domestic:	-7 %	-2 %
Combined:	-7 %	-1 %

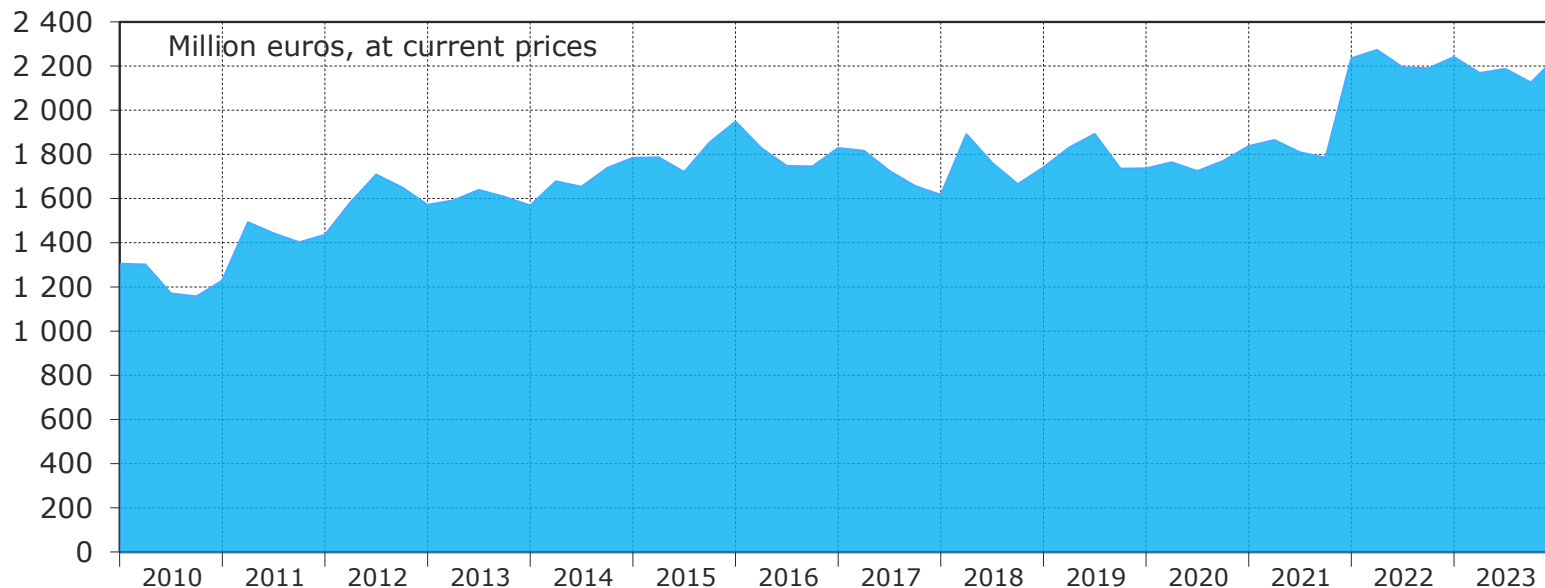
# Value of new orders in the information technology\* in Finland



Change:	IV,2023 / IV,2022	IV,2023 / III,2023
Combined:	35 %	92 %

\*) Excl. game industry and data center companies

# Value of Order Books in the Information Technology\* in Finland

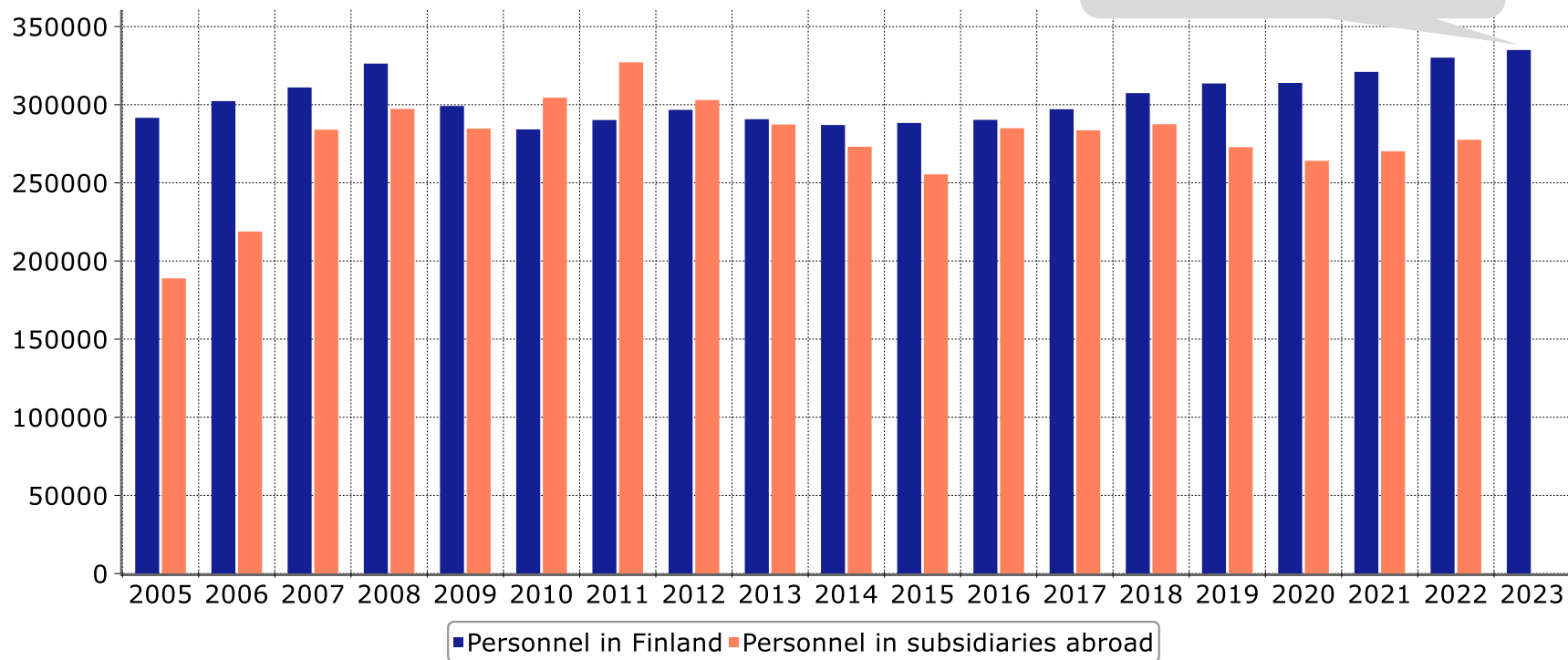


Change:	31.12.2023 / 31.12.2022	31.12.2023 / 30.9.2023
Combined:	0 %	5 %

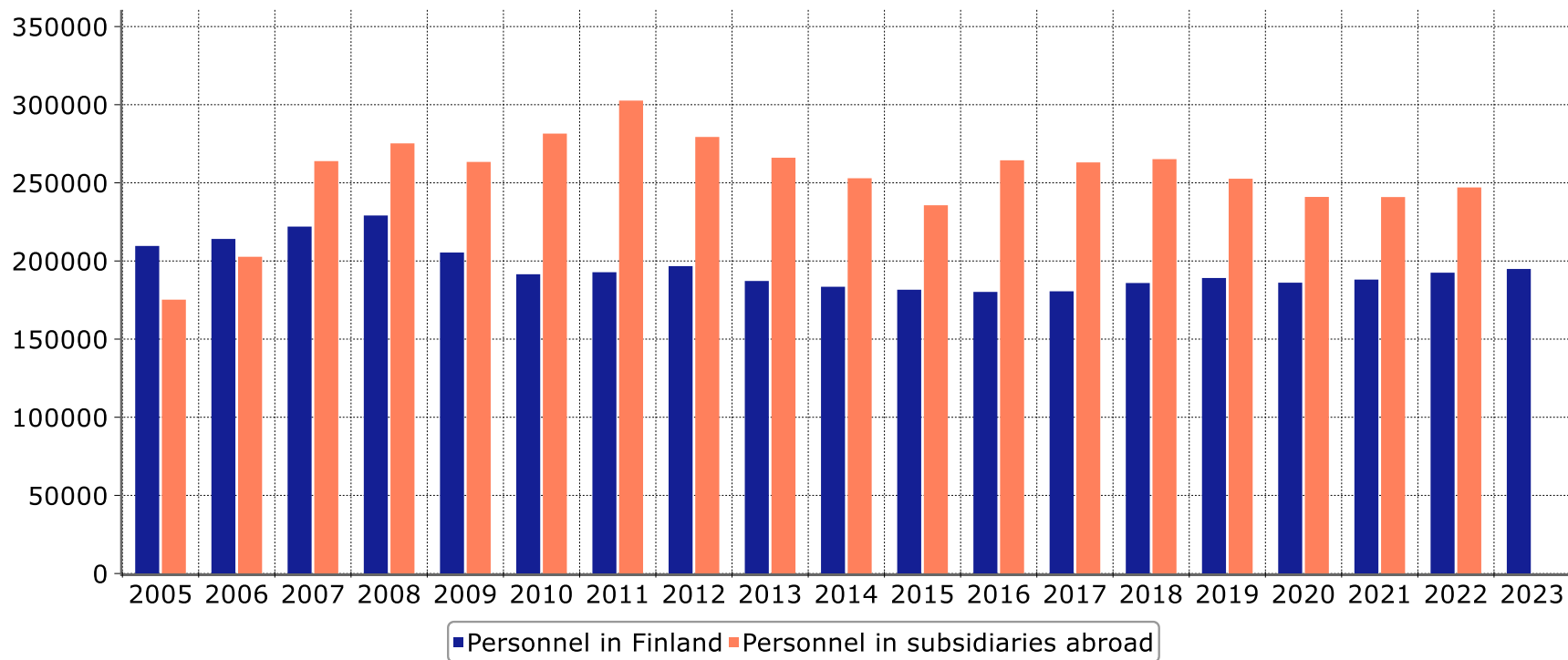
\*) Excl. game industry and data center companies



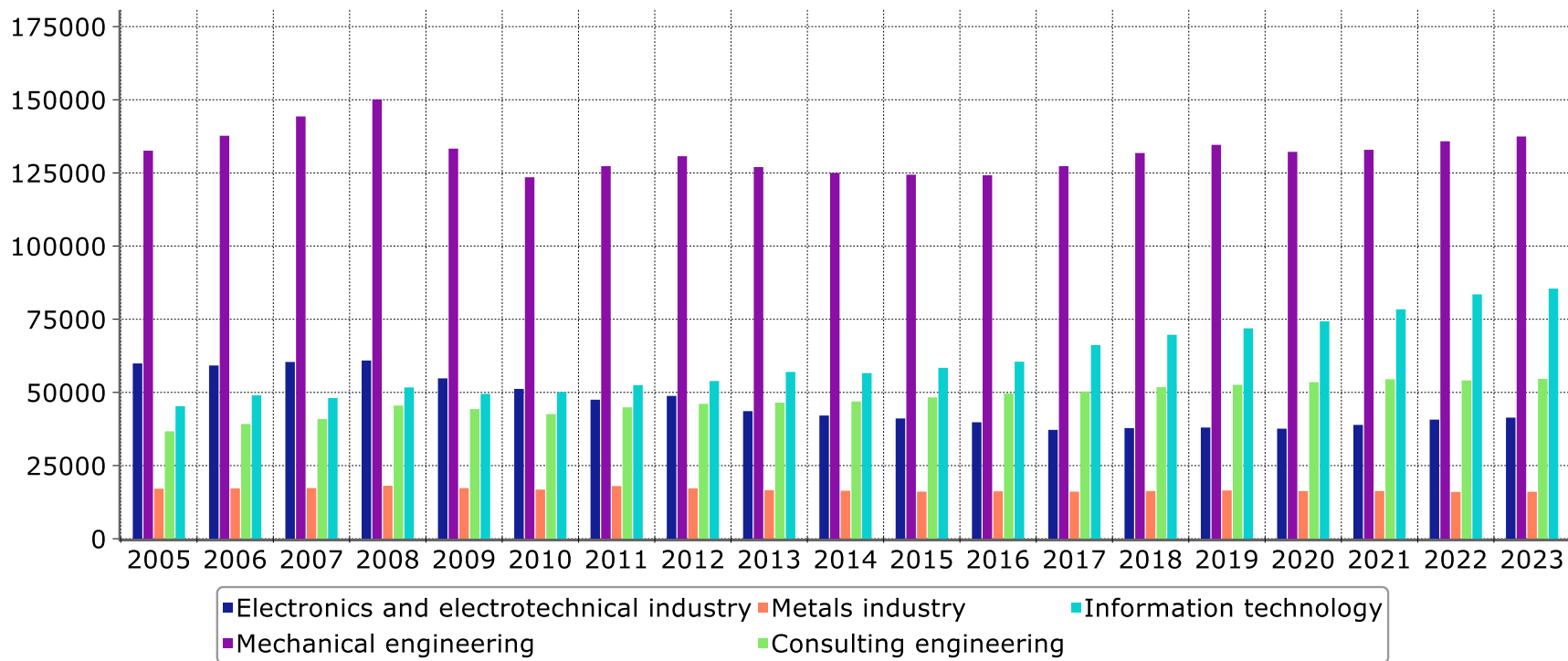
# Technology Industry Personnel



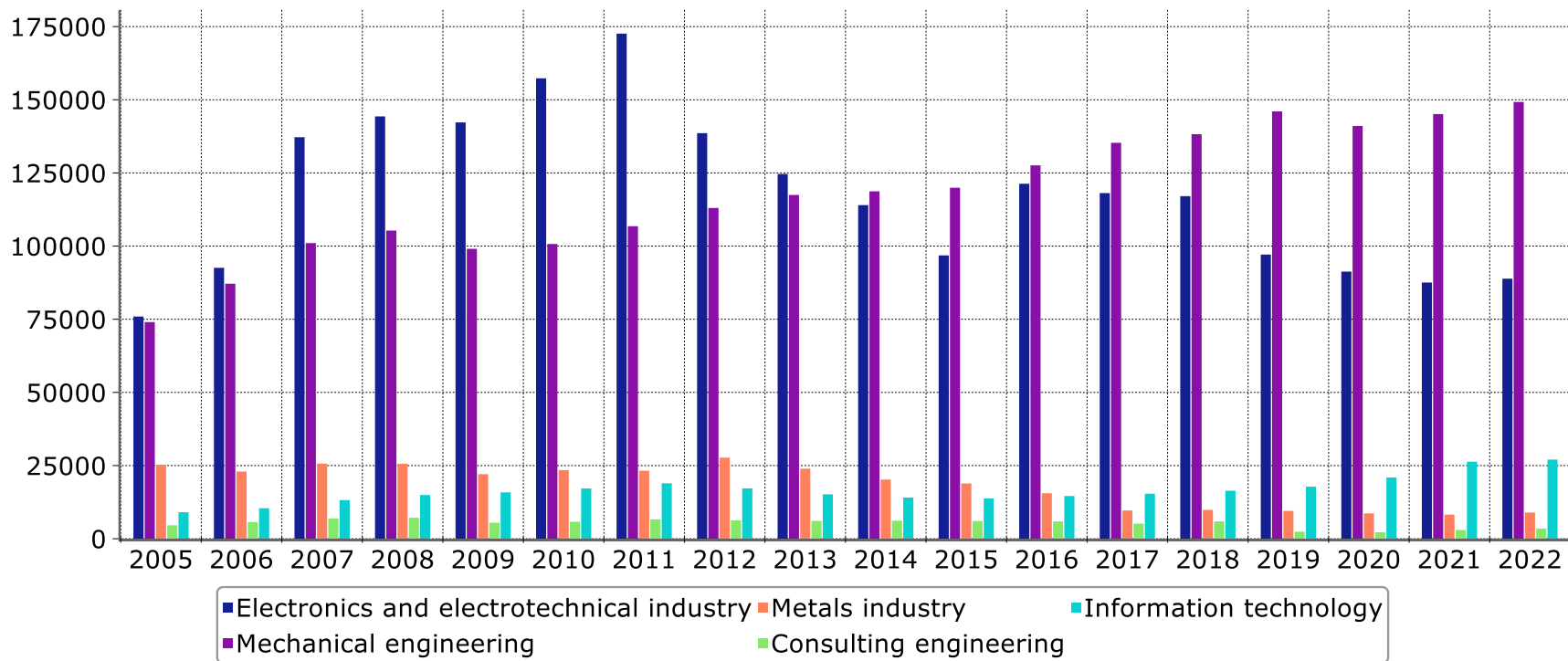
# Technology Industry Personnel in Manufacturing Industry\*



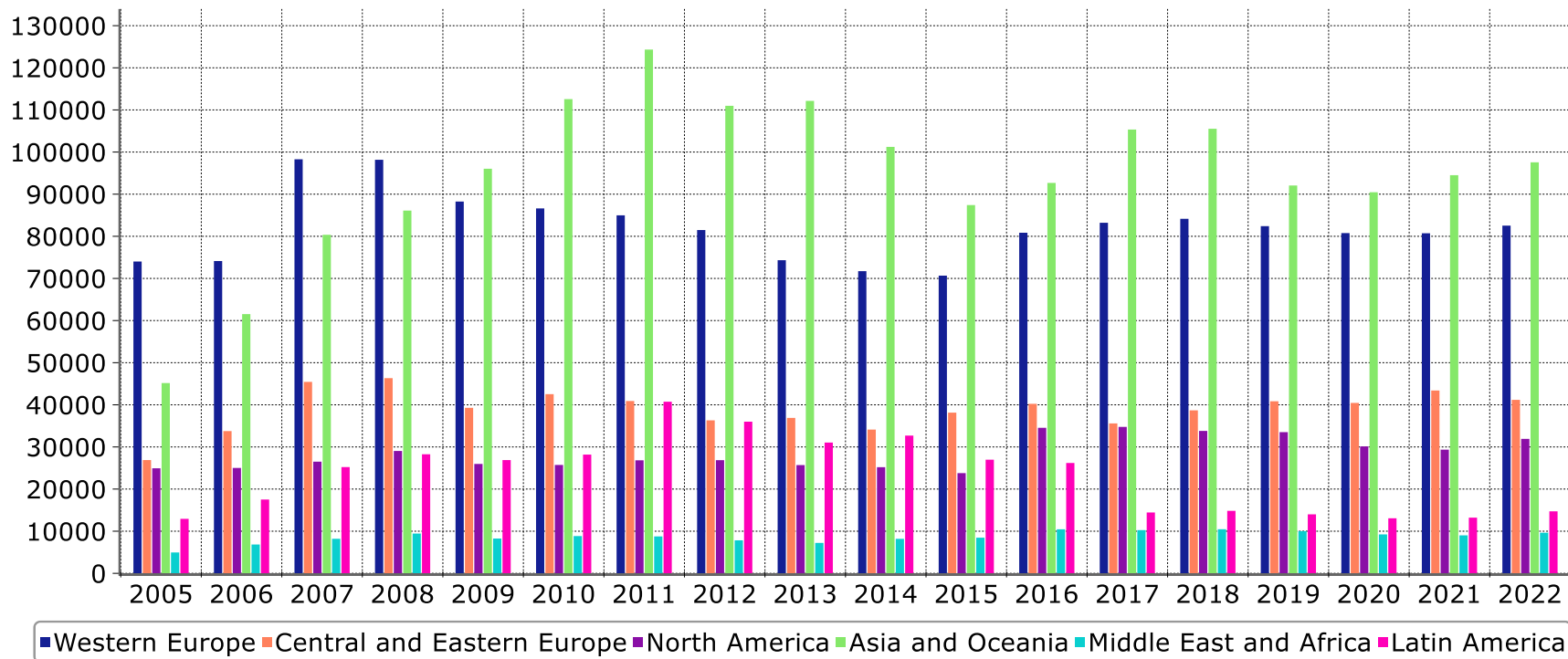
# Technology Industry Personnel in Finland by Industry



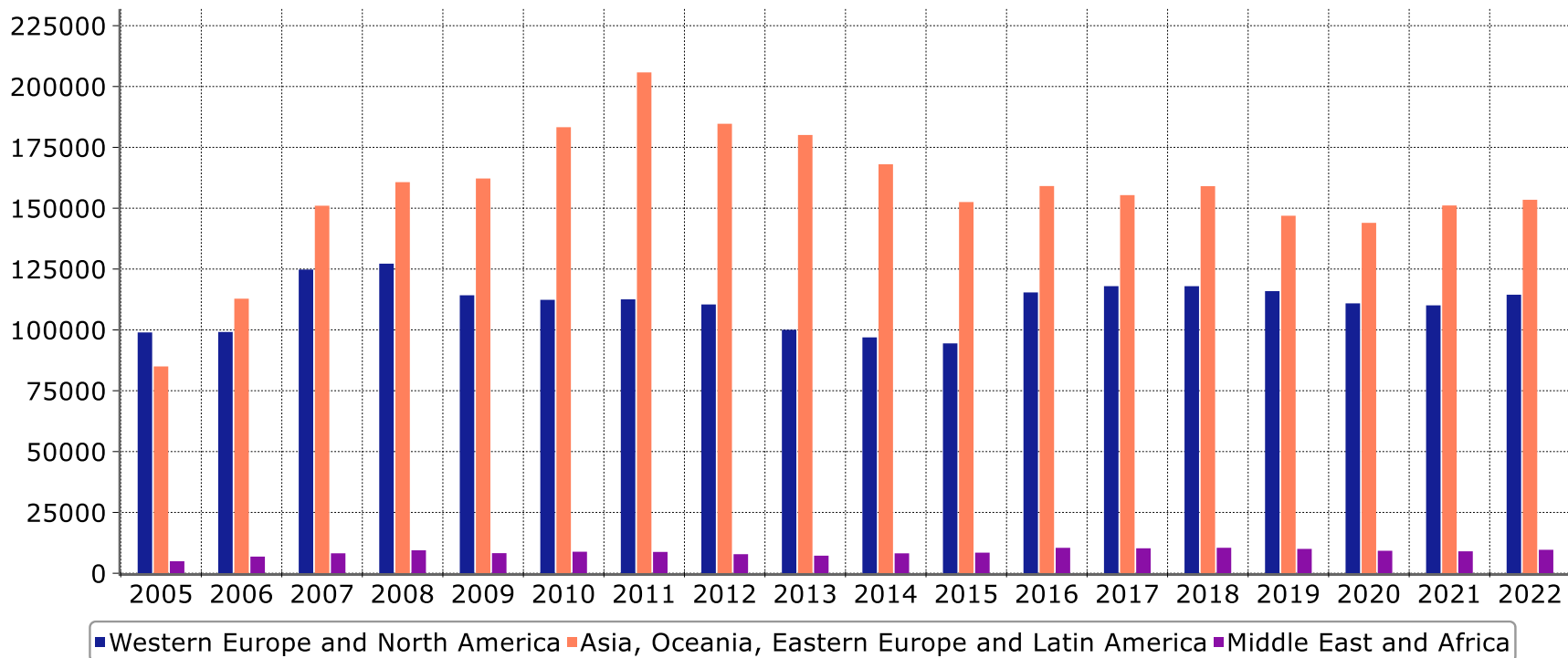
# Technology Industry Personnel in Subsidiaries Abroad by Industry



