

Contents

Global and Finnish Economic Outlook	3
Technology Industries in Finland	5
Electronics and Electrotechnical Industry in Finland	é
Mechanical Engineering in Finland	5
Metals Industry in Finland	
Consulting Engineering in Finland	
Information Technology in Finland	

The threat of a crisis has dissipated - but early 2024 will be difficult

The economic outlook quite aptly reflects the current season. It is now the heart of winter — and the economic outlook also seems to indicate that the darkest time is at hand and there are growing expectations that spring will soon be here.

The greatest interest focuses on the trend in inflation and central banks' decisions on interest rates. At the end of last year, as inflation slowed faster than forecast and a high threat of recession loomed, there were expectations that the first interest rate cut would be made sooner than anticipated. Those who were most eager expected that the first decision on interest rate cuts would be made in the first quarter of 2024.

However, those hoping for an early interest rate cut had to face disappointment in January. The European Central Bank (ECB) has given no clear indications about when it will start cutting interest rates. The consensus estimate is that the first interest rate cut will come in the summer of the current year. Differences of opinion within the ECB's monetary policy Governing Council have widened. Based on their comments, some members are ready to implement interest rate cuts on a rapid schedule, while others are more cautious and want to see permanently lower inflation figures and evidence that wage pressures are easing before considering rate cuts.

In terms of the big picture of the economy, it is somewhat irrelevant whether the first interest rate cut will be seen in the second or third quarter of the year. The most important thing is that there is already a very clear understanding that interest rate hikes are now behind us and cuts will begin in 2024.

The dissipation of the uncertainty related to interest rates and the easing of inflation will increase the predictability of companies' investment projects. The financing costs of investment projects and in which direction they will develop are now clearer. Similarly, the price trend in own production looks more stable after several relatively volatile years. The clearer outlook will likely brighten the mood from the deep pessimism that prevailed at the end of last year.

In other words, it is hoped that demand will gradually pick up during the current year. However, one should not expect a sudden turn for the better. Rather, the message is that, as things now stand, we will be able to avoid the serious recession we feared last year.

However, at best, the outlook for development in the coming year is that growth will be anaemic at around zero.

The latest data on demand and order intakes in the Finnish technology industry predicts major challenges during the first part of the year. The excellent news is that the very weak order intake in the third quarter will be an exception — new orders recovered significantly during the fourth quarter. Despite the clear improvement in order intake compared to the third quarter, it was weak compared to the average order intake in recent years. The situation will thus remain difficult, but we can now dare to say that it looks like a crisis will be avoided.

IMF: The global economy will survive the inflation spike without a more severe recession

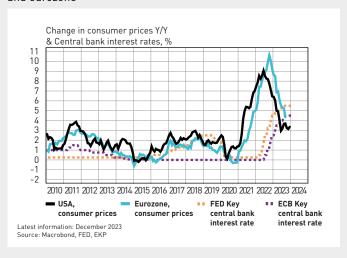
The main message of the outlook published by the International Monetary Fund (IMF) in January is that the global economy will avoid a severe recession despite a significant spike in inflation. Of course, the IMF points out that significant adverse risks to growth remain plausible.

The growth forecast for 2024 has been raised slightly compared to the previous outlook in October. The current projection for global economic growth in 2024 is 3.1 per cent. In 2025, the growth rate is forecast to be 3.2 per cent. For the eurozone, the growth forecasts for 2024 and 2025 are 0.9 and 1.7 per cent, respectively. The corresponding figures for the United States are 2.1 and 1.7 per cent. Growth in China is forecast at 4.6 per cent for 2024 and 4.1 per cent in the following year.

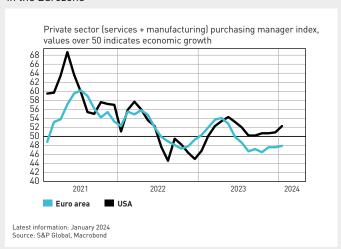
We should be pleased that serious stagnation in the global economy will likely be avoided. At the same time, however, we should keep in mind that global growth both this year and next will be clearly lower than the long-term average.

It seems increasingly more likely that growth will also fall short of the earlier level.

