

# Economic Outlook

Technology Industries of Finland

3 | 2018

## Global And Finnish Economic Outlook

Global economic growth continues to slow down

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## Technology Industries In Finland

Order growth stalling, significant expansion in personnel

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## Global economic growth continues to slow down

The growth of the global economy has slowed down somewhat during the spring and summer. The increasing uncertainty caused by rising protectionism and geopolitical tensions is having an impact on global trade development. Foreign trade of both emerging and advanced economies was still enjoying robust development at the end of 2017, but the pace has slowed down since.

Recent industrial production and manufacturing purchasing managers' indexes also show that the development of global trade has slowed down. Production data is available up to the May-June period and purchasing managers' survey data up to July. In the EU and Japan, production levels have even dropped slightly from the levels reported at the end of 2017. The change is not significant, however. In the US, growth has continued at a steady pace. The changes to the US tax code have clearly given a boost to business investments and economic growth. However, the planned trade barriers and tariffs could reverse this trend.

In terms of growth, industry outlook is set to weaken further in the autumn. This view is supported by both EU-level and global data collected in July. Industry is reporting slower growth and a slowdown in the production of capital, consumer and intermediate goods.

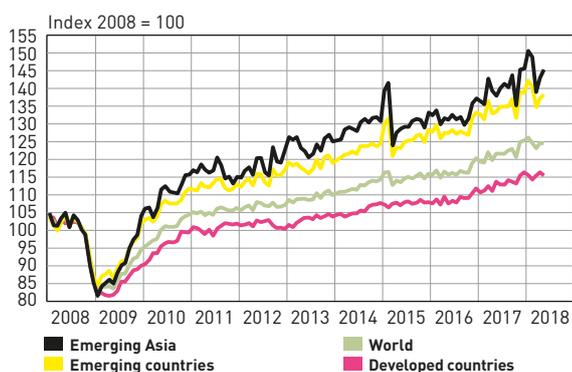
Overall, industry outlook remains more positive in the US than in the rest of the world. In China, Japan, India and several other emerging countries, growth rates are expected to remain below average. In Russia, production could even shrink.

The geopolitical tensions and the first steps toward a trade war have already raised the prices of raw materials, such as steel products. As a result, there is a real risk of significant increases in producer prices. Manufacturers of intermediate goods may benefit from the situation, at least temporarily. However, uncertainty is increasing across industry as a whole, which has a negative impact on companies' investment decisions and the overall industry outlook.

A prolonged trade war could increase volatility in currency exchange rates. For example, the Chinese yuan has recently weakened by some five per cent against the 2017 annual average euro exchange rate. The same is true for the US dollar, although it is not as weak as it was in early 2018.

Exports to Russia and Sweden are impacted negatively by the fact that the rouble has weakened by some 10 per cent and the krona by more than 5 per cent against the 2017 annual average euro exchange rate.

### Strongest Growth in World Trade Is already Behind, Export volume



Source: Macrobond, The CPB Netherlands Bureau for Economic Policy Analysis  
Latest information: May 2018

## The strength of Finnish economic growth threatened

The Finnish economy expanded at a pace of some 3 per cent in early 2018. According to a calculation made by Technology Industries of Finland, the Finnish GDP would need to expand at this rate until the end of the next parliamentary term to catch up with the rest of the euro area. This should be an imperative of economic policy in Finland. The objective is ambitious, but there is a strong case for it. It is necessary for our ability to maintain the welfare state. Considering the complete economic picture, the pace of growth will inevitably become more modest without new decisions on economic and tax policy that support growth.

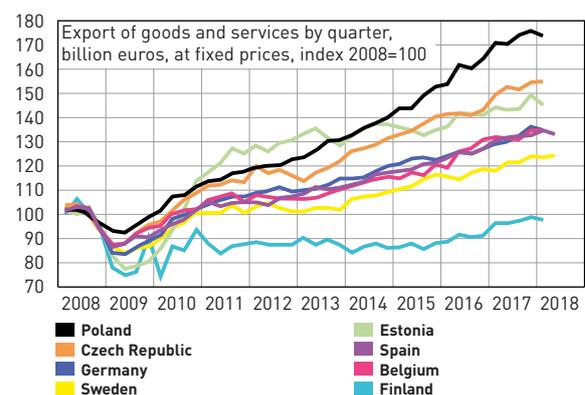
Despite current pace of growth, economic outlook has become increasingly uncertain for several reasons. Protectionism, which threatens global economic development, will have a wholly negative impact on Finnish exports. This impact will take place gradually and over a long term.

The growth of the Finnish economy is also threatened by the slowdown in construction and a decline in business investment in Finland. Strong construction activity has been one of the main drivers of economic growth recently. According to the data on recent development of building permits published by Statistics Finland, construction is about to slow down. The total number of building permits granted in the spring of 2018 was almost 20 per cent lower than a year earlier. Permits granted for office and commercial buildings as well as industrial and warehouse buildings declined significantly. Permits for residential buildings also declined.

According to the investment survey published by the Confederation of Finnish Industries in June, investment activity has become more subdued. According to the survey, productive investment will drop by more than 10 per in 2018 from 2017 levels. Investment in research and development (R&D) will also continue to decline slightly.

In July, Statistics Finland published detailed data on the consumption of fixed capital by enterprises, which also includes manufacturing enterprises, up to the year 2017. This data is essential for an in-depth analysis on the strength and outlook of Finnish economic growth. The development of investment and fixed

### Finnish Exports Have Lagged Behind the Competition Countries



Source: Macrobond, Eurostat  
Latest information: 2018 Q2

capital in manufacturing plays a significant role because industry continues to provide 80 per cent of Finland's export revenue.