# Technology Industry Personnel in Subsidiaries Abroad by Location



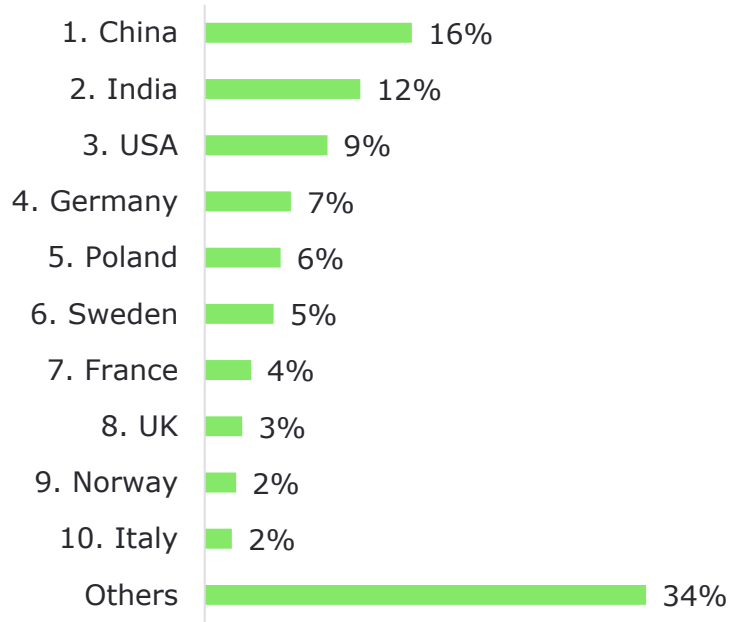
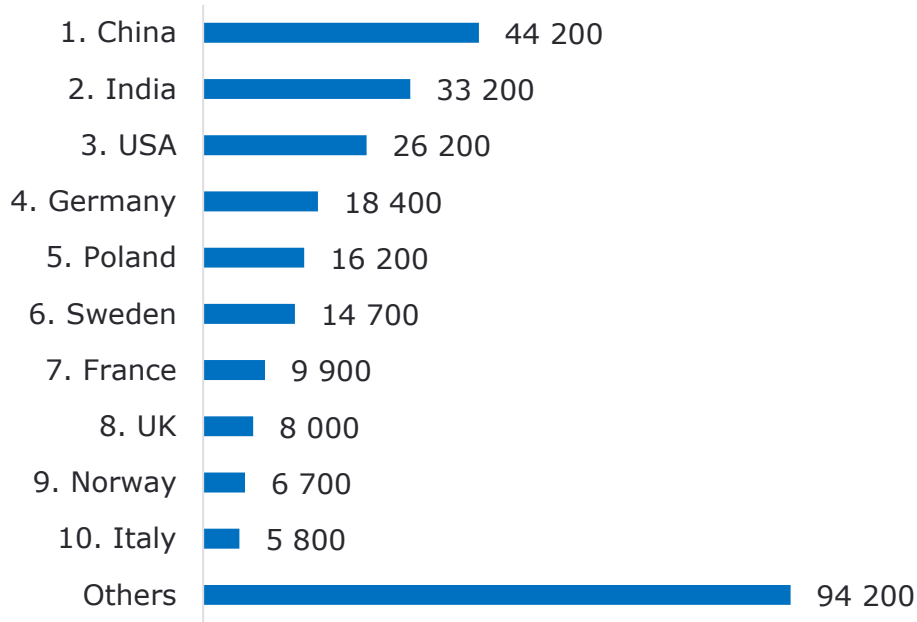
# Technology Industry Personnel in Subsidiaries Abroad by Location



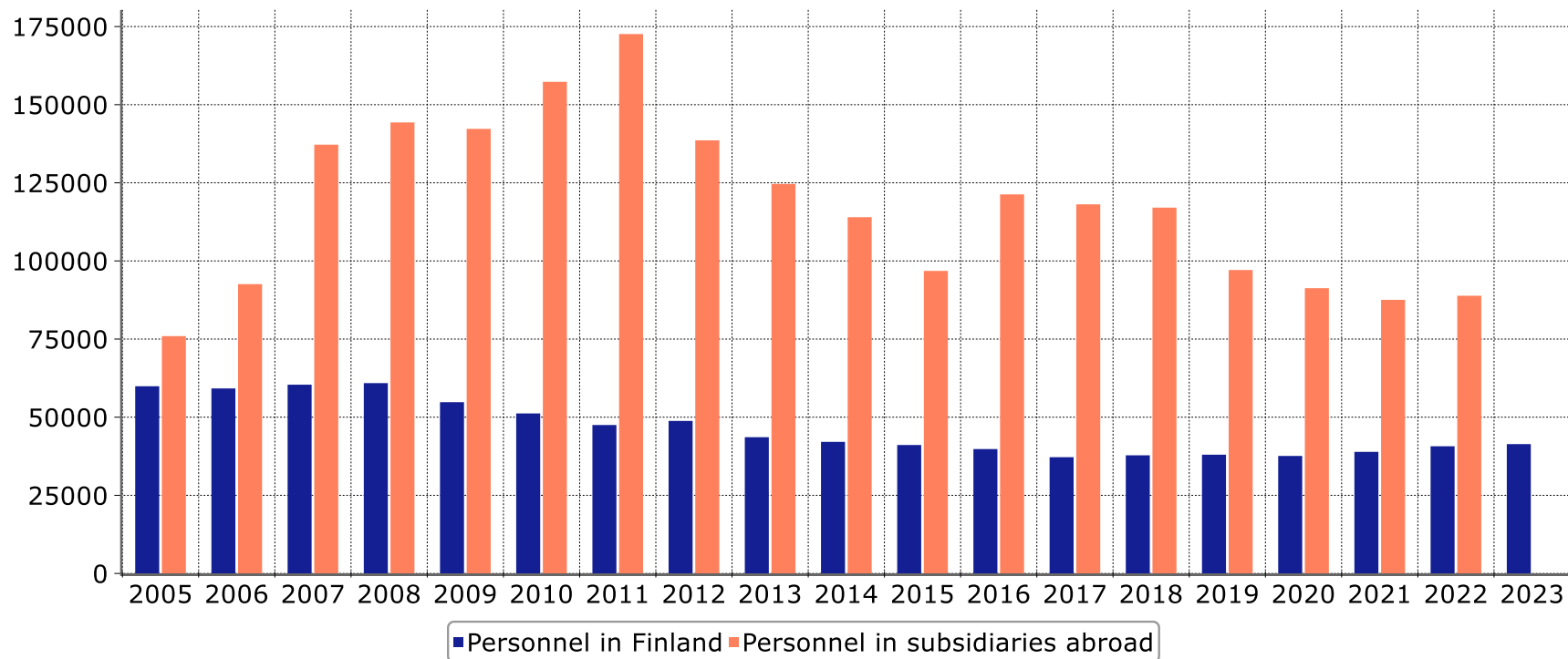
# Technology Industry Personnel in Subsidiaries Abroad by Country



Information from year 2022, total 278 000

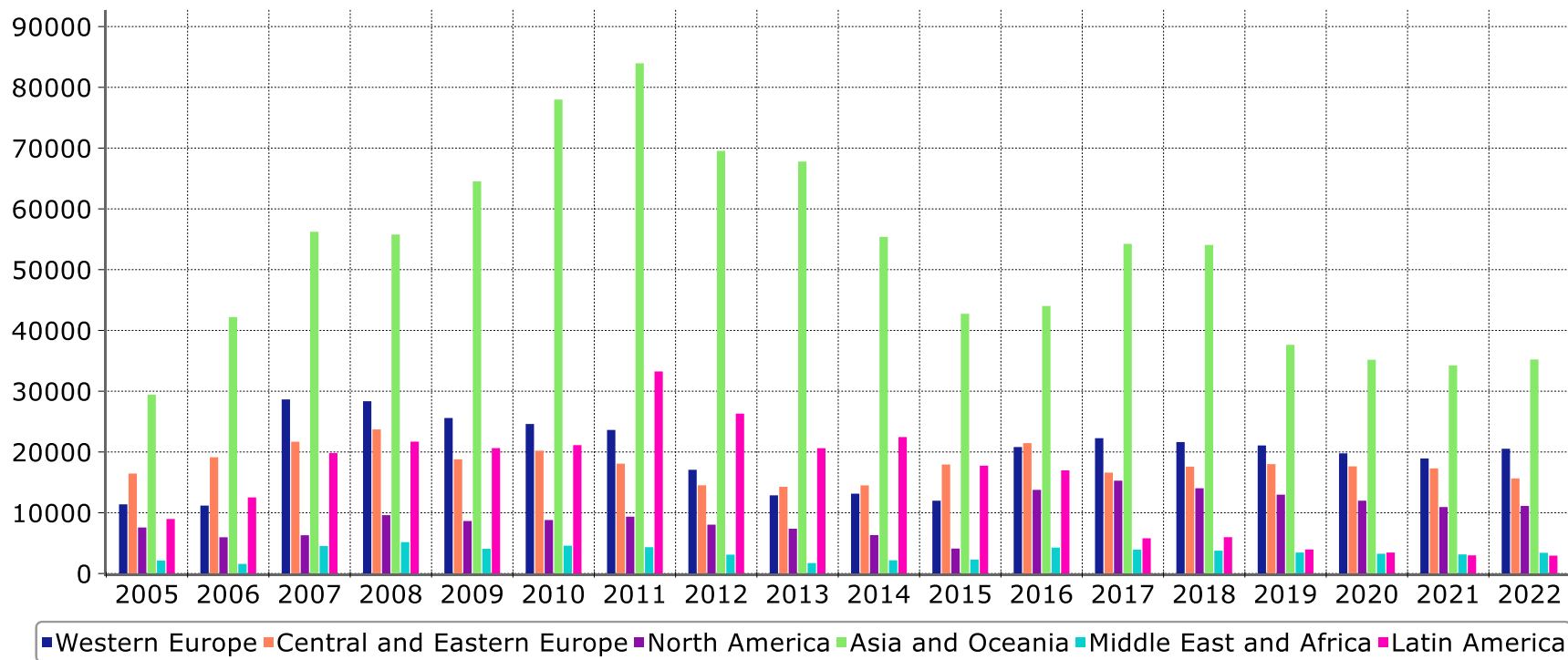


# Personnel in Electronics and Electrotechnical Industry

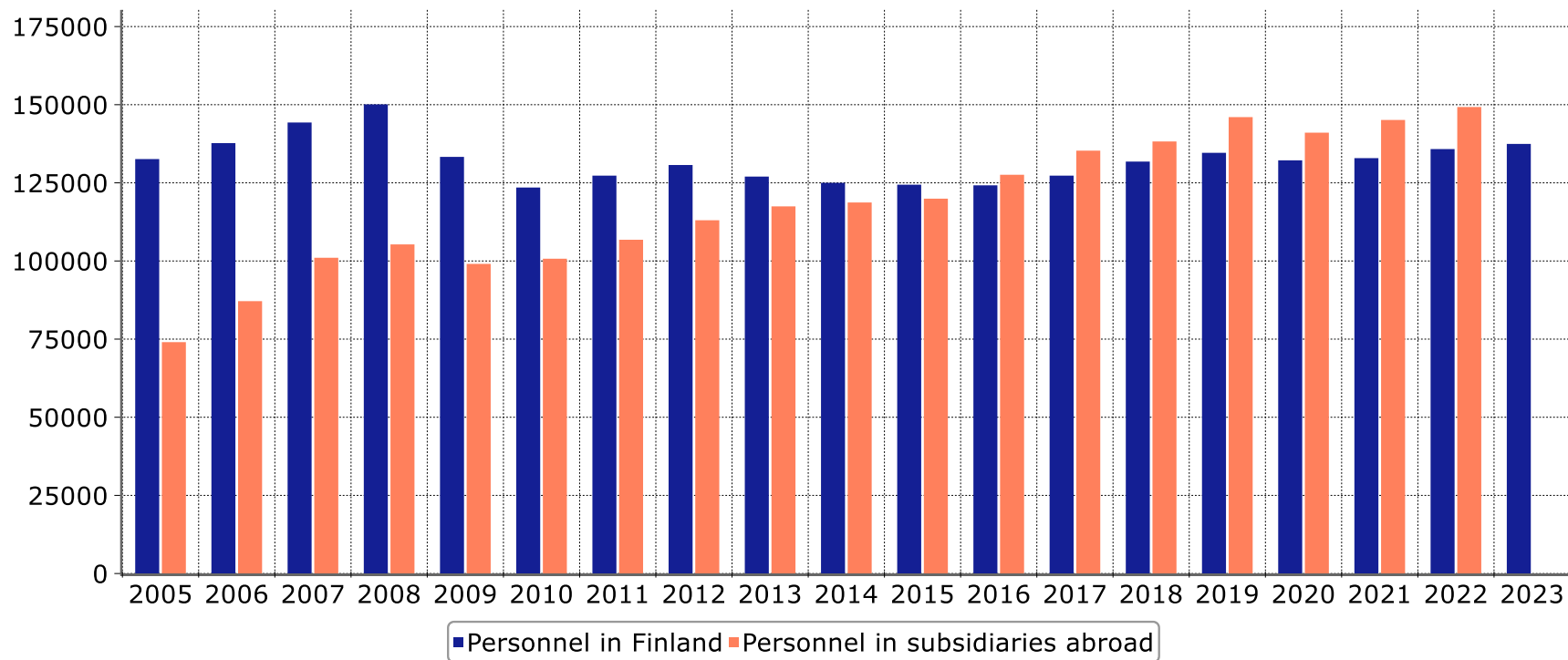




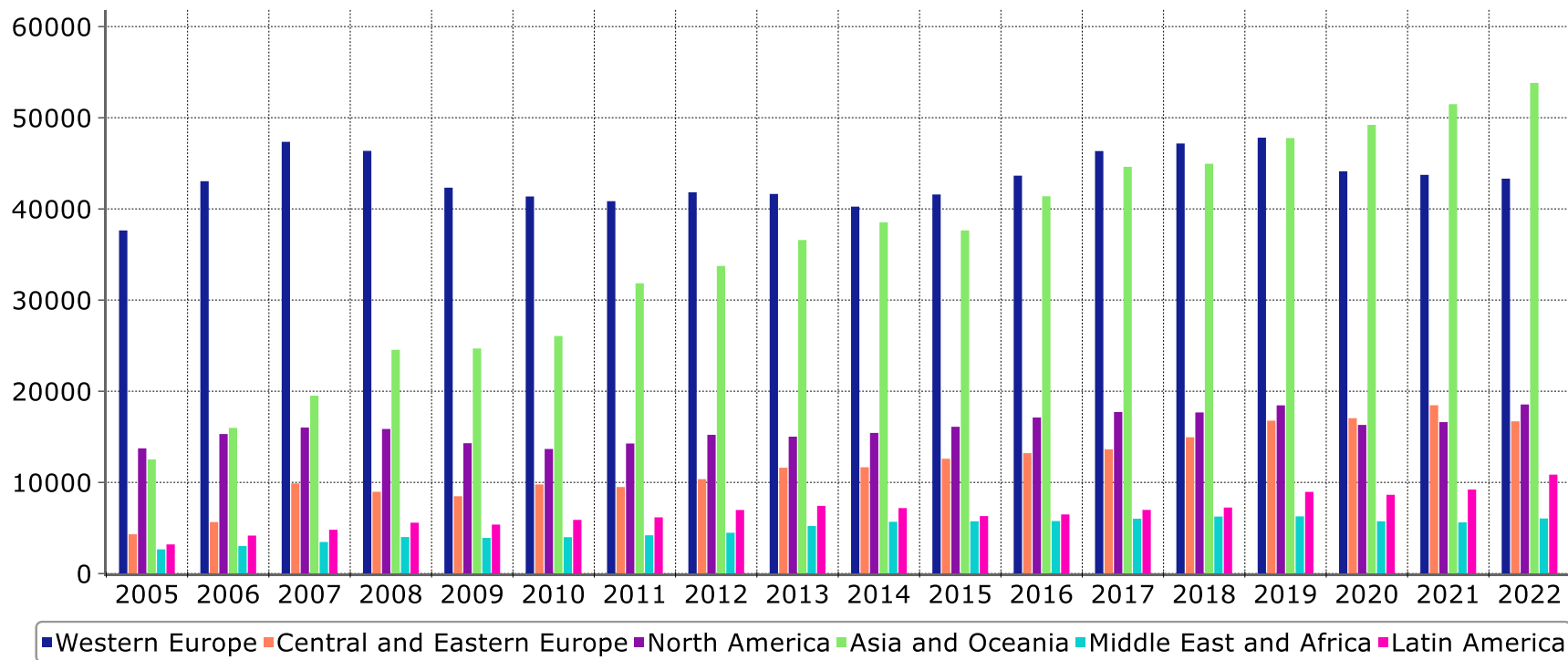
# Electronics and Electrotechnical Industry Personnel in Subsidiaries Abroad



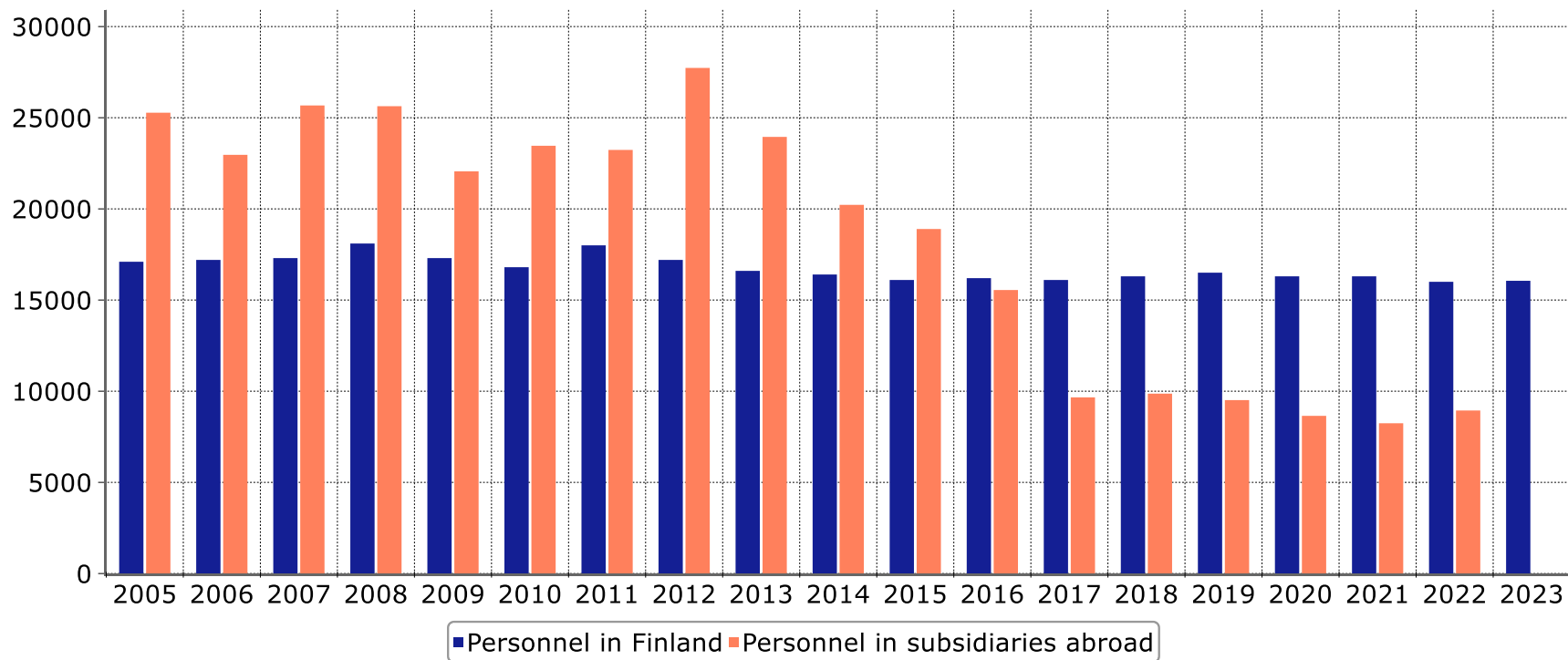
# Personnel in the Mechanical Engineering