Inflation and key central bank interest rates in the USA and eurozone



Purchasing Manager's Indices indicate weak development in the Eurozone



Industrial production in Europe has already been waning for a year - but there is light at the end of the tunnel

In Europe, industrial production has been falling for about a year now - the latest data goes back to November 2023. Ultimately, the differences between countries are minor: production volumes have been on a more or less downward trajectory in all of Europe.

In the United States, the situation in manufacturing has remained better than in Europe. On the other hand, this only means that industrial production is not contracting, but that its growth is flat.

Manufacturing purchasing managers' indices (PMIs) for January indicate that the eurozone is taking a slight turn for the better. The indicator figures have improved on a broad front and expectations for the future have become brighter. Although the PMIs continue to point to a contraction in output in the eurozone, the rate of decline is clearly slower than it was.

Similarly, PMIs in the United States indicate that the situation in manufacturing improved in January.

In other words, although the situation in manufacturing remains very challenging, it would seem that there are budding signs of improvement. It is still too early to say whether this is a more permanent change with a real turnaround in demand, or whether this represents brightening optimism due to expectations of lower interest rates.

In Finland, industrial production will contract in the early part of the year – temporary factors that burdened demand are easing

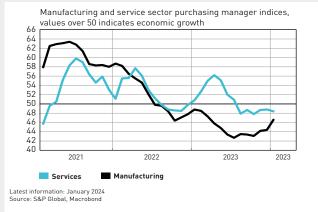
As noted in the previous Economic Outlook report, demand in the latter half of 2023 was burdened by many factors at once. Factors weakening demand included high inventory levels and efforts to reduce them, the deflationary price environment for investment goods, and general uncertainty regarding both geopolitics and interest rates.

The order intake in the fourth guarter and the budding indications in January that the economic outlook will become slightly brighter indicate that these factors that weakened demand have started to lose their hold, at least in some respects.

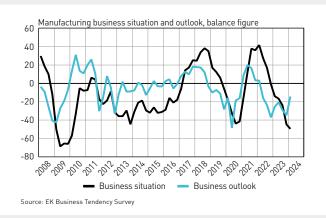
Despite this, the development of industrial production is expected to be downbeat in the early part of the year. With respect to the whole of the manufacturing industry, production volumes in Finland have been decreasing at the same pace as the rest of Europe for about a year. However, it should be noted that the decline in the total production volumes of Finnish industry is almost exclusively due to the challenging situation faced by the forest industry. In the technology industry, production volumes have been "merely" horizontal, i.e. flat, for the past year or so.

In the technology industry, output over the past six months has been at a high level, but during this same period the inflow of new orders has been very weak. Although the situation picked up in the fourth quarter, the order intake cannot be described as good or even satisfactory. It thus seems inevitable that production volumes in the technology industry will decline somewhat in early 2024. If production volumes do not see significant growth in the forest industry or chemical industry during the first half of the year, it seems clear that the production volumes of industry as a whole will continue to follow a downward trend during the first half of the year.

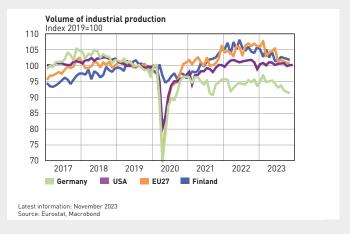
Industrial production in the Eurozone continues to contract, but at a slower pace than before



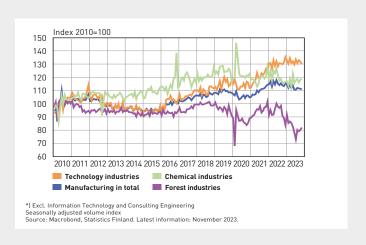
Turn for the better in manufacturing business expectations – assessment of the current situation is very weak



Industrial production in Europe continues to decline



Volume of Industrial Production in Finland



Order books continue to shrink - weak demand remains a problem despite the recovery in order intake

According to preliminary data, the turnover of technology industry companies in Finland decreased by approximately two per cent in 2023 from 2022. Turnover decreased in the electronics and electrotechnical industry and the metals industry. Turnover grew in mechanical engineering, the consulting sector and information technology. Their turnover in Finland amounted to approximately EUR 102 billion in 2023. Last year, turnover began to decline due to lower producer prices. In 2023, average production volumes in the technology industry were on a par with 2022.