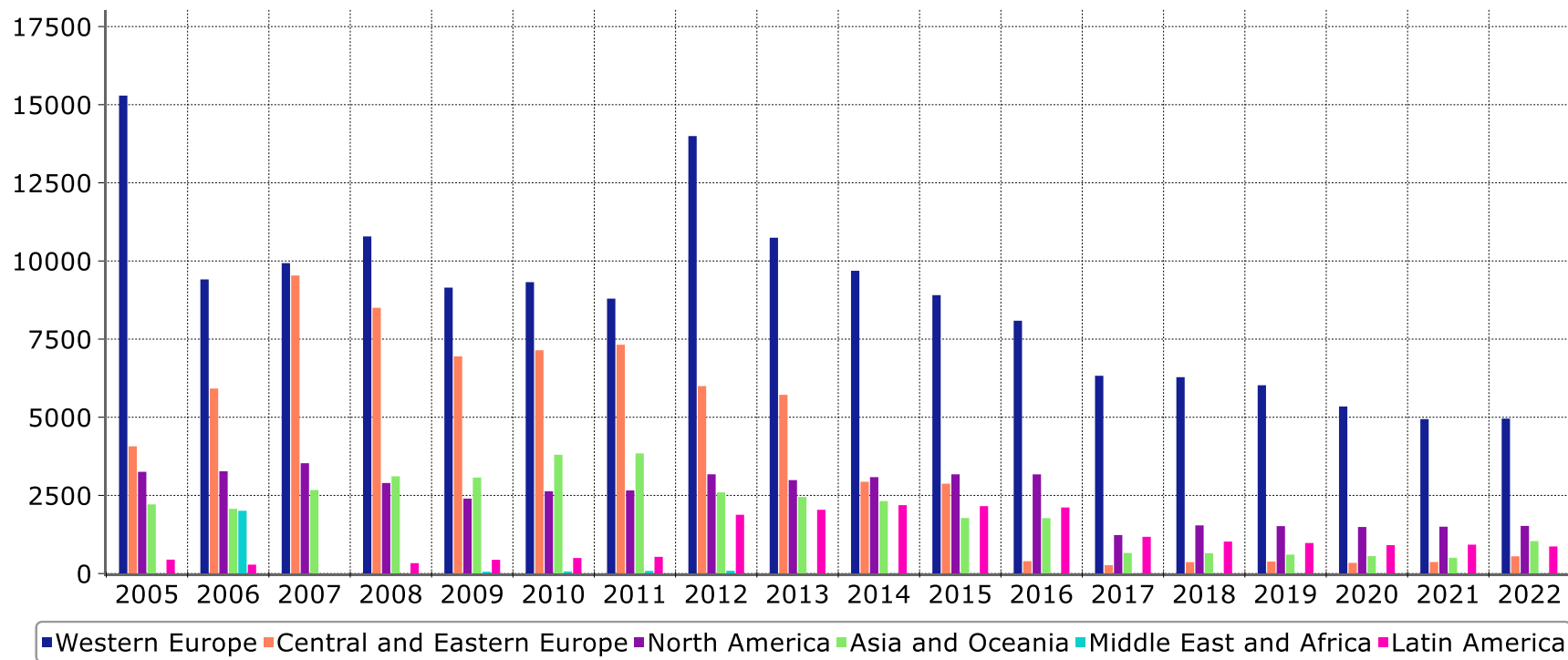
# Mechanical Engineering Personnel in Subsidiaries Abroad



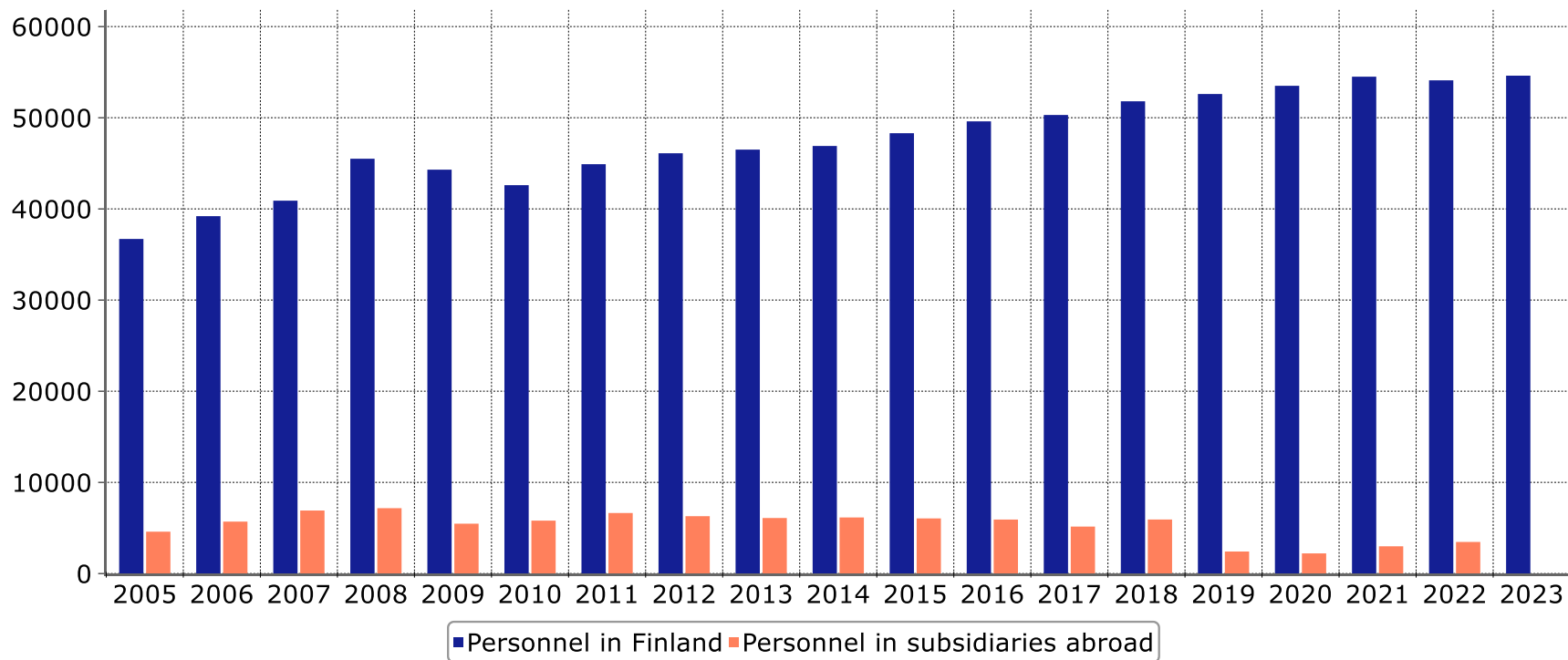
# Personnel in the Metals Industry



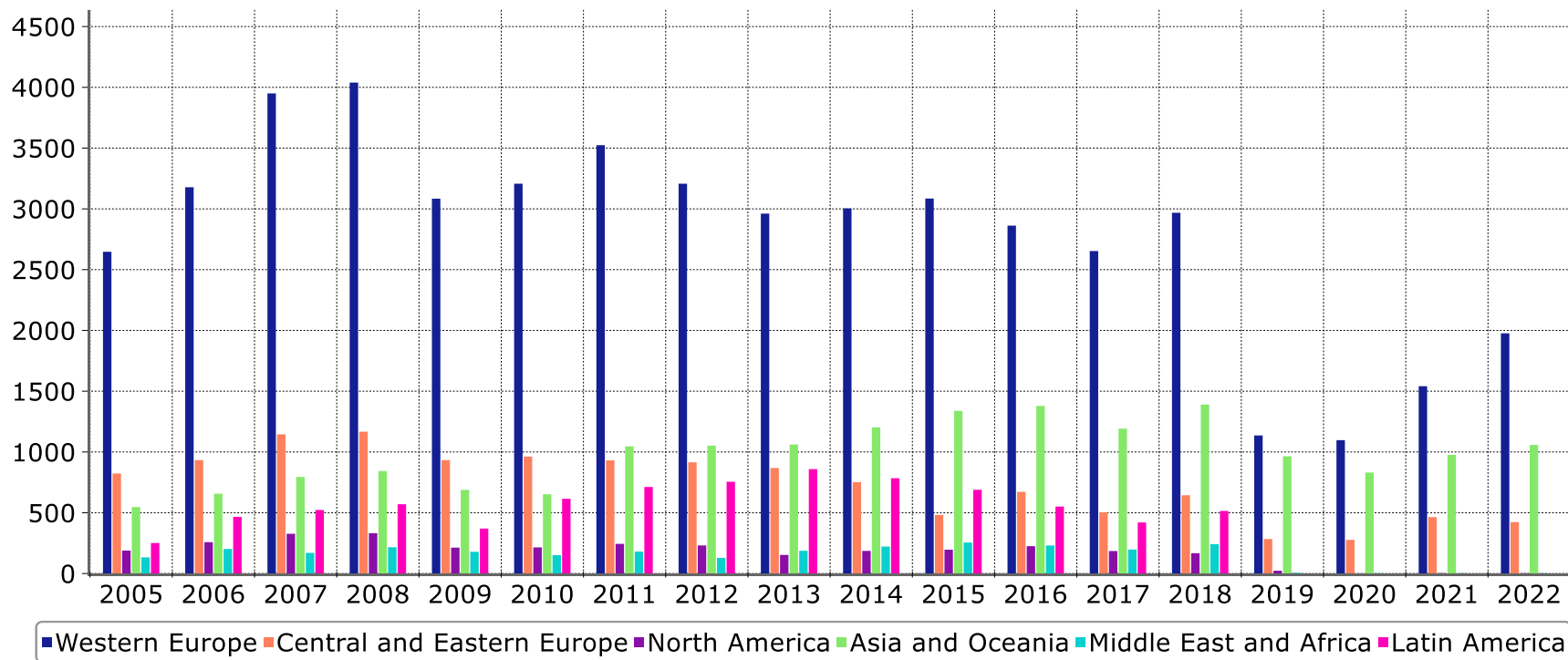
# Metals Industry Personnel in Subsidiaries Abroad



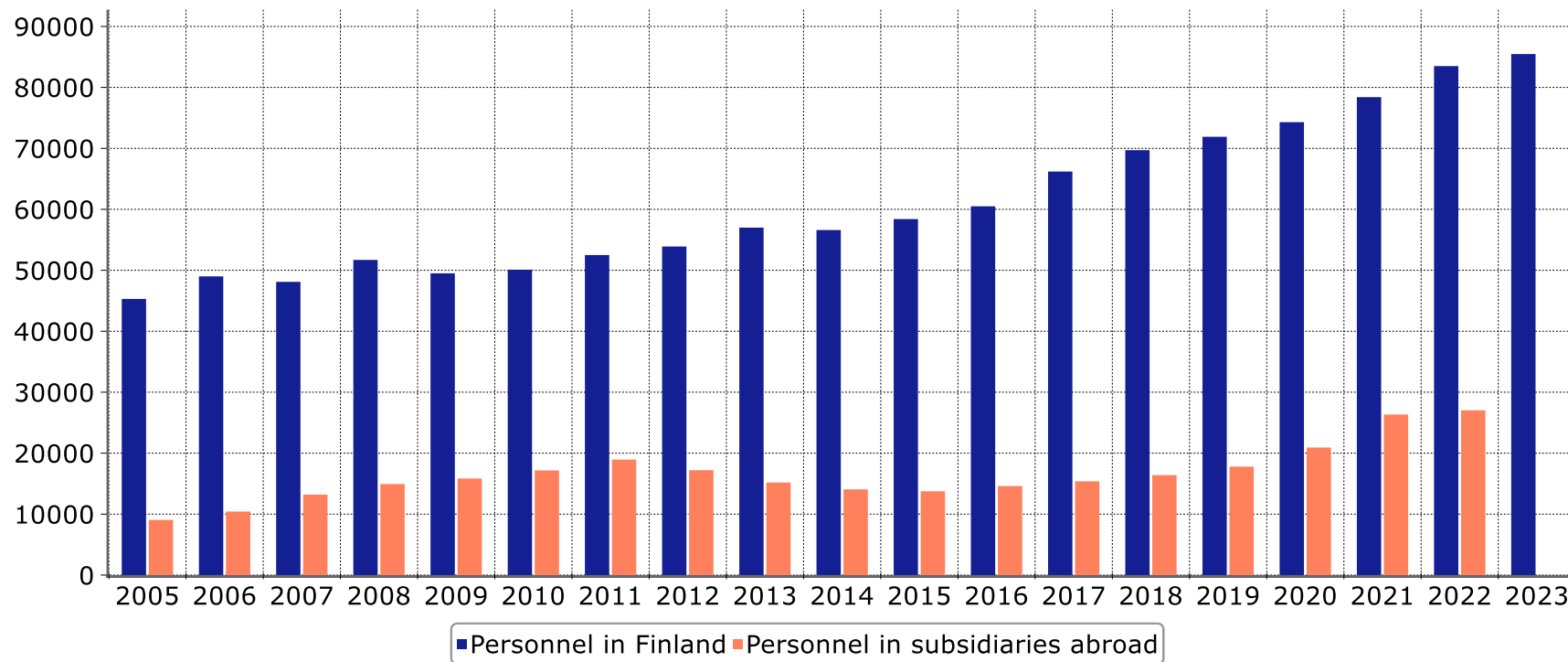
# Personnel in Consulting Engineering



# Consulting Engineering Personnel in Subsidiaries Abroad

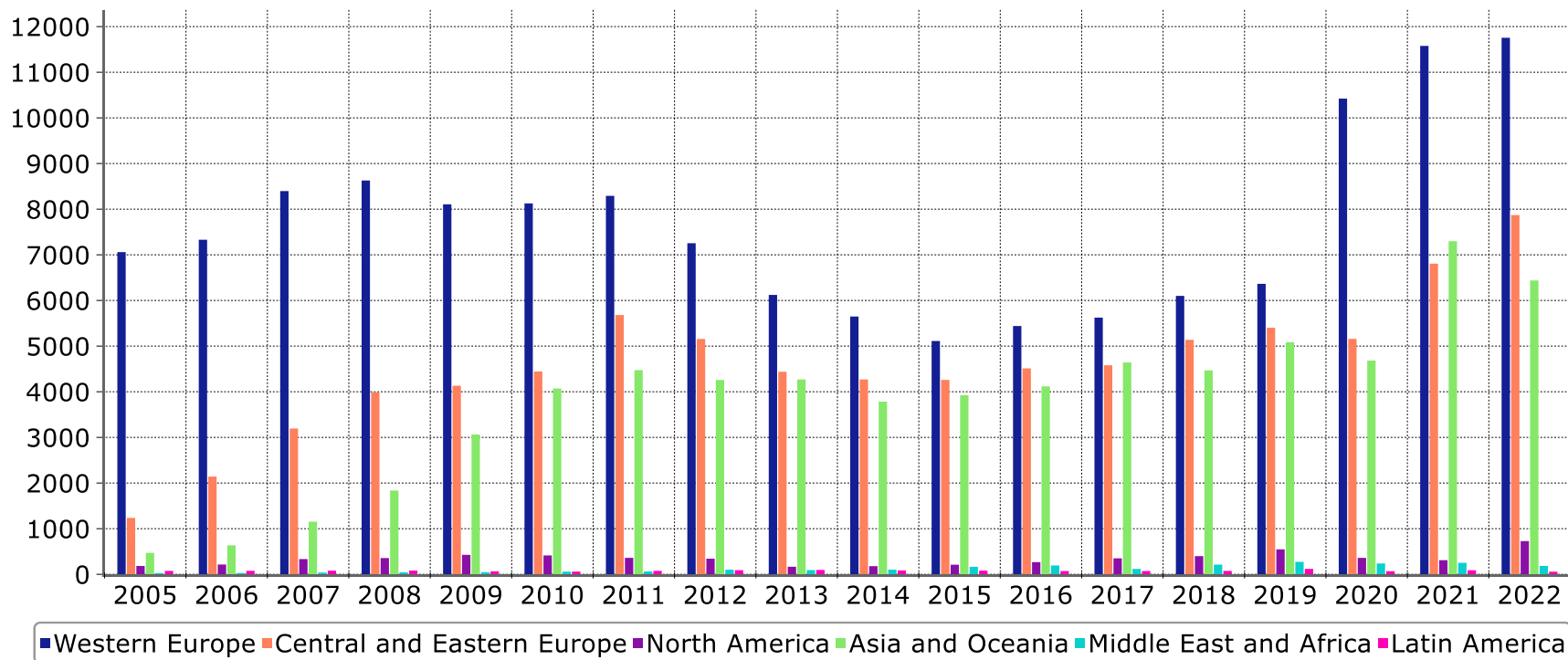


# Personnel in Information Technology

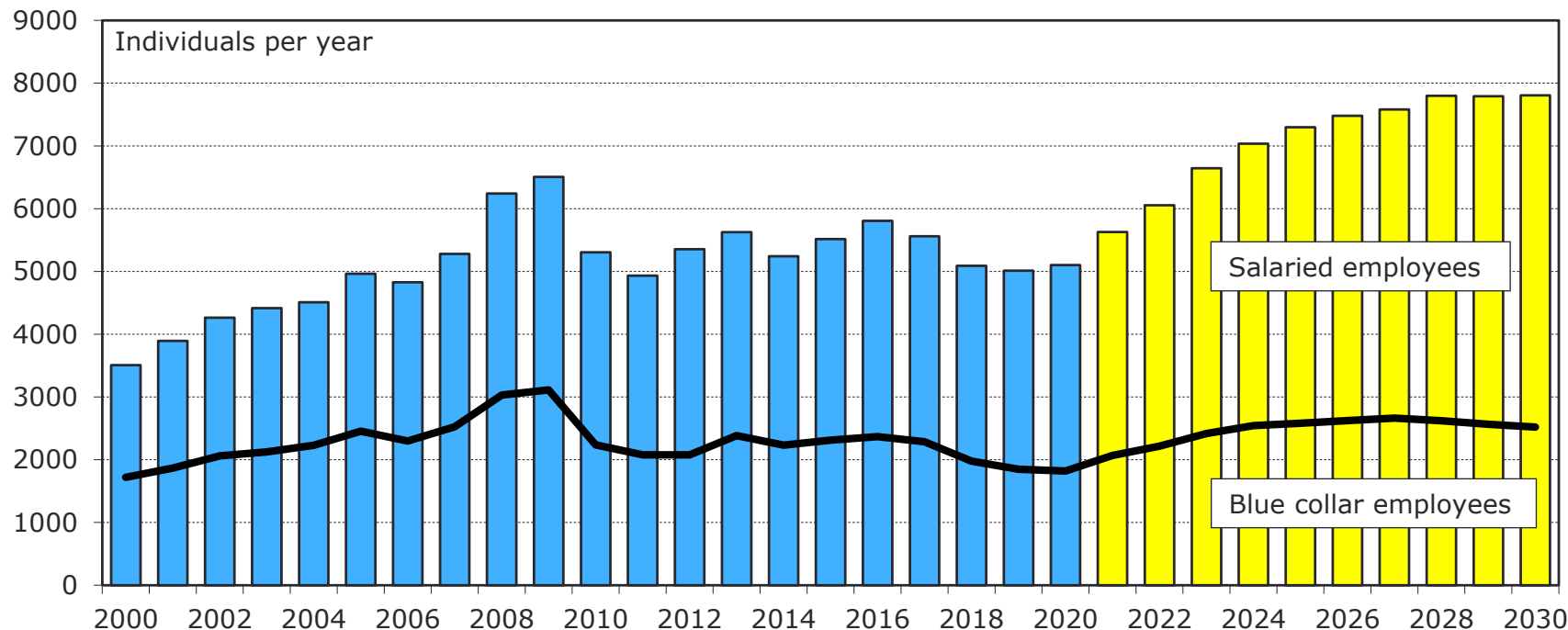




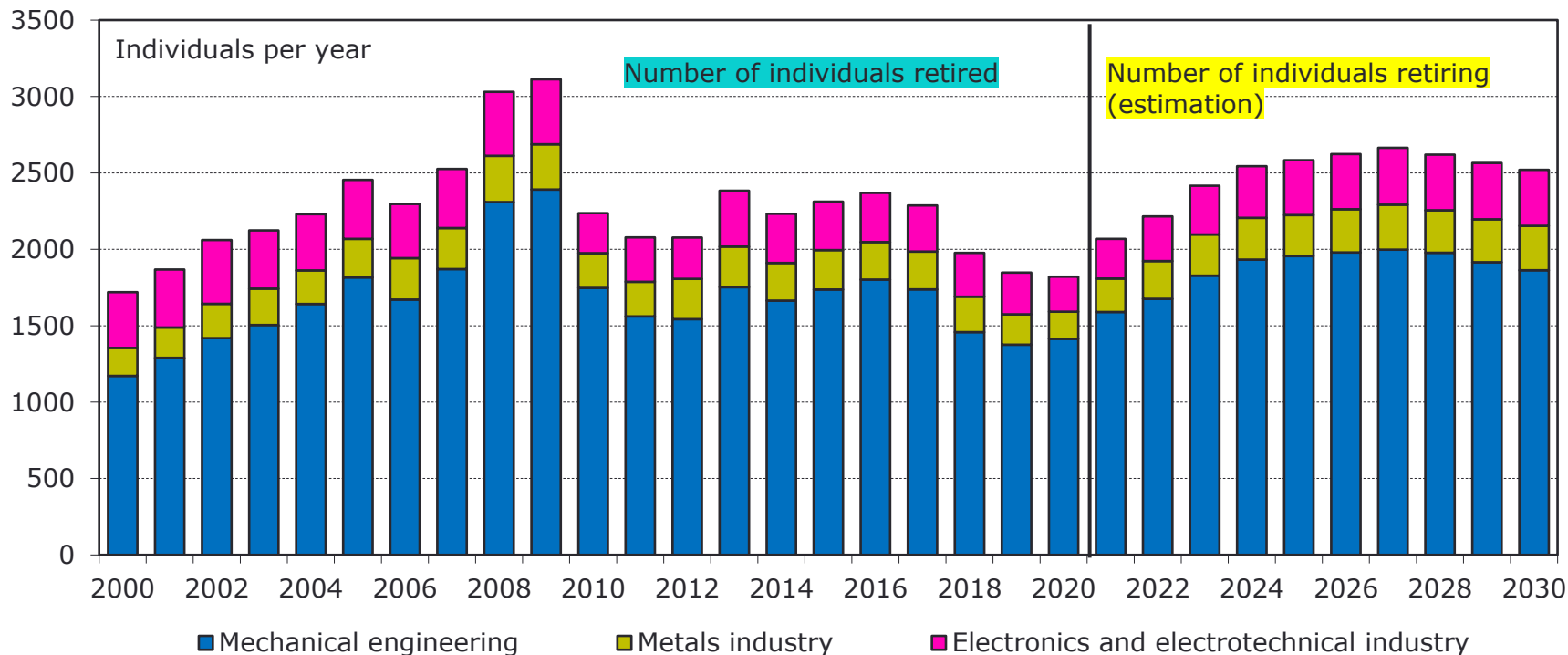
# Information Technology Personnel in Subsidiaries Abroad