The monetary value of new orders in the October-December period was 33 per cent higher than in the previous guarter, but 19 per cent lower year-on-year. The large guarter-on-guarter increase is explained by the recovery of order intake from the exceptionally weak intake seen in the third quarter.

The balance figure for tender requests in January was -23. Data collected during January indicates that, despite the pick-up in order intake, the overall demand situation in the market remains rather weak.

At the end of December, the value of order books was three per cent lower than at the end of September and 16 per cent lower than in December 2022. The value of order books decreased continuously throughout last year.

On the basis of order trends at the end of last year, the turnover of technology industry companies is expected to contract over the next six months

The number of personnel employed by technology industry companies in Finland in 2023 was up 1.5 per cent on average, or 5,000 people, from 2022. On average, the industry employed approximately 335,000 people in 2023. At the end of December, the industry had approximately 334,000 employees. The number of personnel remained fairly stable throughout the year. According to the personnel survey by Technology Industries of Finland, the number of employees affected by lay-off procedures at the end of December was approximately 16,000. The number of lay-offs increased significantly in the fourth quarter.

Compared to earlier years, recruitment of new employees remained at a low level in the October-December period. In total, recruitments came to 7,500. Some companies were increasing their payroll, while others were hiring new employees due to retirements and employee turnover.

The downturn in the number of personnel at the end of the year and the increase in the number of laid-off employees were expected due to the weaker economic situation. The number of personnel is forecast to keep declining slightly in the first part of the year. It is likely that the number of layoffs will continue to increase.

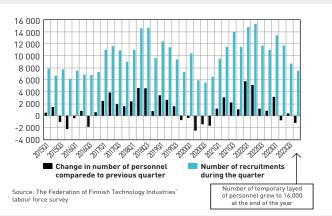
Tender requests* received by the technology industry companies in Finland



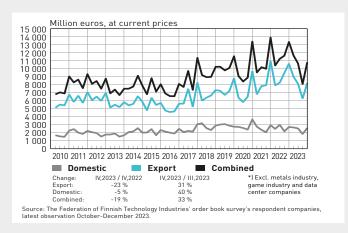
*) "Have you experienced a notable increase or decrease in the number of requests for tend in recent weeks in comparison to the situation three months ago". Balance figure = the shar of companies receiving more requests - the share of companies receiving less requests. Negative balance figure indicates that demand has weakened when compared to a situation three months ago.

Source: The Federation of Finnish Technology Industries' order book survey's respondent companies The latest questionnaire in Janurary 2024.

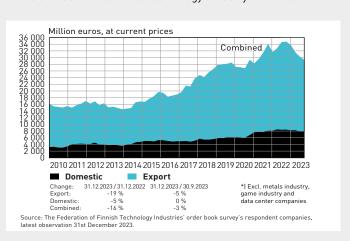
Headcount number fell slightly in the technology industry in Finland



Value of new orders in the technology industry* in Finland



Value of order books in the technology industry* in Finland





Electronics and Electrotechnical Industry in Finland

Value of new orders grew compared to earlier figures

According to preliminary data, the turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment and medical technology) in Finland decreased by approximately 7 per cent in 2023 from 2022. In 2023, their turnover in Finland amounted to more than EUR 19 billion.

The value of both new orders and order books increased in the October-December period from the preceding quarter. As has been typical for the sector in recent years, order volumes can fluctuate strongly from one quarter to another.

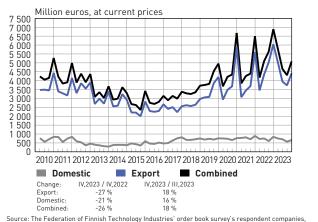
The electronics and electrotechnical companies that took part in Technology Industries of Finland's survey of order books reported that the monetary value of new orders between October and December was 18 per cent higher than in the preceding quarter, but 26 per cent lower than in the corresponding period in 2022.

At the end of December, the value of order books was 14 per cent higher than at the end of September, but 21 per cent lower than in December 2022.