# Retirement of technology industry personnel in Finland



# Retirement of technology industry blue collar employees in Finland

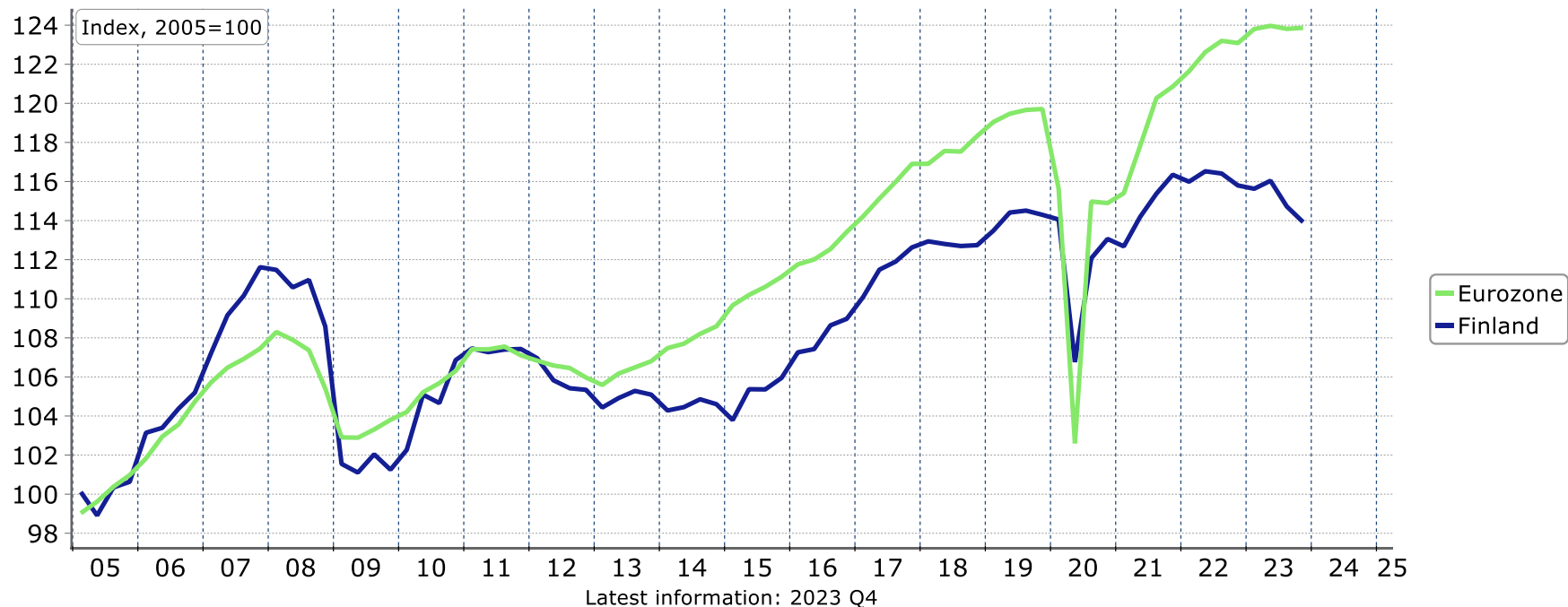




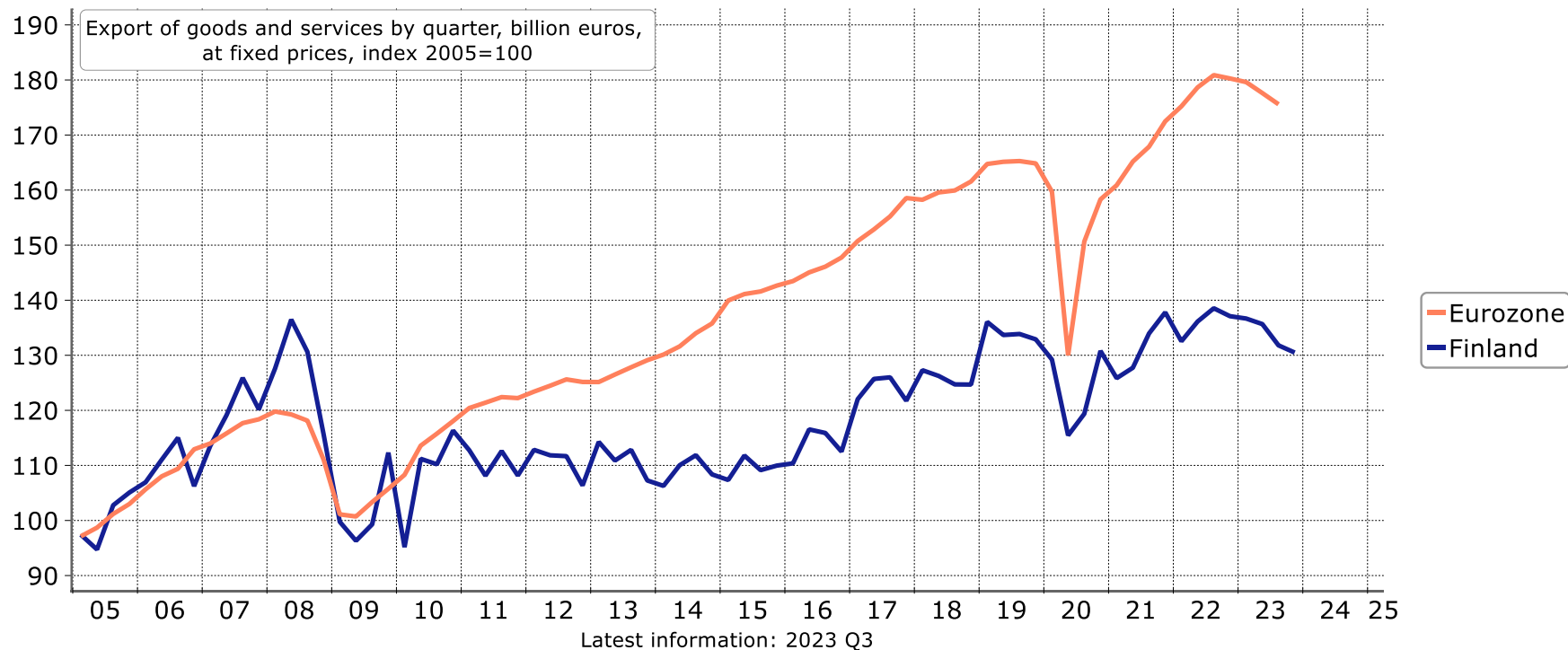
# **World economic outlook**

## **- Finland as a part of global economy**

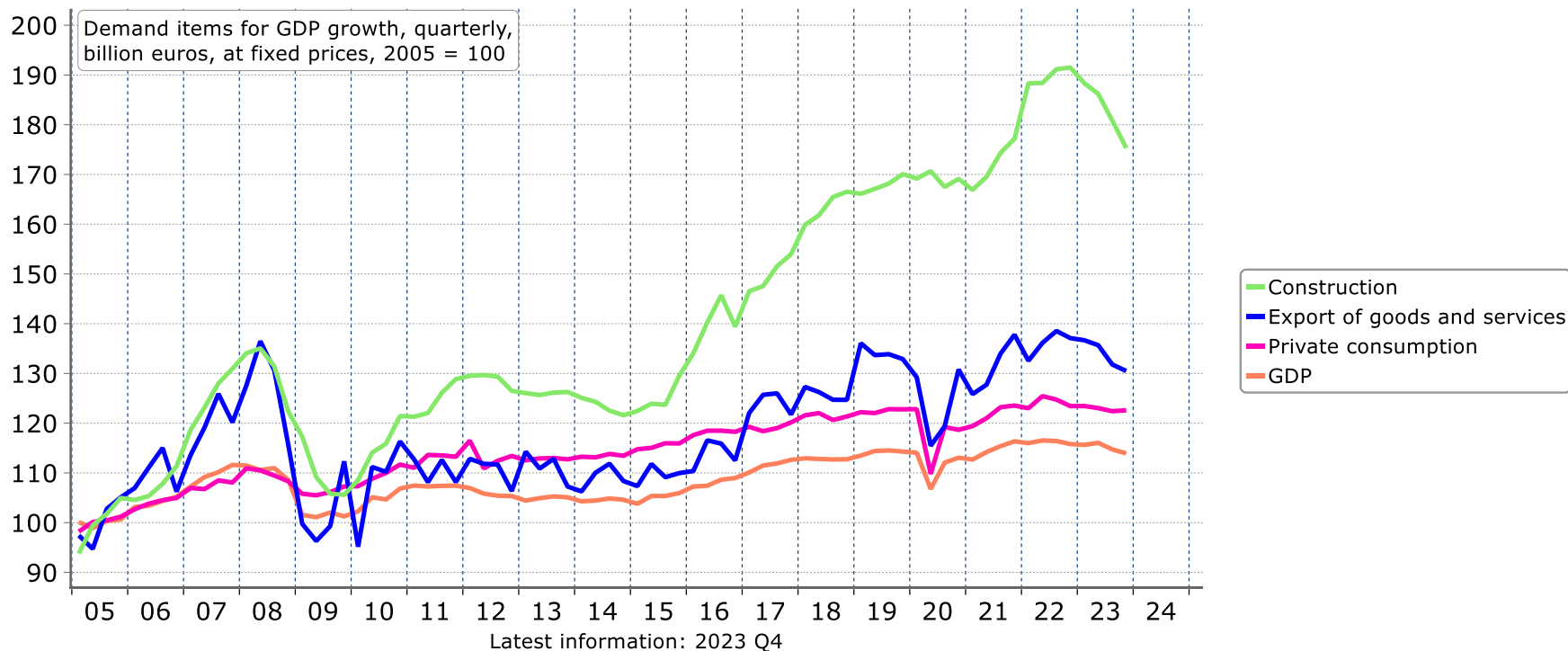
# GDP in Euro Area and Finland by quarter



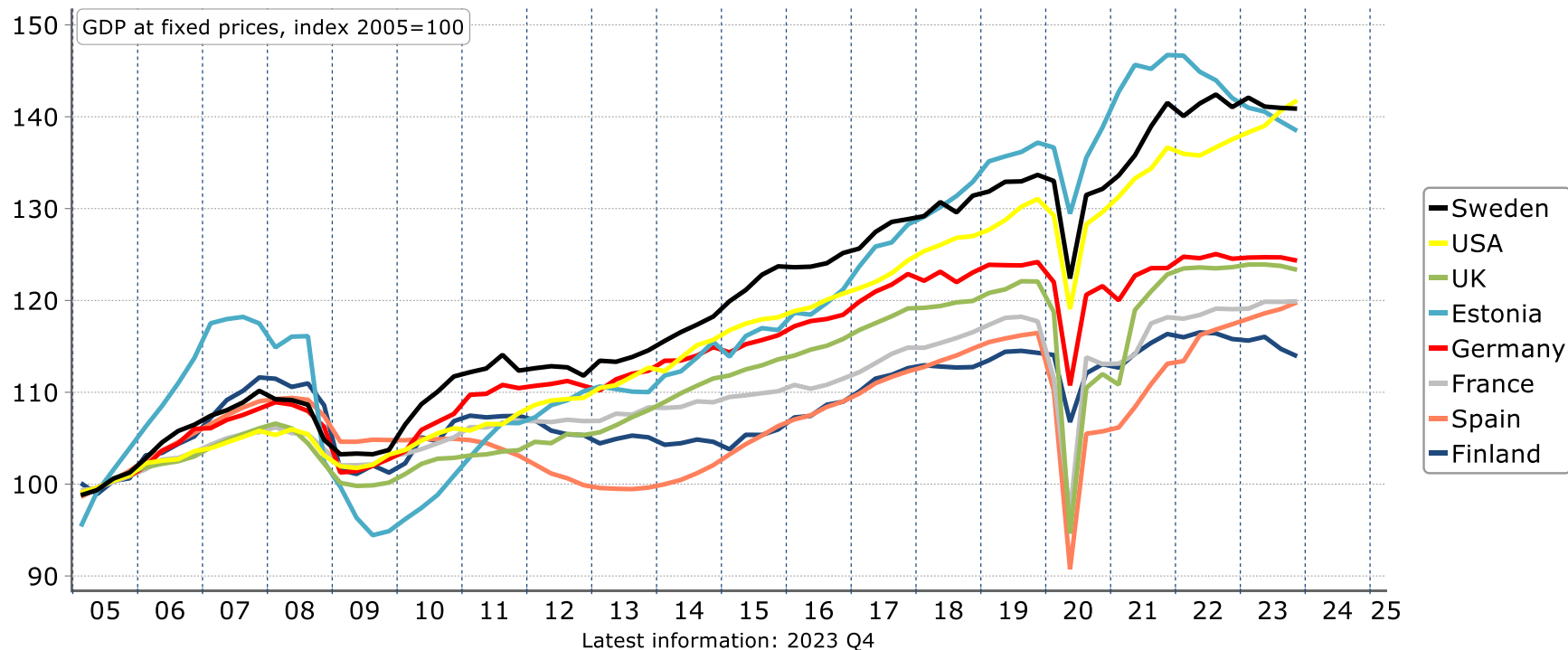
# Export of goods and services from Finland and Euro Area by quarter



# GDP by demand sector in Finland by quarter



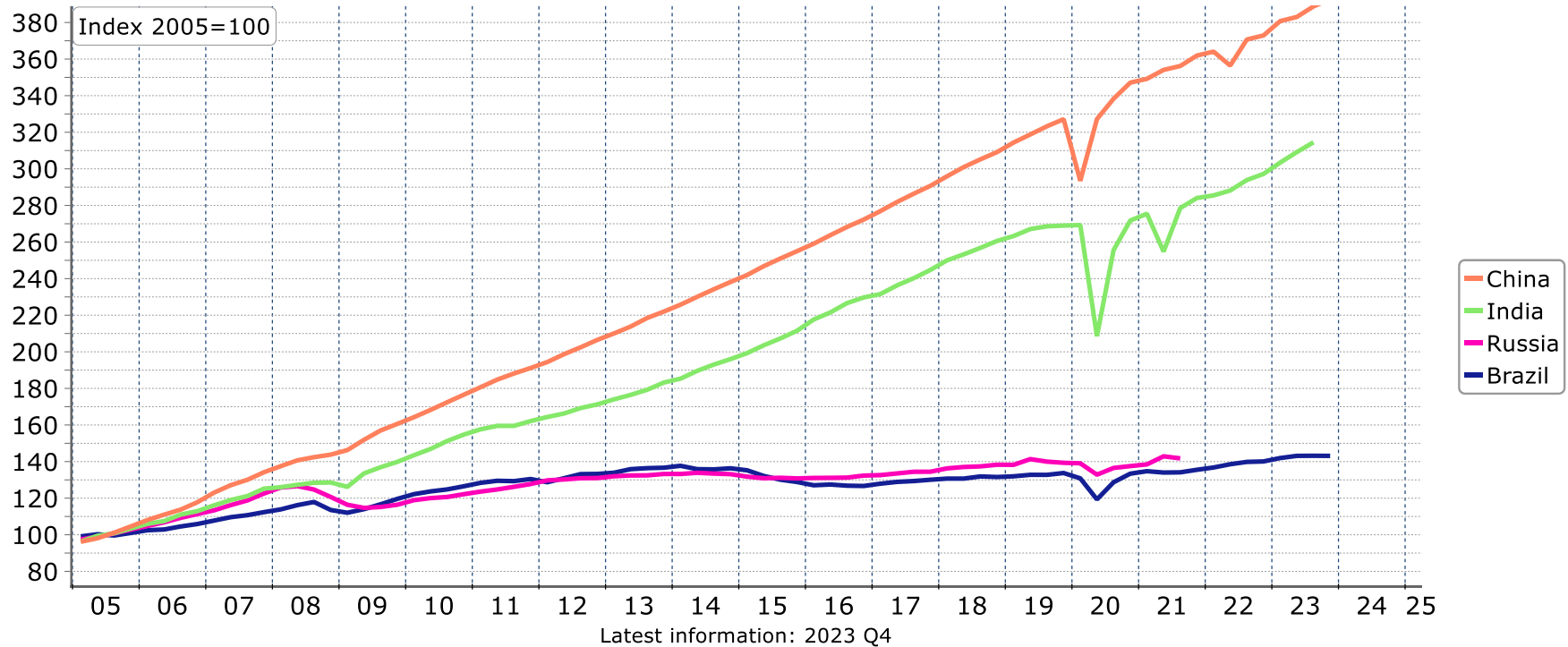
# GDP in some western countries



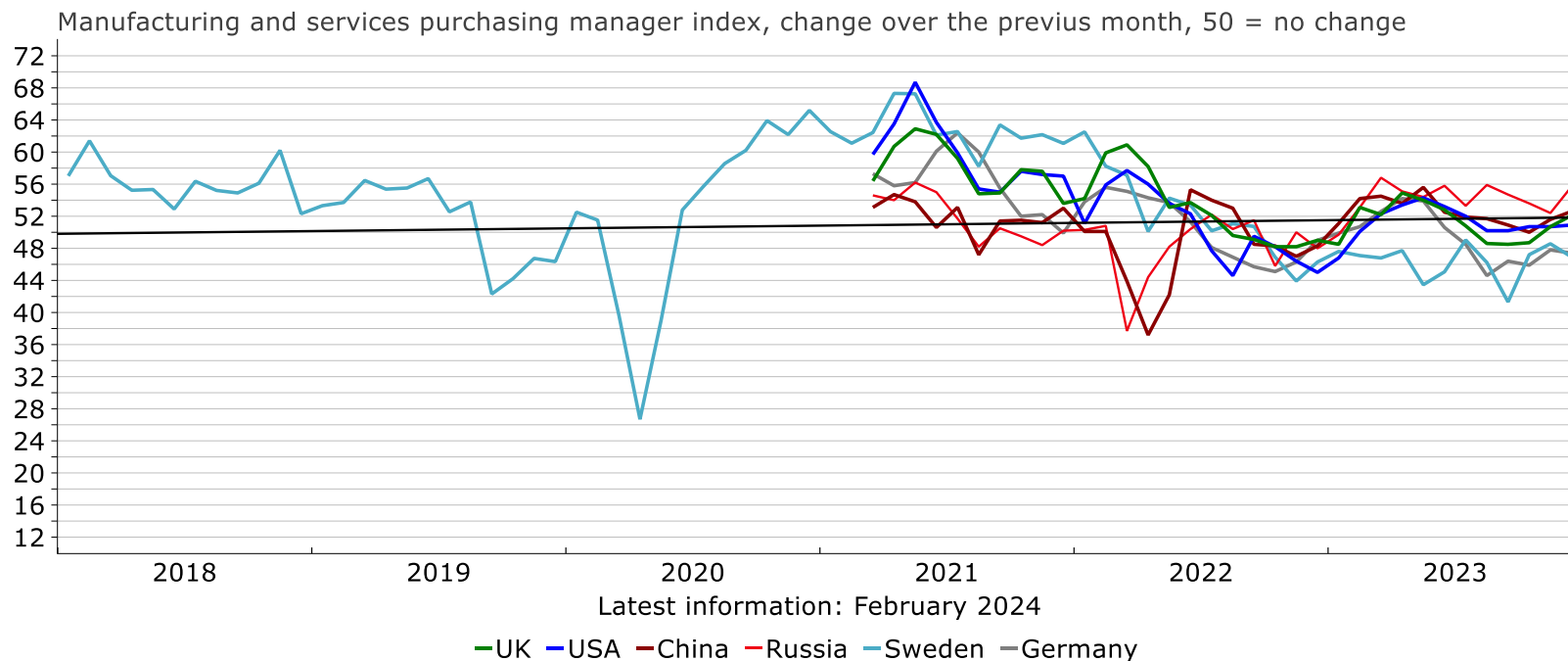


# GDP in large developing countries

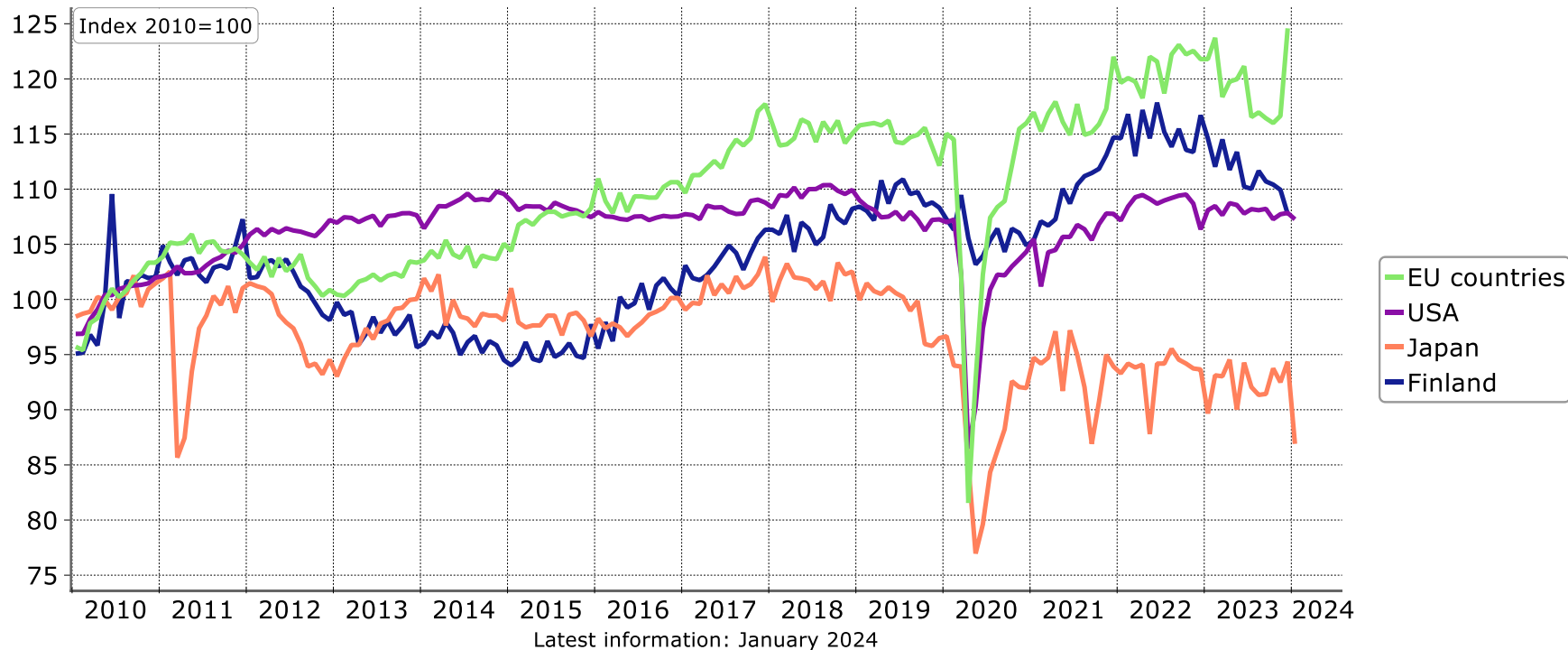
China, India, Brazil and Russia account for 31% of the world economy, adjusted for purchasing power



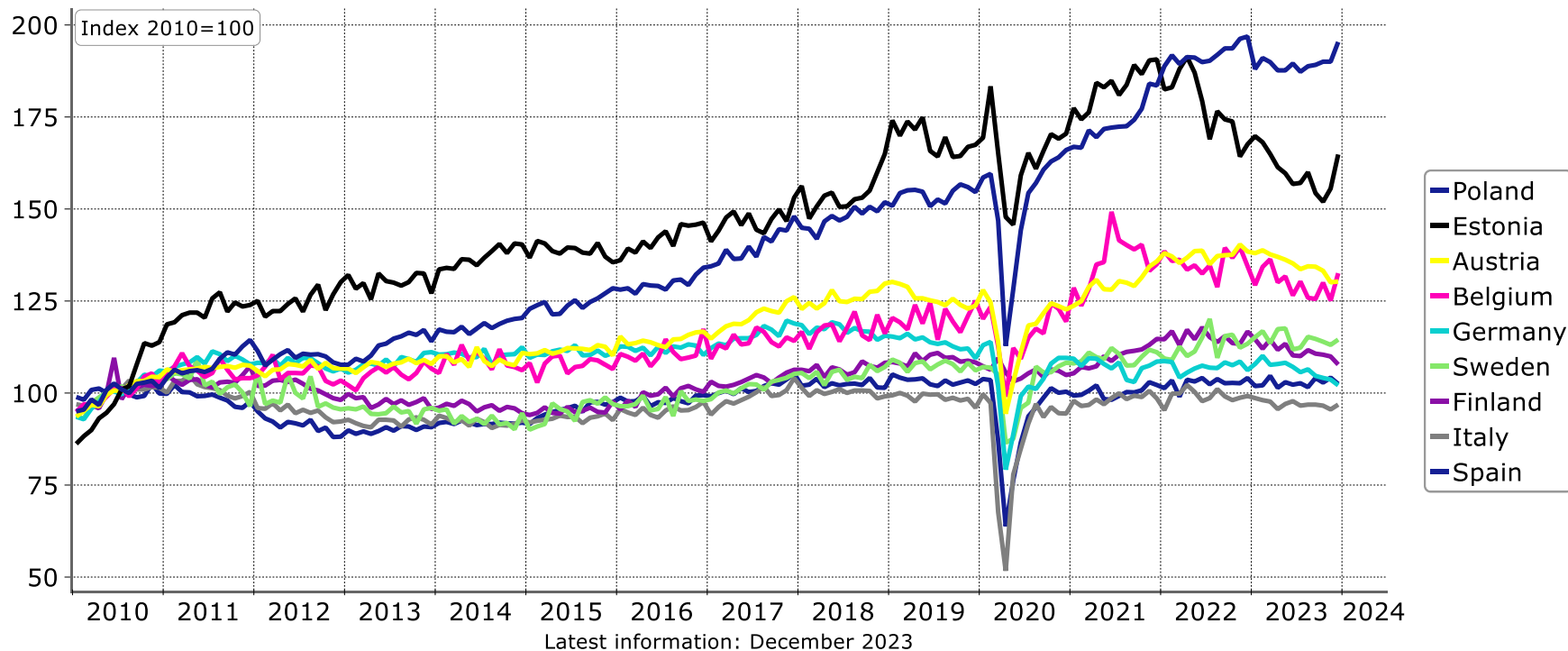
# Purchasing Manager Indices for the entire business sector in Finland's most important export countries



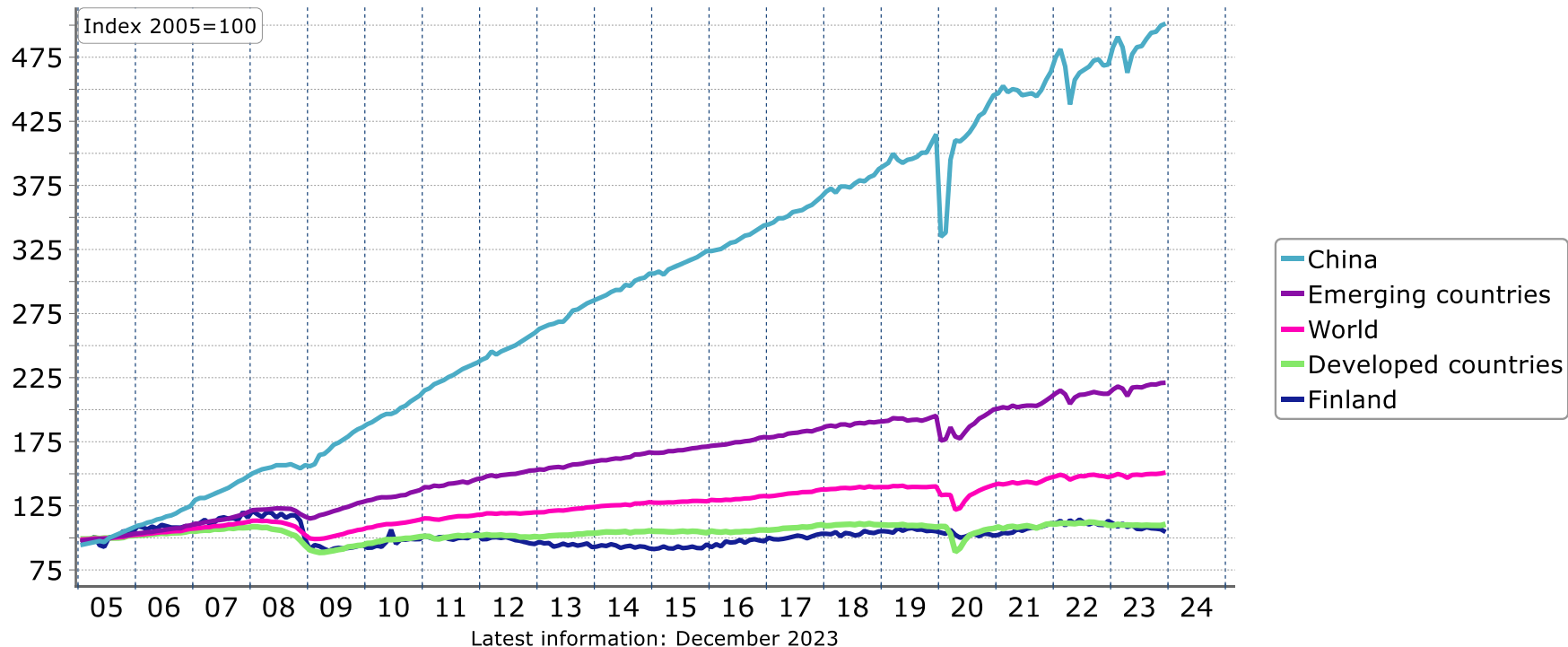
# Industrial Production Volume in USA, EU, Japan and Finland



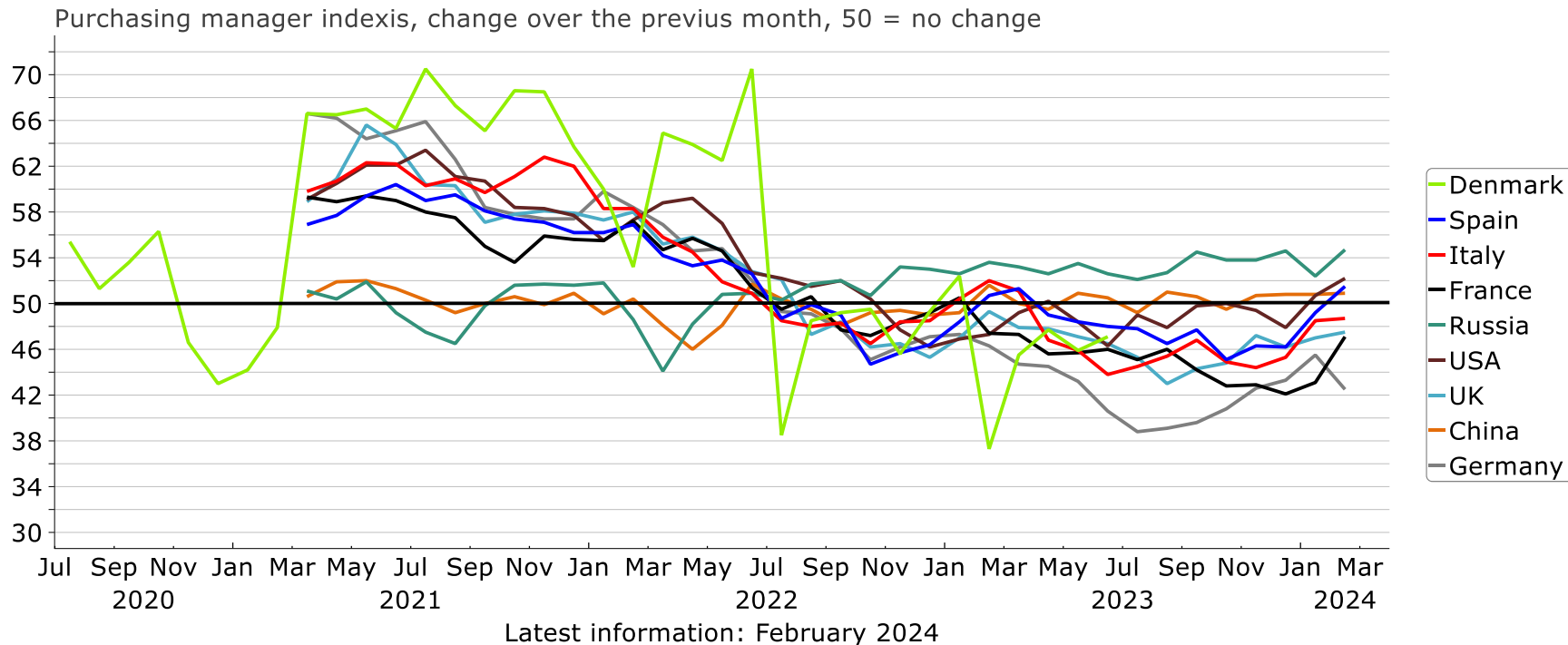
# Industrial Production Volume in EU-Countries



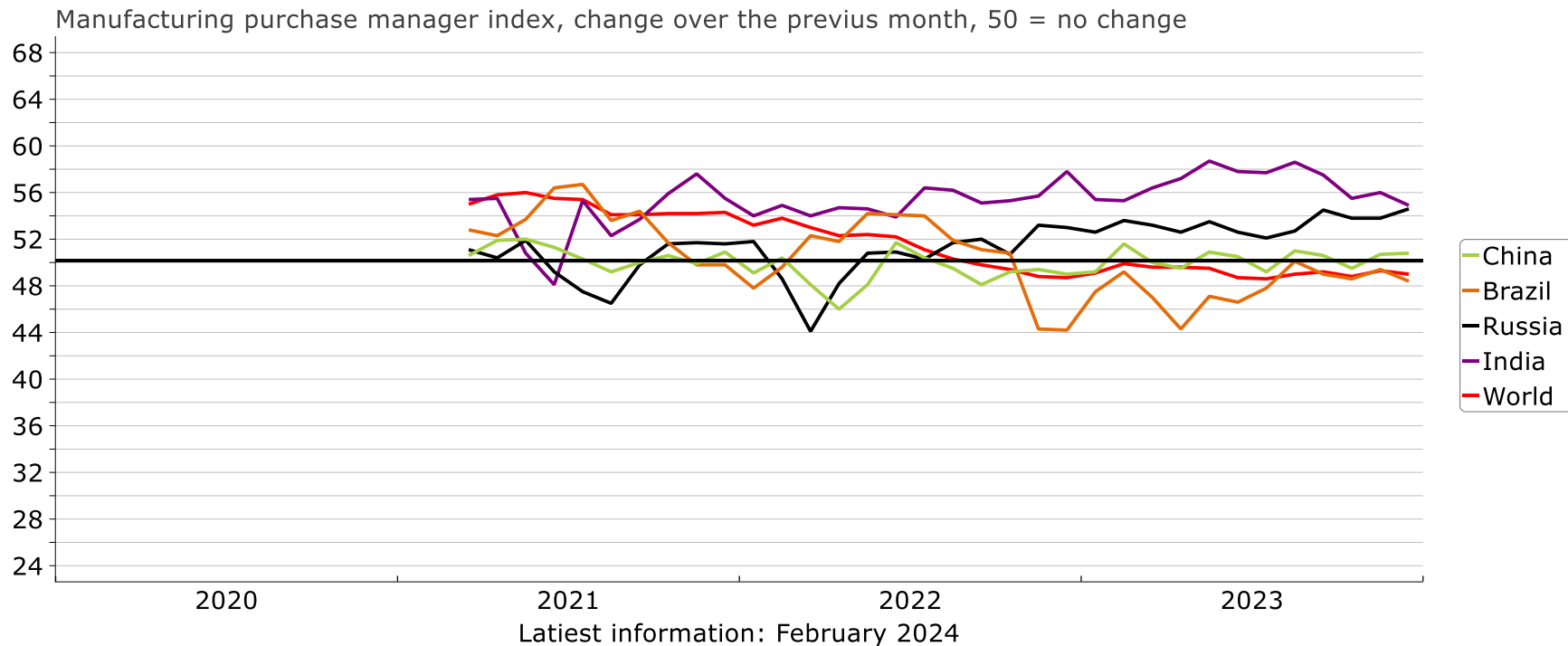
# Industrial production globally



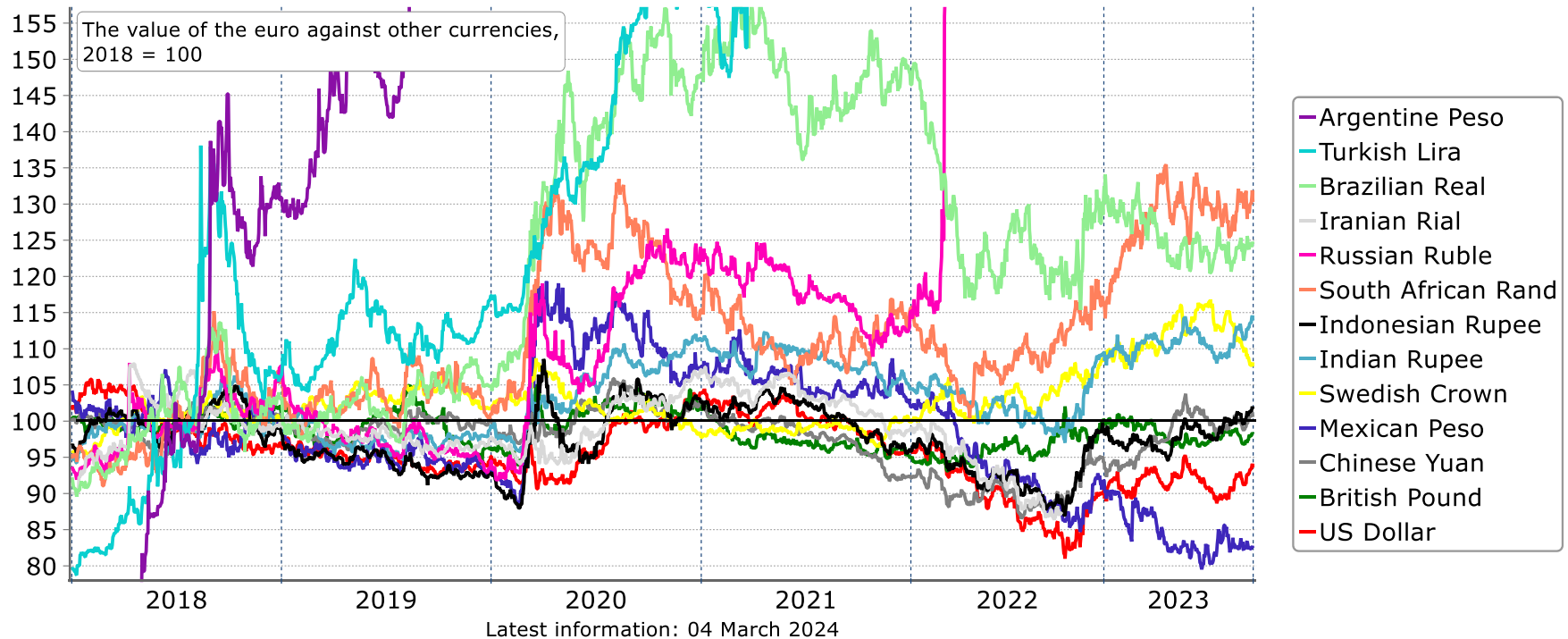
# Purchasing Manager indices for the manufacturing industries