On the basis of order trends at the end of last year, the turnover of electronics and electrotechnical industry companies is expected to contract over the next six months.

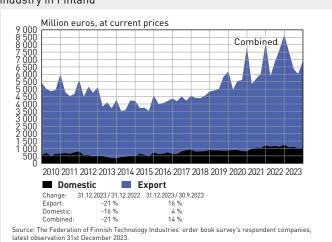
The number of personnel employed by electronics and electrotechnical companies in Finland grew by 1.7 per cent in 2023 from the 2022 average. The industry employed 41,400 people, approximately 700 more than in 2022. At the end of December, the number of personnel was 41,200.

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



Source: The Federation of Finnish Technology Industries' order book survey's respondent companies, latest observation October-December 2023.

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





Mechanical Engineering in Finland

Order books are shrinking fast

According to preliminary data, the turnover of mechanical engineering companies (machinery, metal products and vehicles) in Finland increased by four per cent in 2023 from 2022. Their turnover in Finland amounted to approximately EUR 40 billion in 2023.

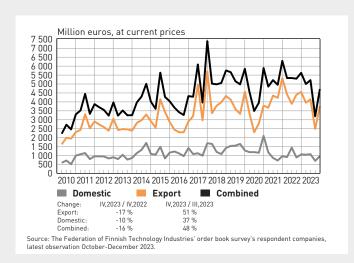
The value of new orders in mechanical engineering in the October-December period was 48 per cent higher than in the previous quarter. Year-on-year, the value of new orders decreased by 16 per cent. Order intake recovered clearly from the very weak level of the third quarter, but fell significantly short of the previous year.

At the end of December, the value of order books was 9 per cent lower than at the end of September and 16 per cent lower than in December 2022. It should be noted that shipyards have an exceptionally large share of the total value of order books.

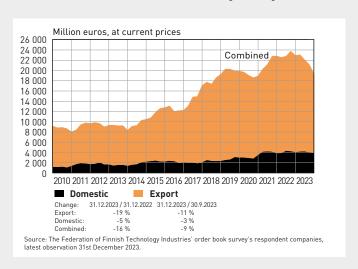
On the basis of order trends at the end of last year, the turnover of mechanical engineering companies is expected to contract over the next six months.

The number of personnel employed by mechanical engineering companies in Finland grew by 1.2 per cent in 2023 from the 2022 average. The industry employed 137,500 people on average in 2023, approximately 1,700 more than in 2022. At the end of December, the number of personnel was 137,300.

Value of new orders in the mechanical engineering in Finland



Value of order books in the mechanical engineering in Finland





Turnover fell significantly last year - production volumes remained stable

According to preliminary data, the turnover of metals industry companies (steel products, non-ferrous metals, castings and metallic minerals) in Finland decreased by 20 per cent in 2023 from 2022. In 2023, their turnover in Finland amounted to more than EUR 15 billion. Turnover began to fall due to the strong decline in producer prices last year.

The total production of steel products, non-ferrous metals, castings and metallic minerals in Finland in the January-November 2023 period remained largely unchanged year-on-year.

The number of personnel employed by metals industry companies in Finland grew by 0.3 per cent in 2023 from the 2022 average. The industry employed 16,100 people, approximately 100 more than in 2022. At the end of December, the number of personnel was 16,000.

Global steel production in 2023 remained virtually unchanged year-on-year. Globally, production volume contracted by 0.1 per cent. Production fell by 7.4 per cent in the EU and by 1.7 per cent in North America. In Asia, production was up by 0.7 per cent.

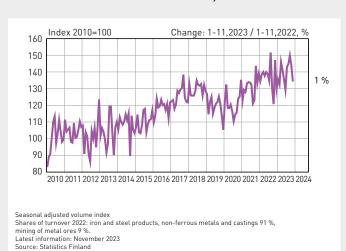
China, India, Japan and the United States were the largest producers in 2023. China accounted for approximately 55 per cent of global steel production last year.