# Purchasing Manager indices for the manufacturing industries in major developing countries

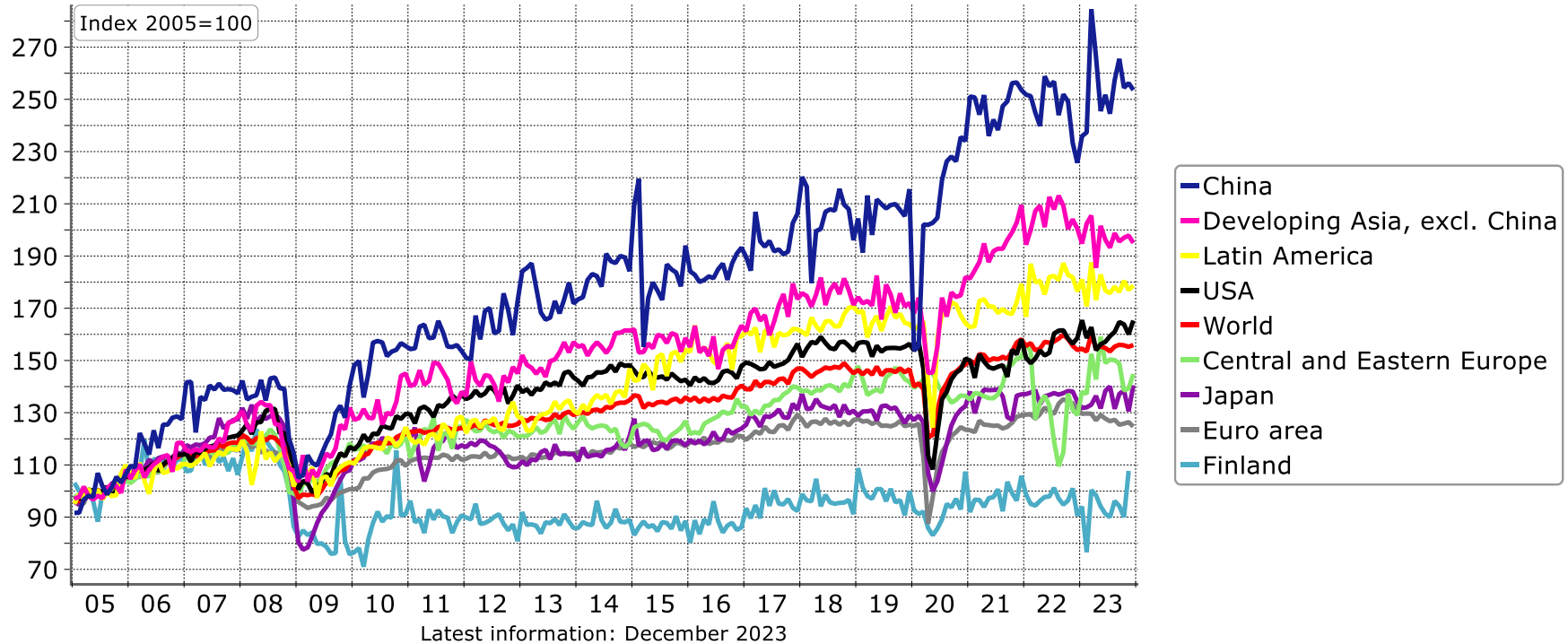


# Exchange rates (when the curve rises, the value of the Euro strengthens against the other currency)

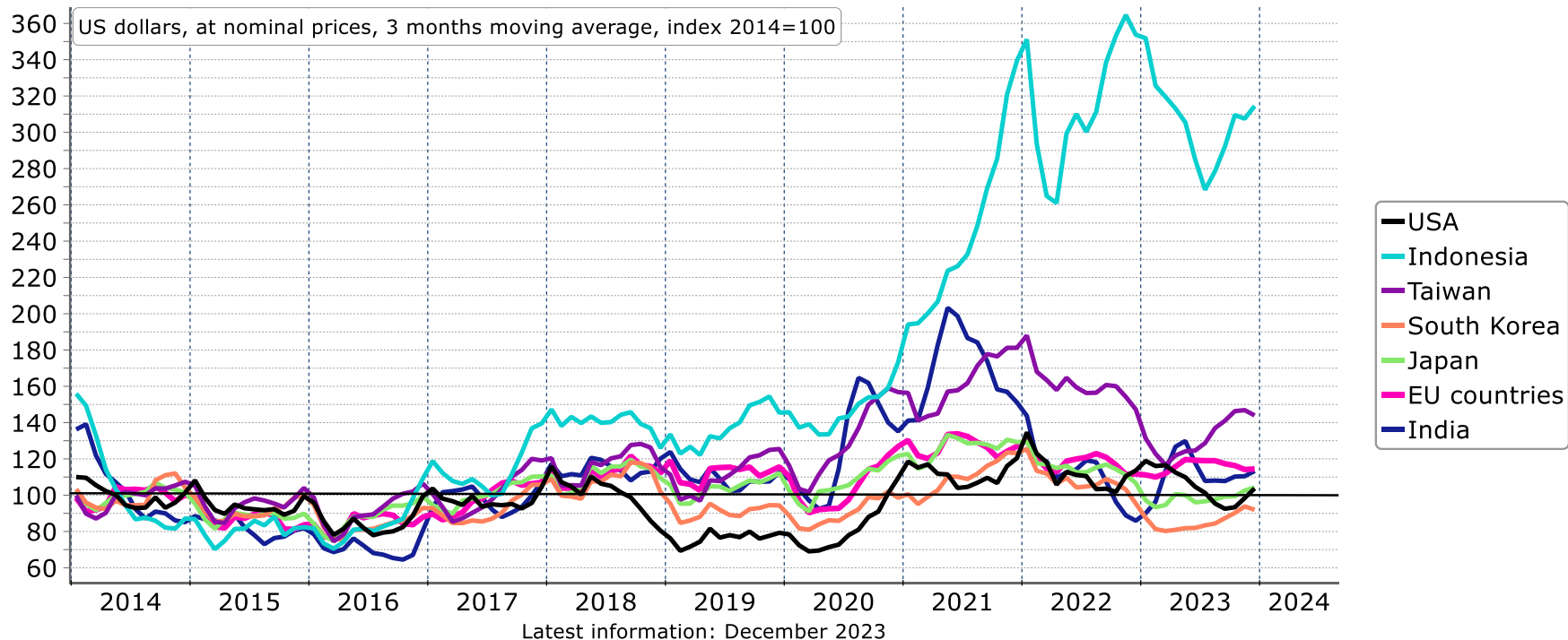




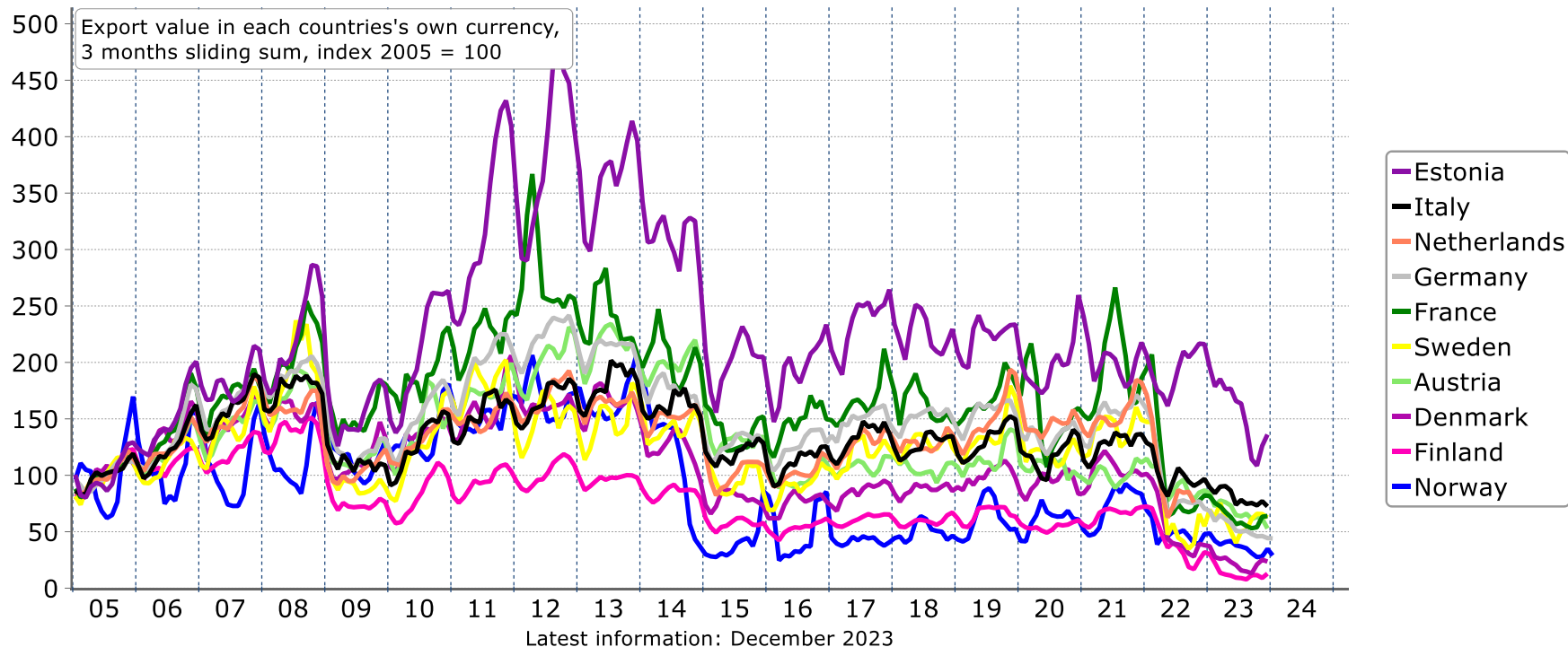
# Goods export volume



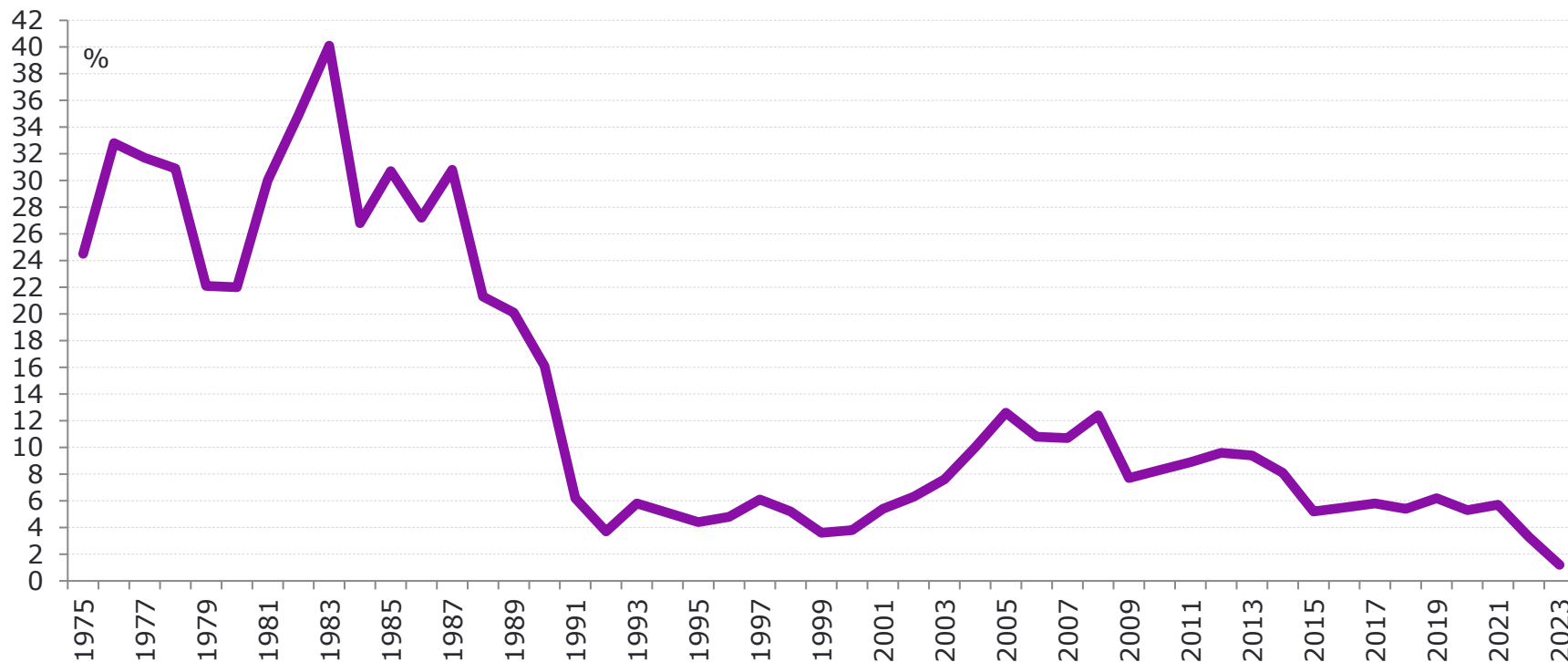
# Chinese goods imports



# EU exports to Russia



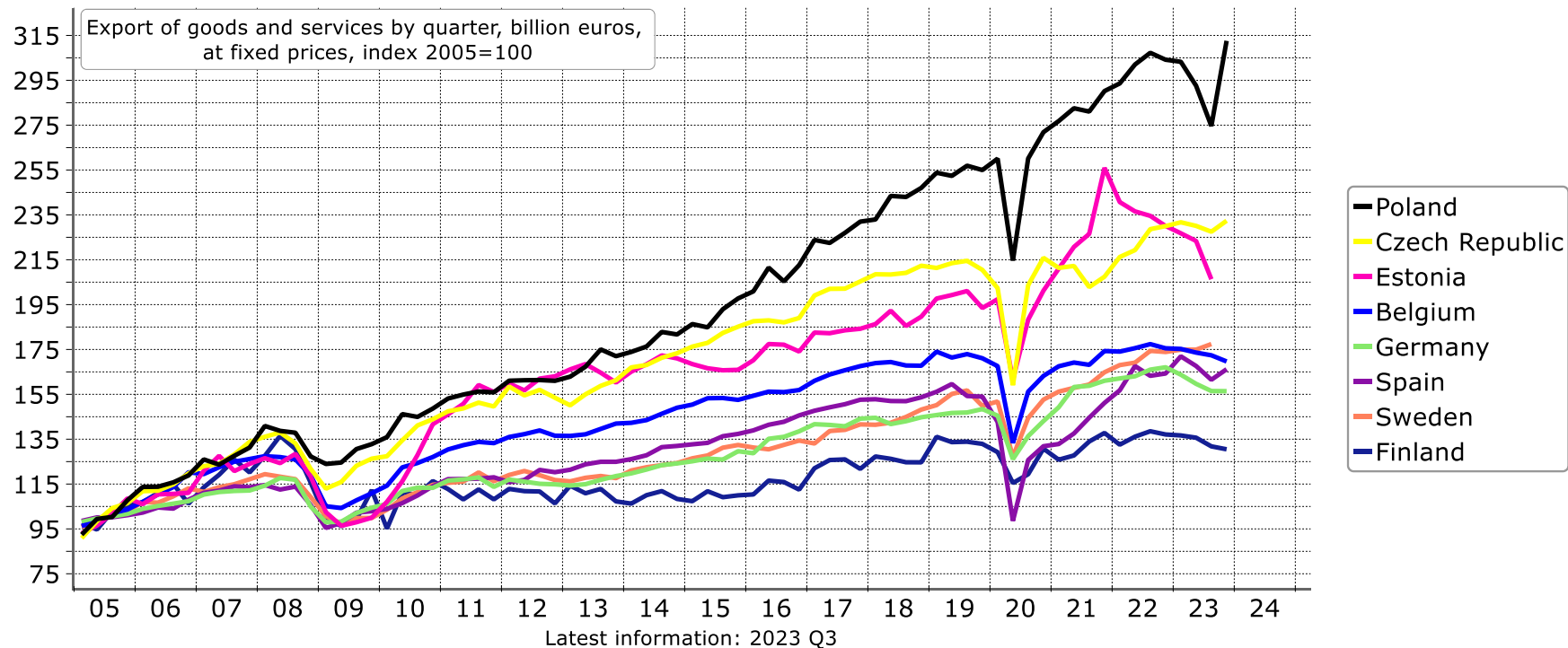
# Russia's\* share of the technology industry's Finnish exports



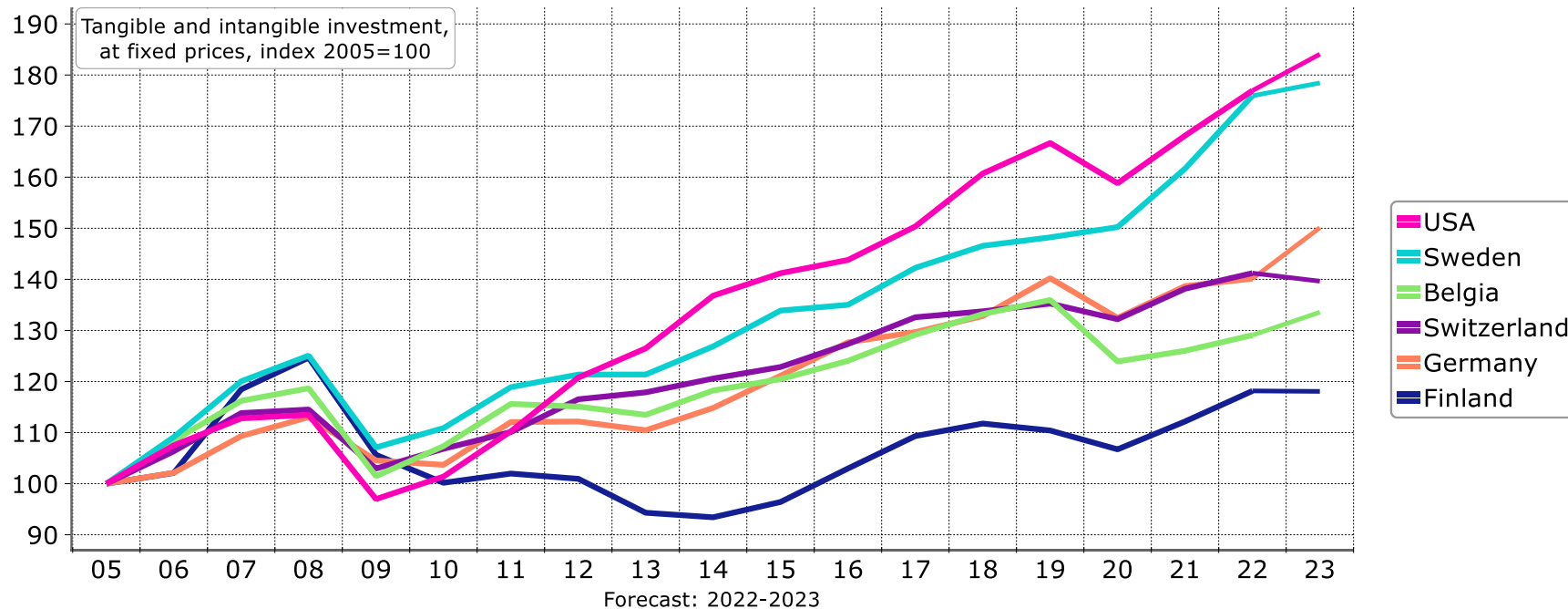


# **Finland's economic growth relies on exports and investments**

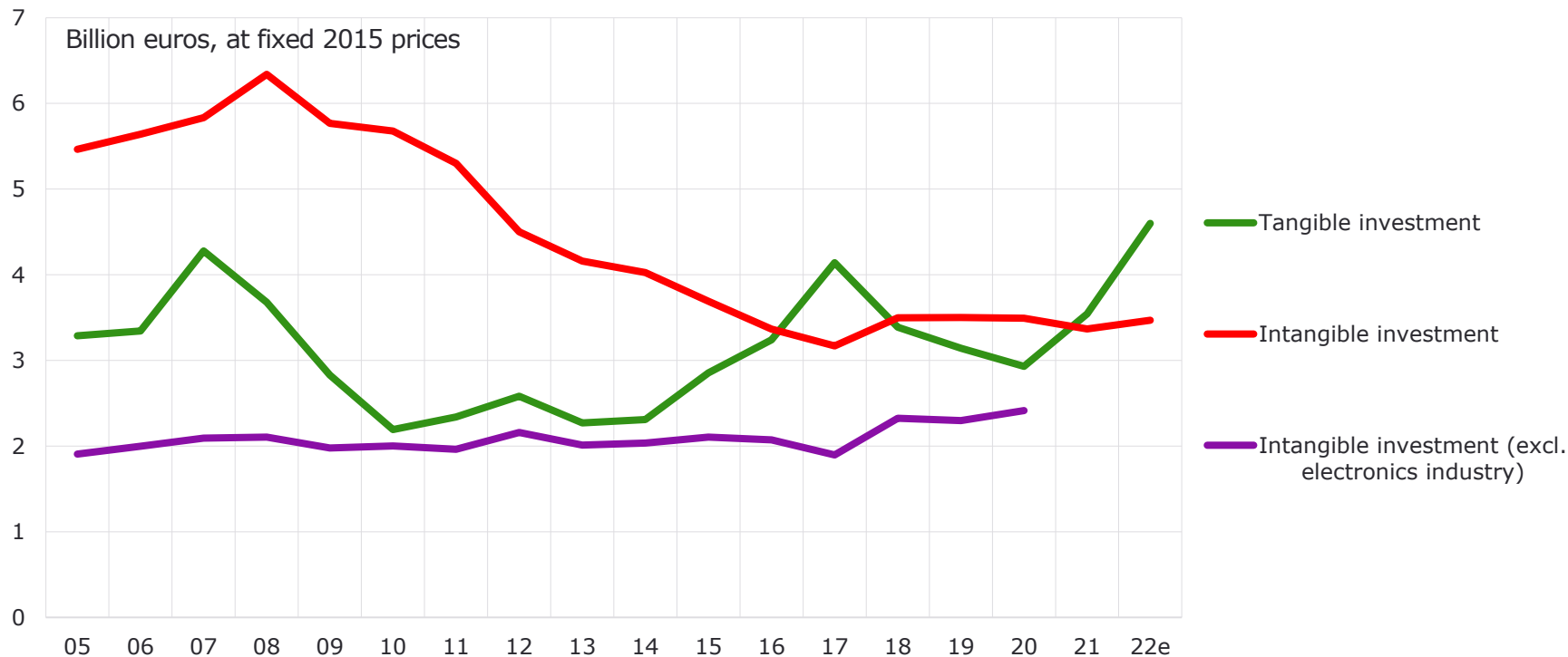
# Export of goods and services



# Business investment

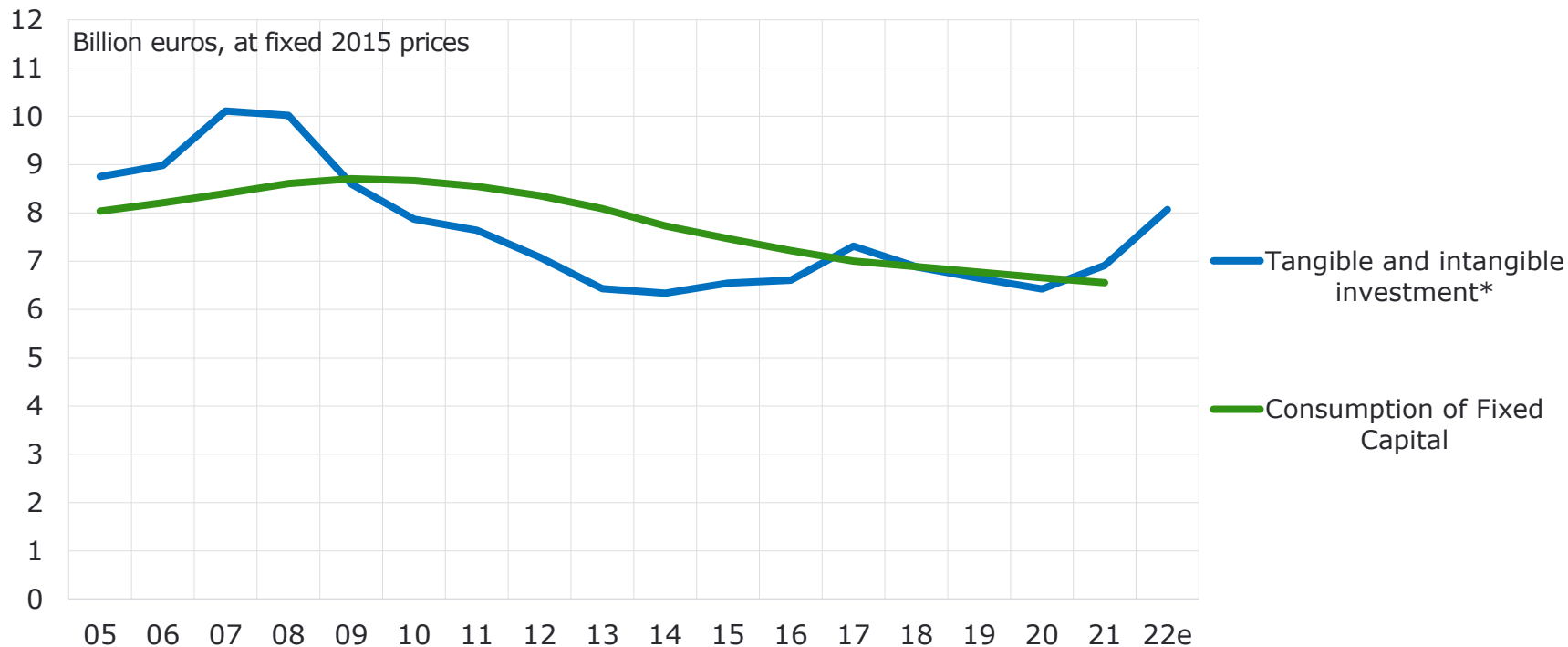


# Industrial tangible and intangible investment\* in Finland

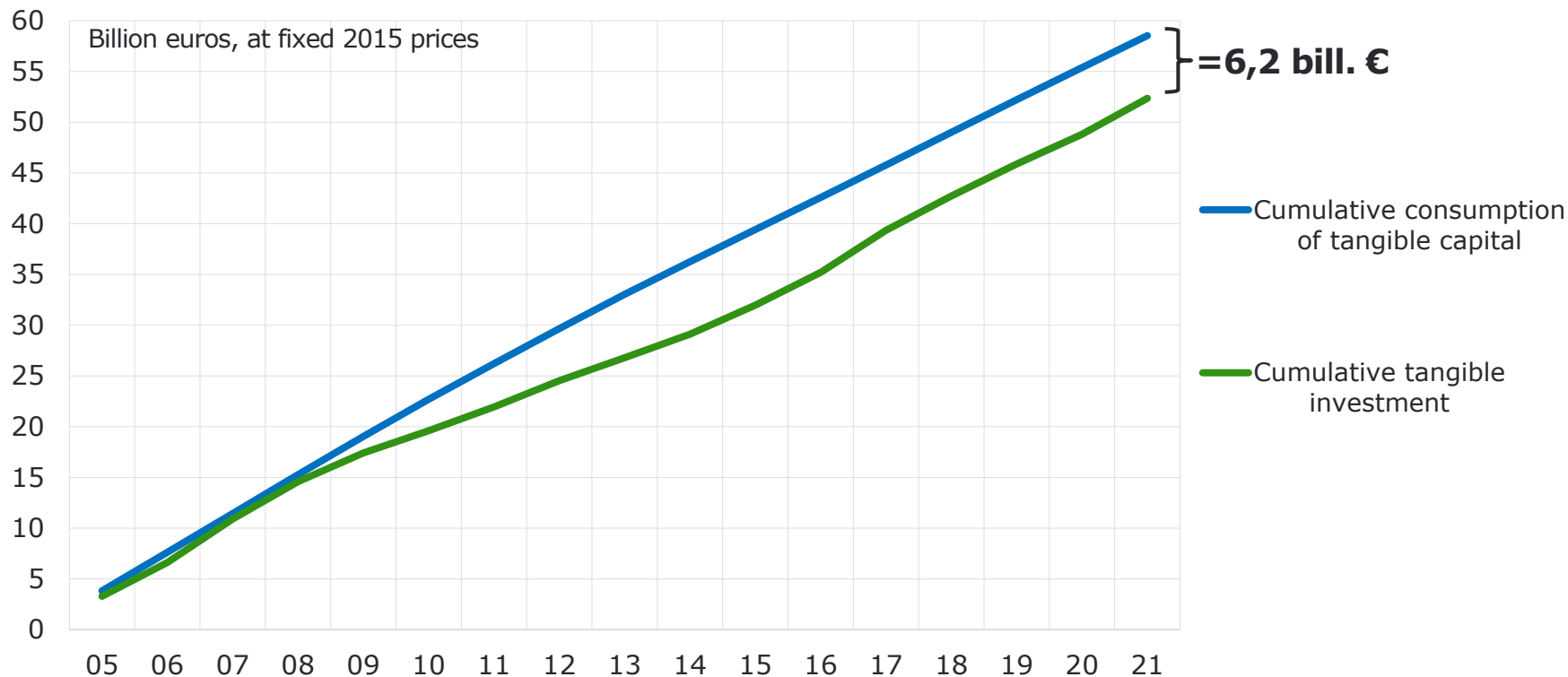




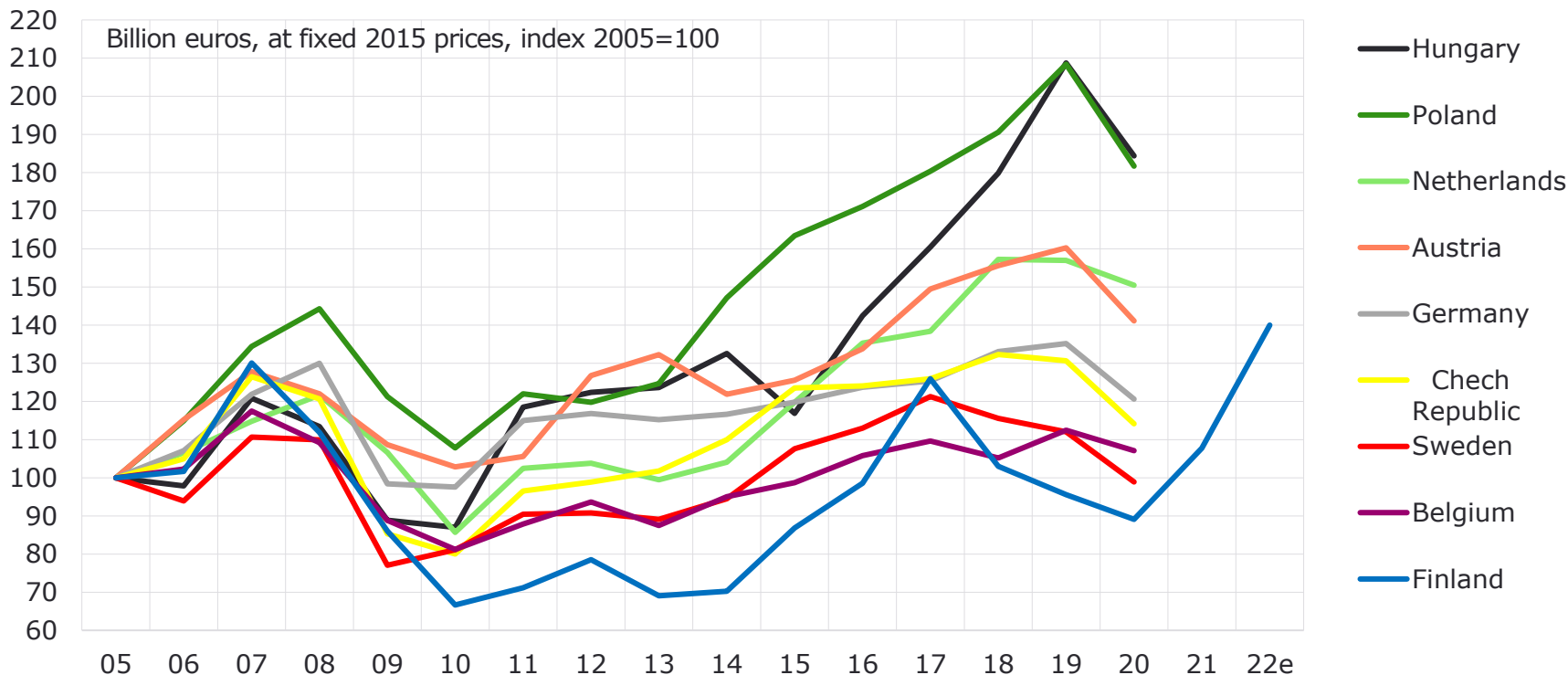
# Industrial investment and consumption of fixed capital in Finland



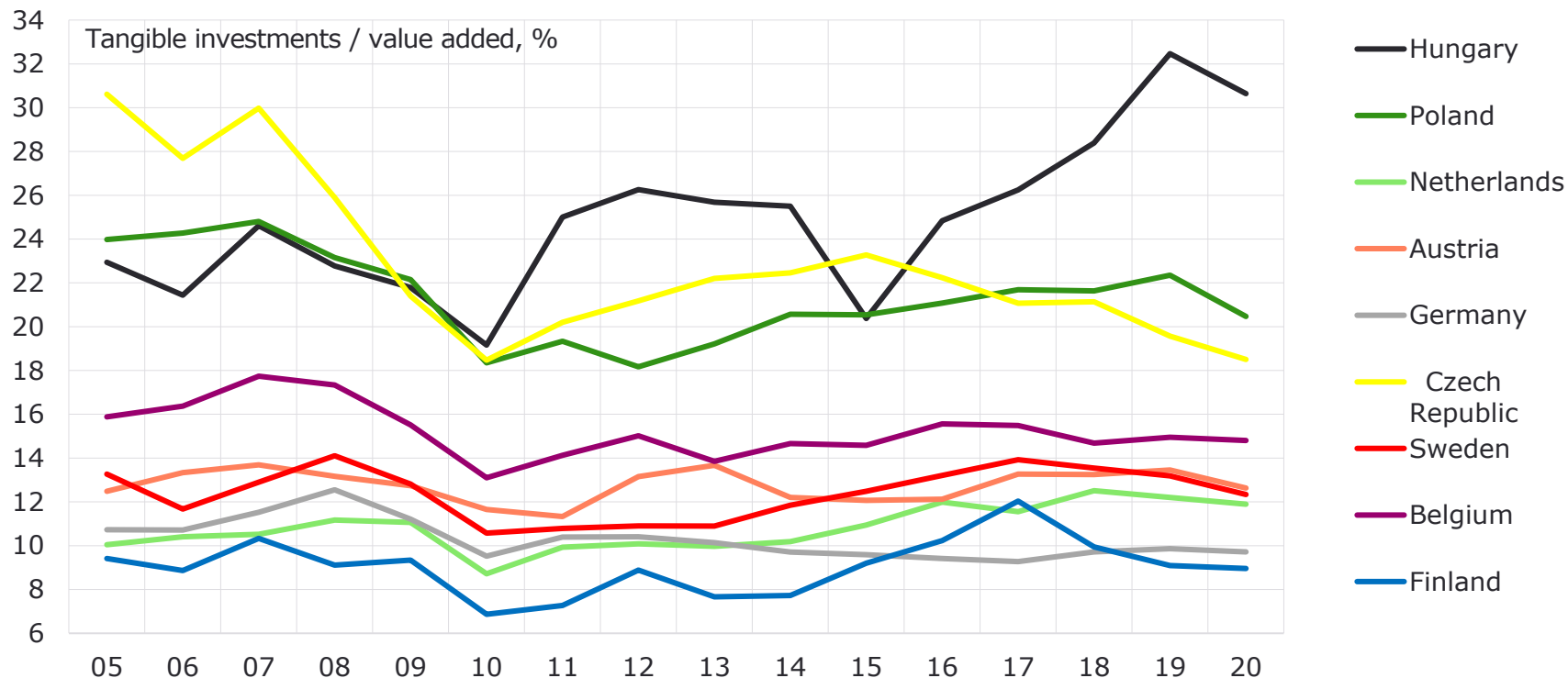
# Industrial production capital loss in Finland



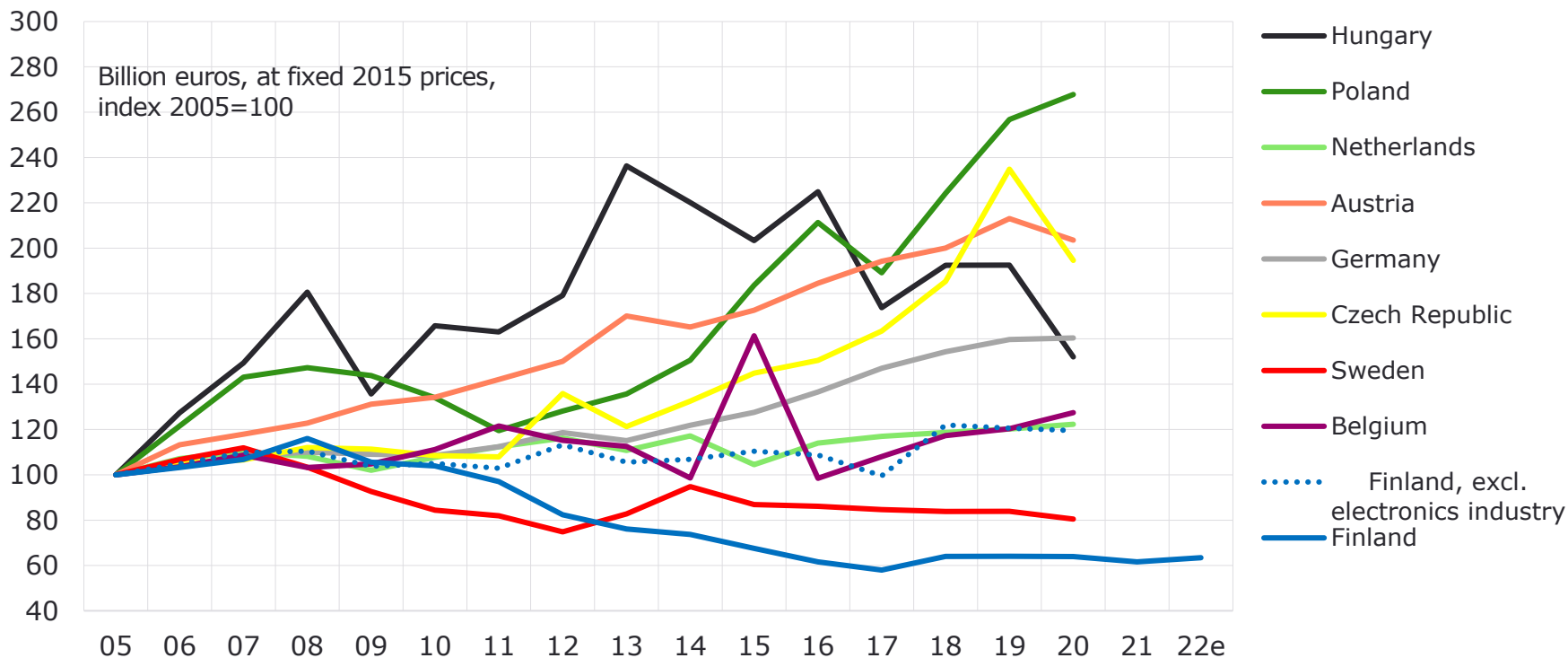
# Industrial tangible investment



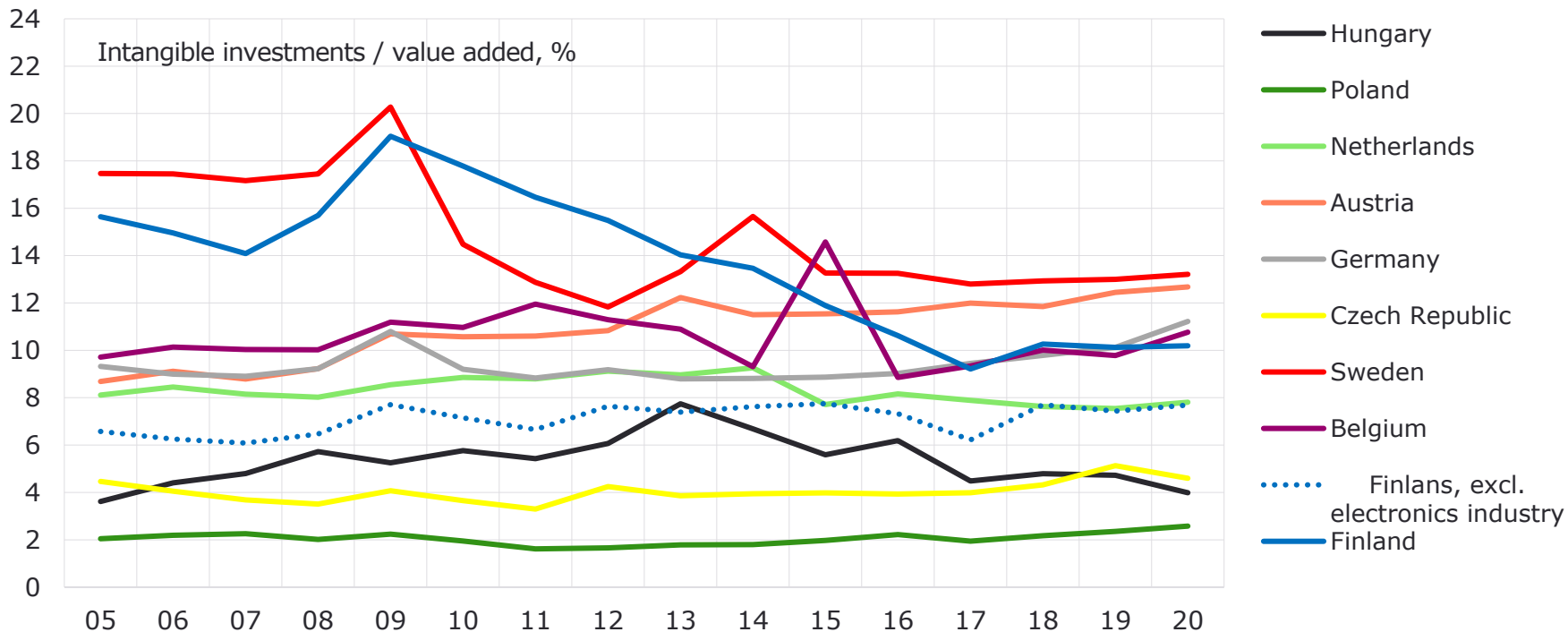
# Investment rate in industrial tangible investments