Turnover of the metals industry in Finland



Seasonal adjusted turnover index Shares of turnover 2022: iron and steel products, non-ferrous metals and castings 91 %, mining of metal ores 9 % Latest information: October 2023 Source: Statistics Finland

Production volume of the metals industry in Finland





Consulting Engineering in Finland

Value of new orders rose at the end of last year

According to preliminary data, the turnover of consulting engineering companies (industrial, social and construction expert services) in Finland increased by approximately 3 per cent in 2023 from 2022. In 2023, their turnover in Finland amounted to almost EUR 8 billion.

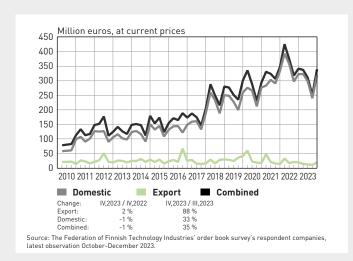
The consulting engineering companies that took part in Technology Industries of Finland's survey of order books reported that the monetary value of new orders between October and December was 35 per cent higher than in the preceding quarter, but 1 per cent lower than in the corresponding period in 2022.

At the end of December, the value of order books was 1 per cent lower than at the end of September and 7 per cent lower than in December 2022.

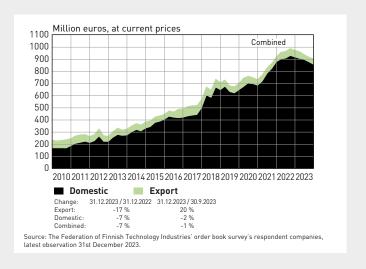
On the basis of order trends at the end of last year, the turnover of consulting engineering companies is expected to contract over the next six months.

The number of personnel employed by consulting engineering companies in Finland grew by 1 per cent in 2023 from the 2022 average. The industry employed 54,600 people, approximately 500 more than in 2022. At the end of December, the number of personnel was 54,000.

Value of new orders in the consulting engineering in Finland



Value of order books in the consulting engineering in Finland





Information Technology in Finland

Value of new orders soared in the fourth quarter

According to preliminary data, the turnover of information technology companies (IT services and software) in Finland grew by slightly over 5 per cent in 2023 from 2022. In 2023, their turnover in Finland amounted to almost EUR 20 billion.

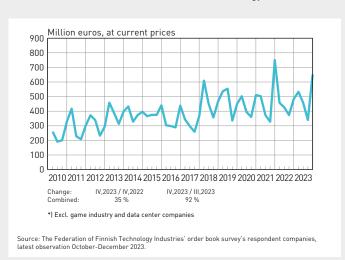
The information technology companies that took part in Technology Industries of Finland's survey of order books reported that the monetary value of new orders between October and December was 92 per cent higher than in the preceding quarter and 35 per cent higher than in the corresponding period in 2022. Game industry and data centre companies are not included in the survey. Typically for the sector, order volumes can fluctuate strongly from one quarter to another.

At the end of December, the value of order books was 5 per cent higher than at the end of September and practically unchanged from December 2022.

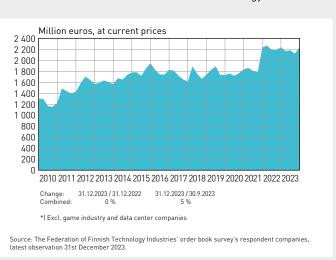
On the basis of order trends at the end of the year, the turnover of information technology companies is expected to grow over the next six months.

The number of personnel employed by information technology companies in Finland grew by 2.4 per cent in 2023 from the 2022 average. The industry employed 83,500 people, approximately 2,000 more than in 2022. At the end of December, the number of personnel was 85,600.

Value of new orders in the information technology* in Finland



Value of Order Books in the Information Technology* in Finland



ECONOMIC OUTLOOK 1 | 2024

Information based on the situation on 7 February 2024

Further information: Petteri Rautanorras, Director, Chief Economist, phone +358 50 304 2220

Hanne Mikkonen, Economist, phone +358 44 0296 152

Please visit the homepage of the Federation of Finnish Technology Industries for additional information on

echnology industry turnover, exports, investments, personnel and the development of producer prices: www.techind.fi.

Technology Industries of Finland | Eteläranta 10, P.O.Box 10, FI-00131 Helsinki | tel. +358 9 19231 | www.techind.f