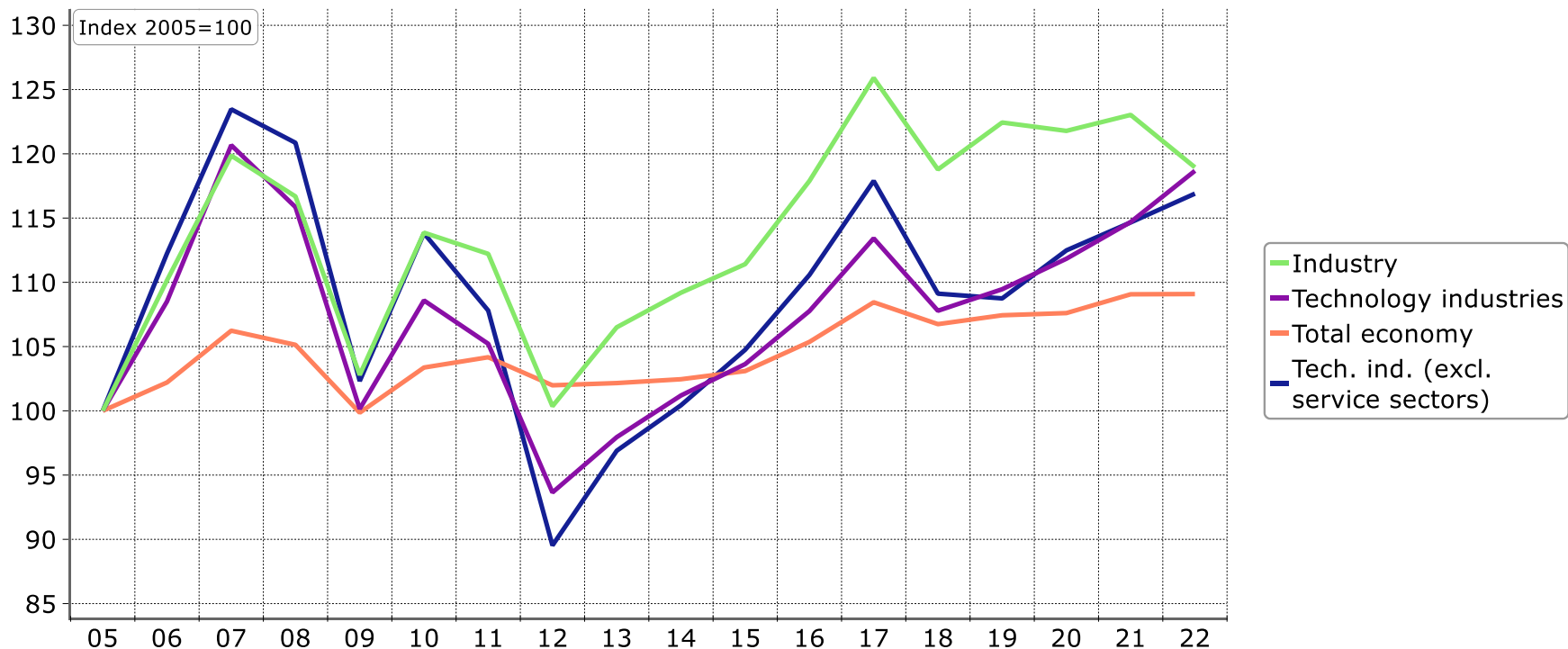
# Industrial intangible investments



# Investment rate of industrial intangible investments\*

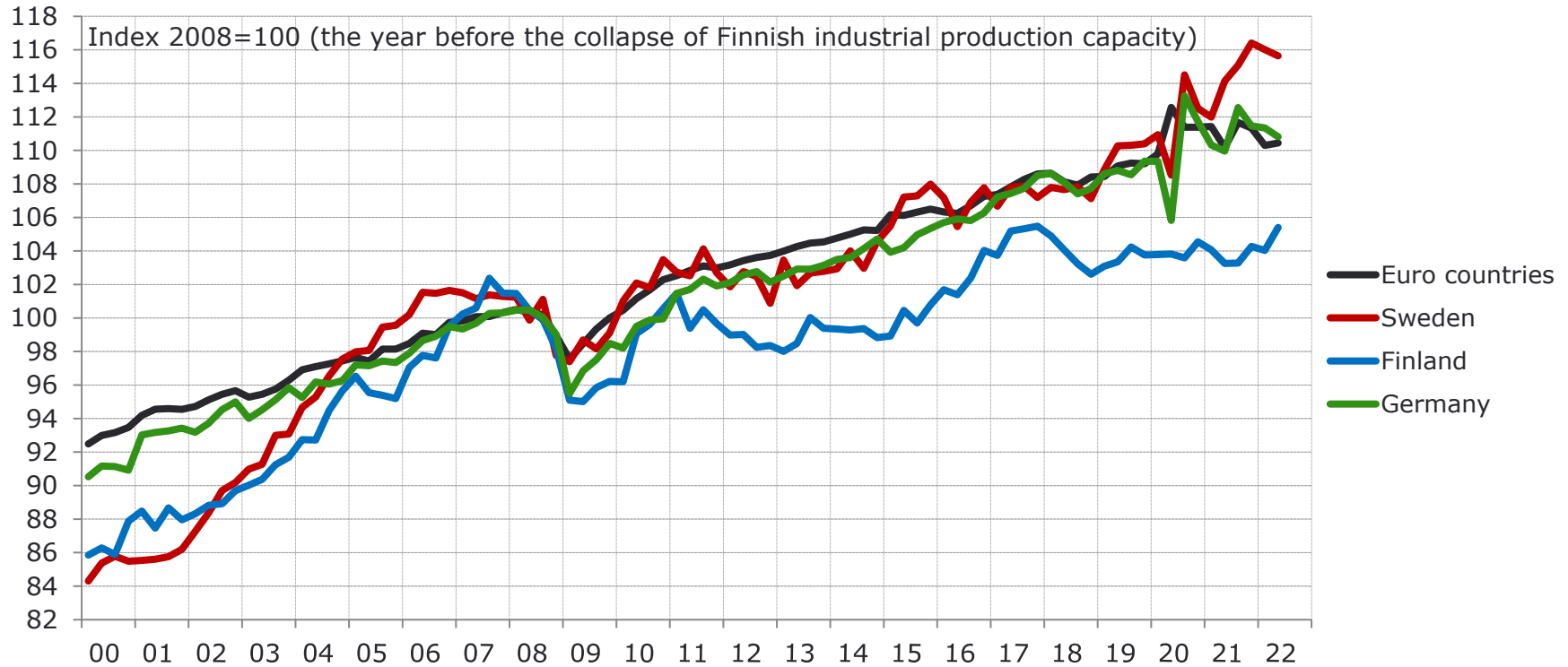


# Productivity\* development in Finland



# GDP productivity development

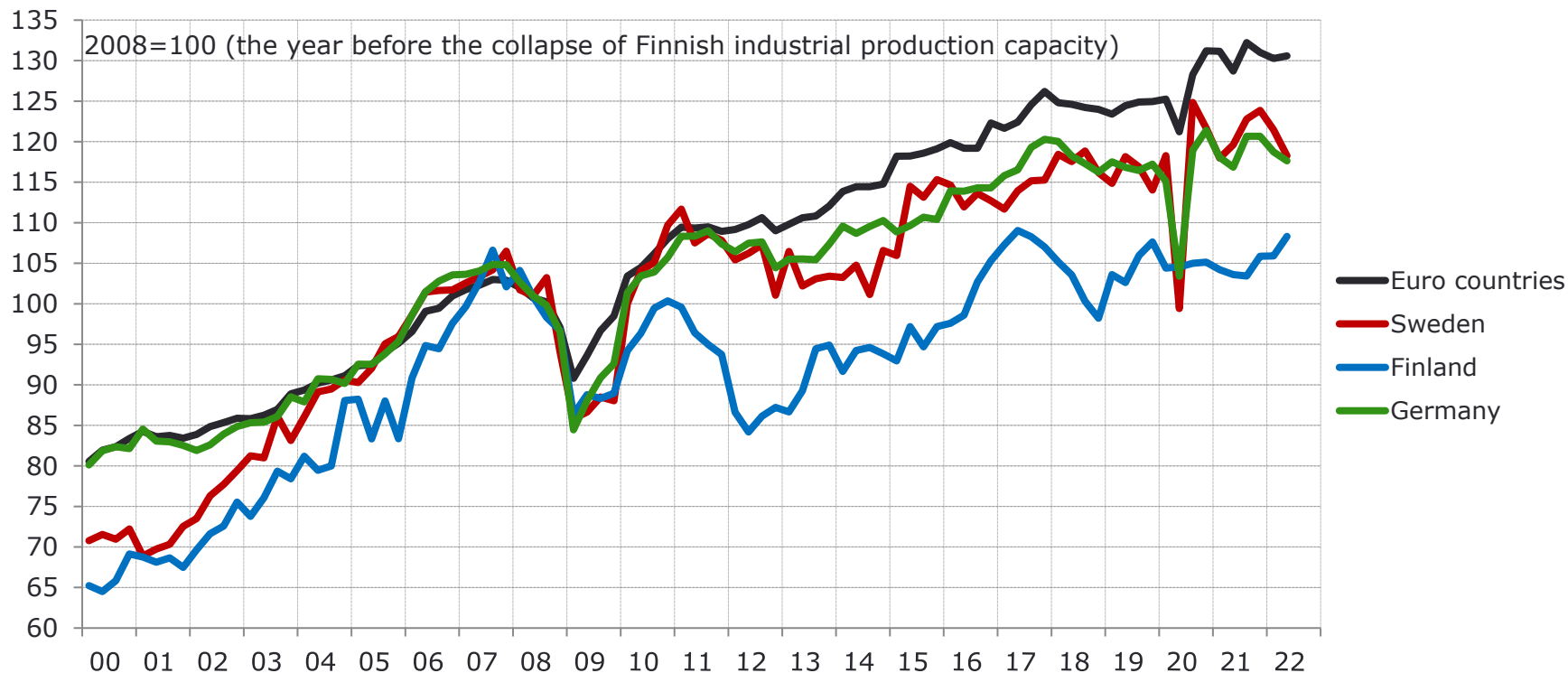
GDP at fixed prices / hours worked



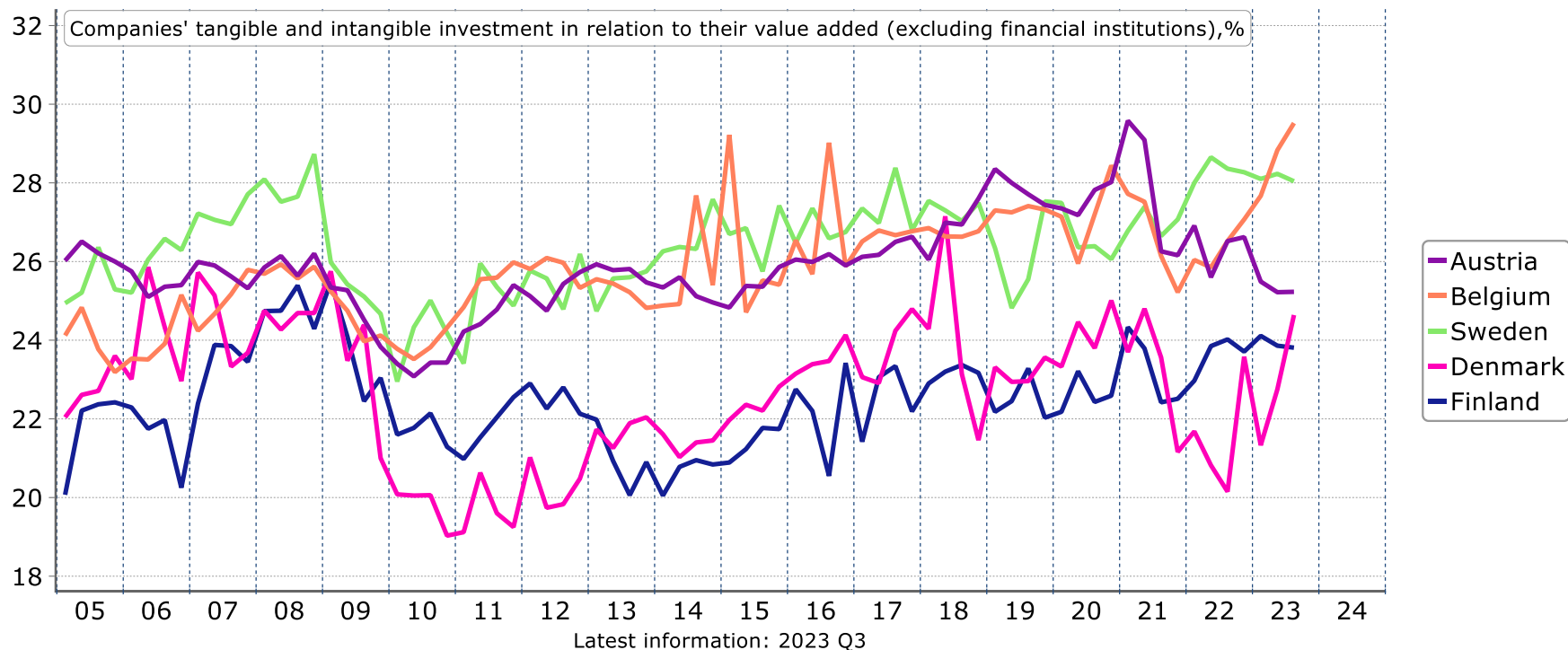


# Industrial productivity development

Industrial value added at fixed prices / hours worked

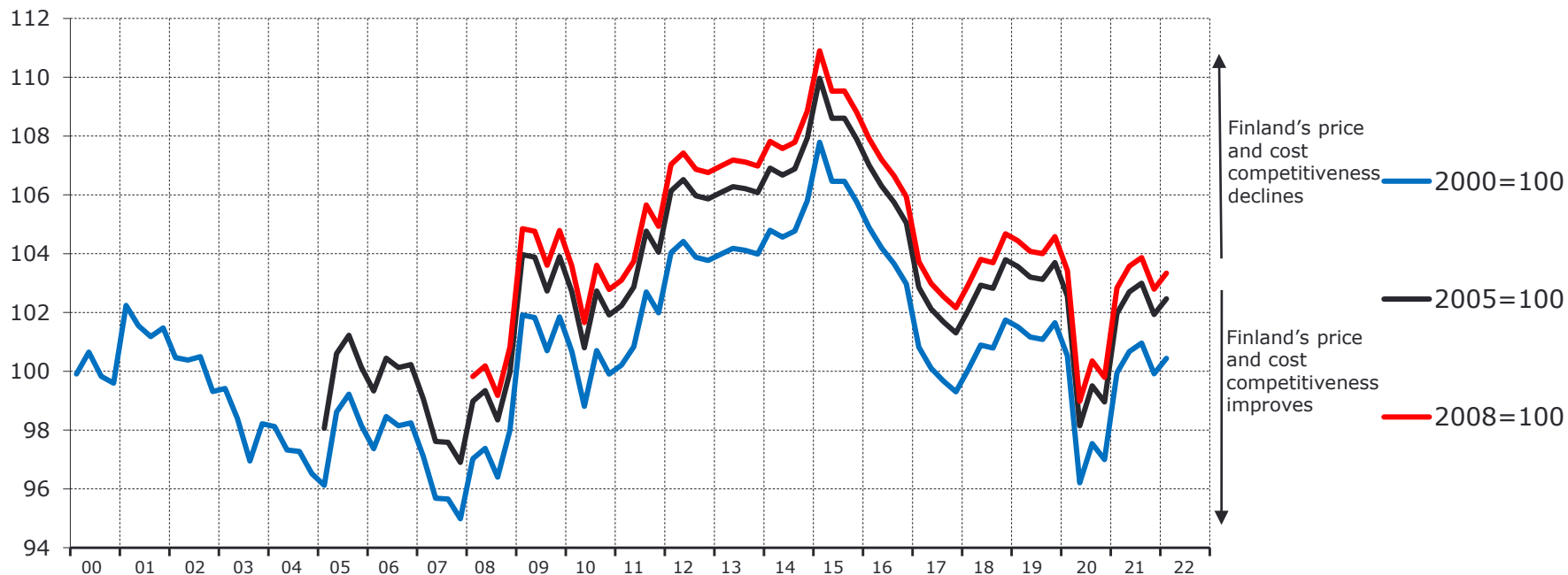


# Corporate investment rate



# Finland's cost competitiveness compared to the average of Euro countries

Unit labour costs in the whole economy = labour costs / productivity, including the influence of effective exchange rates



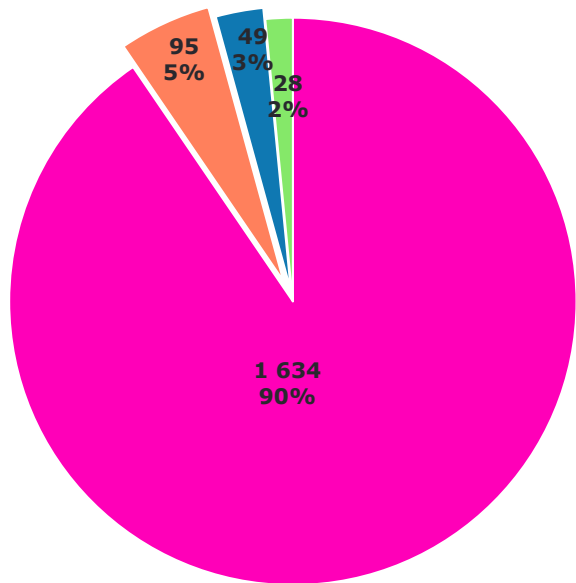


# **Member Companies of the Federation of Finnish Technology Industries**

# The Federation's Member Companies 2022

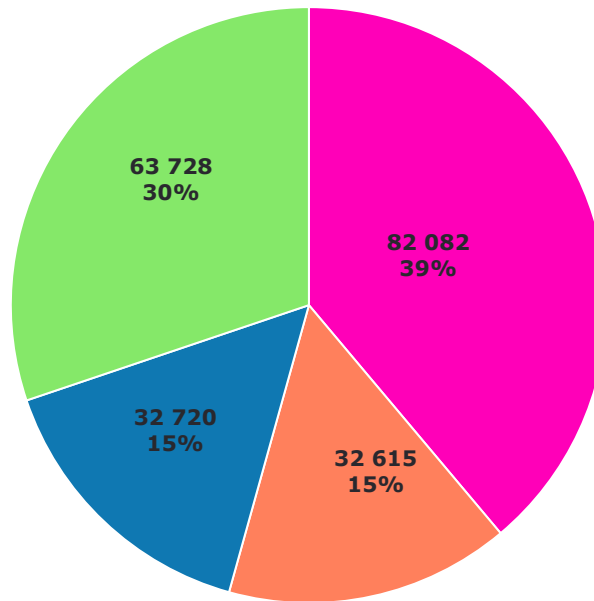


Number of enterprises / 1 806



1-249 employees  
250-499 employees

Number of personnel / 211 145

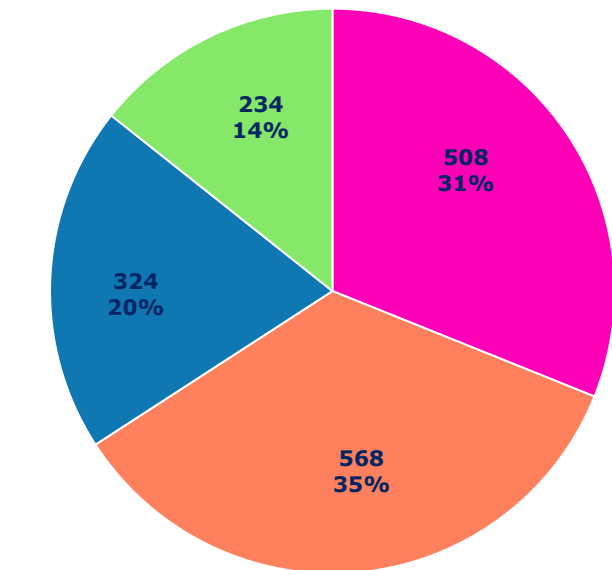


500-999 employees  
1000+ employees

# The Federation's SME Member Companies 2022



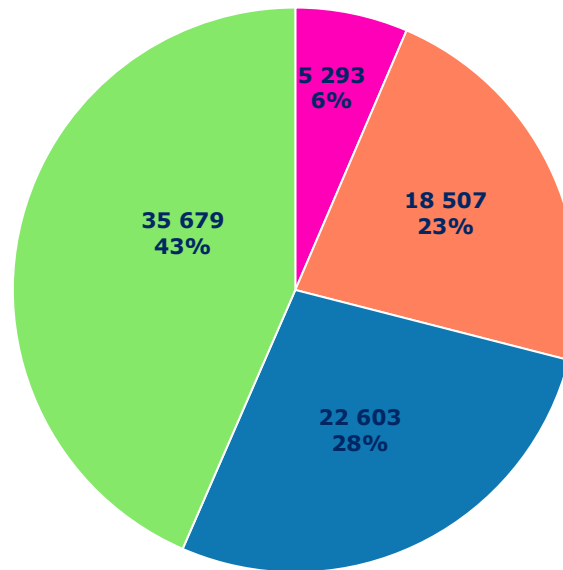
Number of enterprises / 1 634



1-19 employees  
20-49 employees

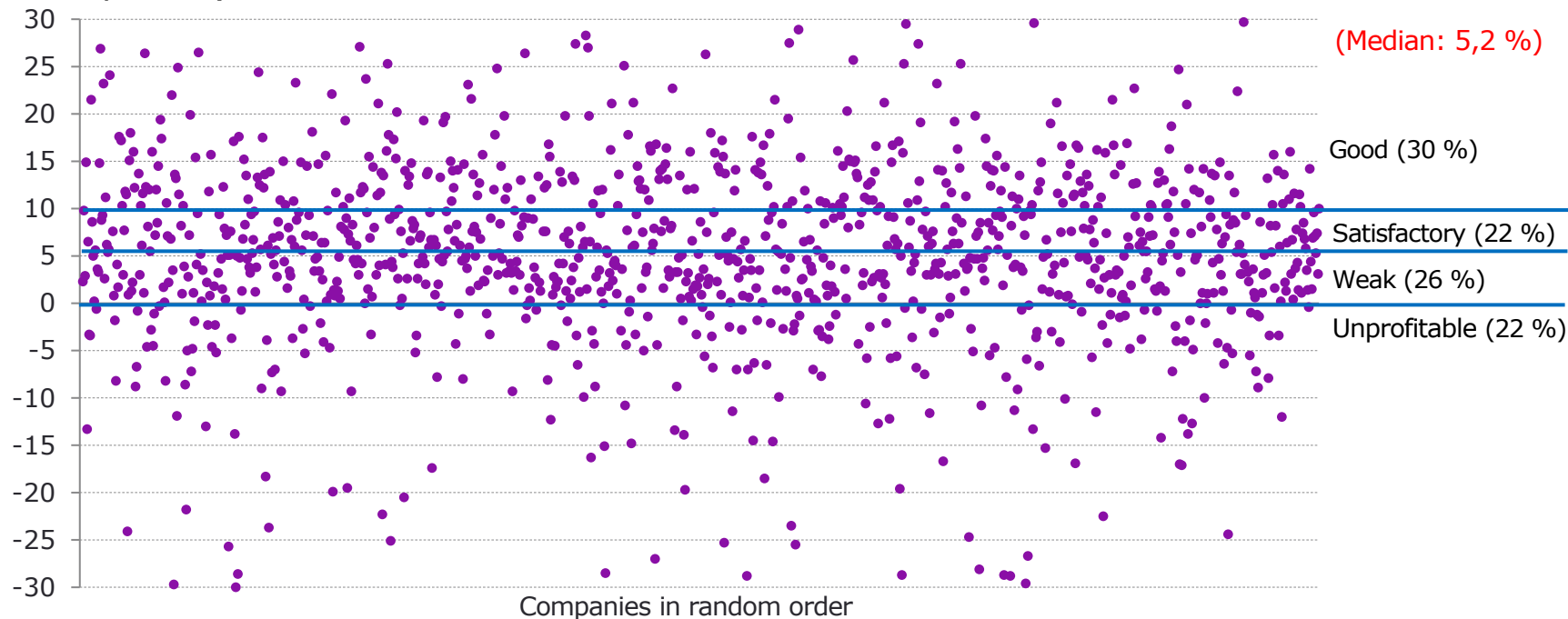
50-99 employees  
100-249 employees

Number of personnel / 80 082



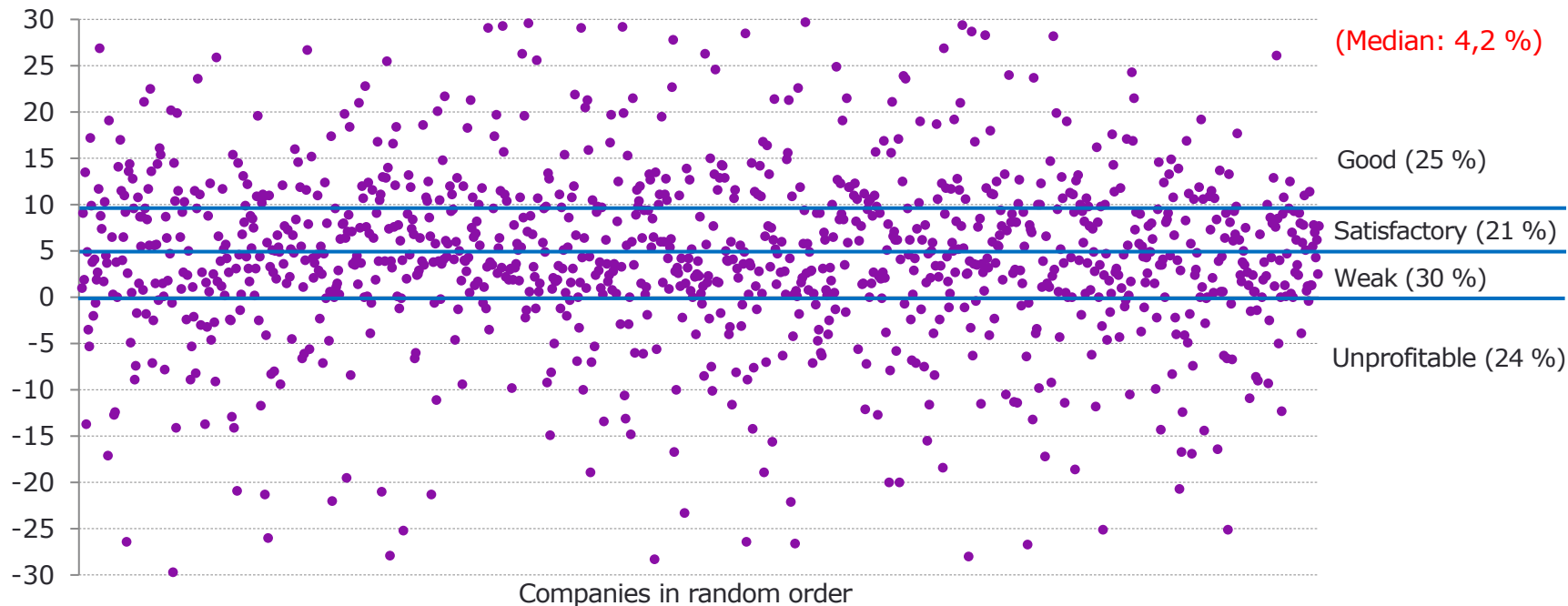
# Operating Profit in the Member Companies of Technology Industries of Finland in 2020

Operating profit-% = operating result / turnover \* 100 (before taxes and financial income and expenses)



# Net Profit in the Member Companies of Technology Industries of Finland in 2020

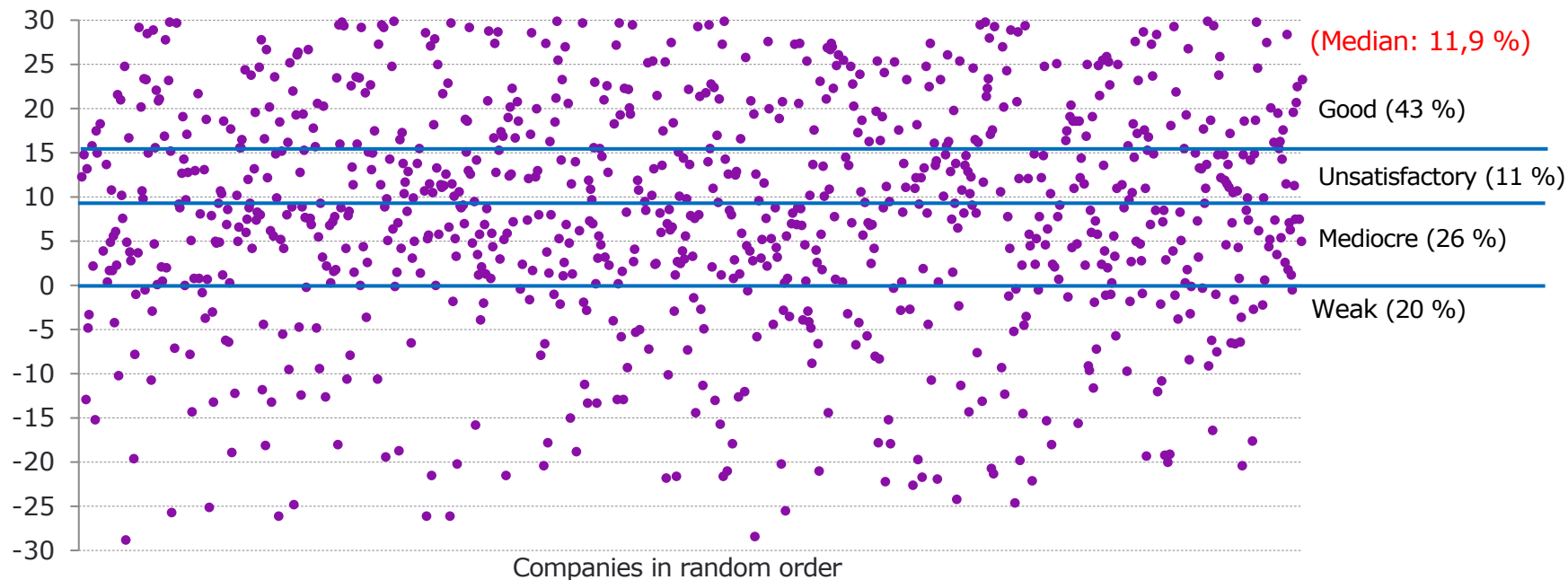
Return on assets -% = (net income + financial expenses + taxes) / (capital invested in the financial year) \* 100





# Return on Assets in the Member Companies of Technology Industries of Finland in 2020

Equity ratio -% = (total equity + total appropriations accrued) / adjusted balance sheet \* 100



# Equity Ratio in the Member Companies of Technology Industries of Finland in 2020

Equity ratio -% = (total equity + total appropriations accrued) / adjusted balance sheet \* 100