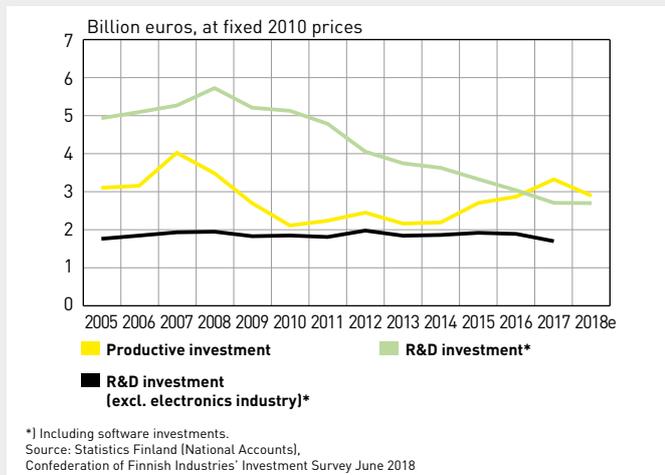
The financial accounts provide some key observations. Firstly, about the changes in manufacturing enterprises' productive and R&D investment. Productive investment increased between 2015 and 2017, but as stated before, is expected to decrease again in 2018. The drastic reduction of R&D investment continued in 2017. In recent years, the reduction has mainly occurred in the electronics industry, but the expected growth has failed to materialise in other sectors. In stark contrast to the competing economies, both productive and R&D investment in Finland have not yet reached the 2007-2008 levels.

Total industry investment in Finland has remained below the consumption of fixed capital for almost a decade. There was no

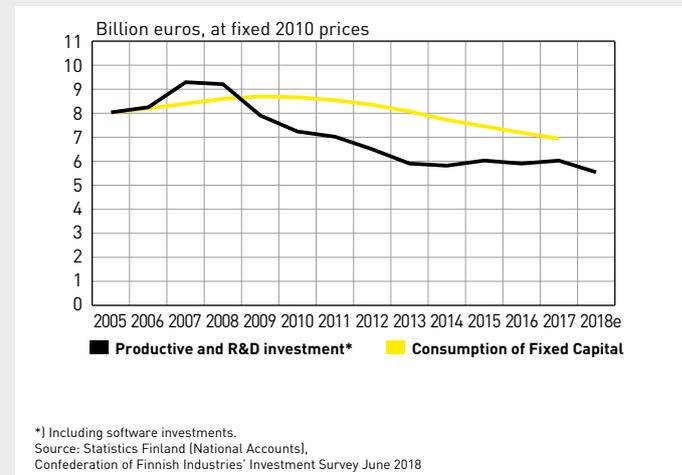
change in this regard in 2017, nor can we expect it in 2018. When looking only at productive investment, new investments in 2017 were at a slightly higher level than the consumption of productive capital. As these investments are set to decline again this year, the consumption of capital is likely to be higher in 2018 than the creation of new capital.

In terms of the growth potential of Finnish economy, it makes sense to compare productive investment and the cumulative consumption of productive capital in the past decade. In comparison to actual productive investment, the reduction of productive capital has occurred on a much wider scale and has mostly taken place since 2008. Considering that growth capital has also disappeared from industry R&D operations, the overall negative impact on the Finnish economy is considerable.

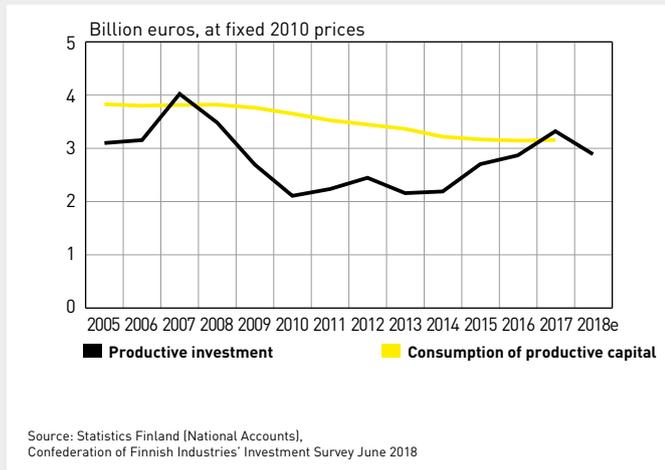
Industrial Productive and R&D Investment in Finland Have Not Yet Reached the 2007-2008 Levels



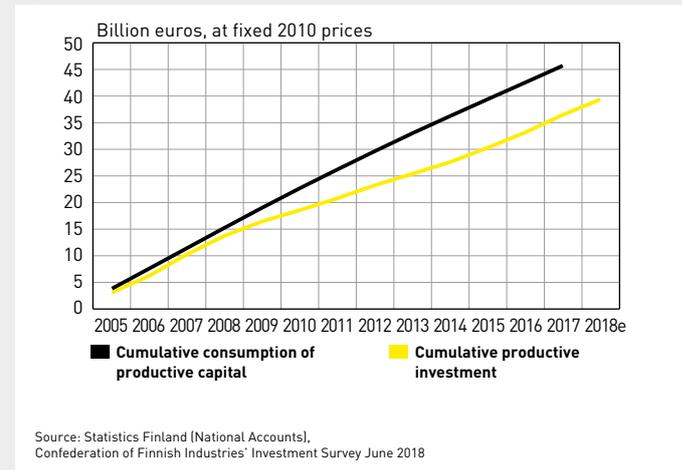
Total Industry Investment in Finland Are Below the Consumption of Fixed Capital



Industrial Productive Investment in Finland Have Reached the Level of Consumption of Productive Capital



Industrial Production Capital in Finland Has Disappeared Significantly, Especially after 2008



# Order growth stalling, significant expansion in personnel

The turnover of technology industry companies in Finland grew by 7 per cent in 2017 from 2016. In the January-April period, the turnover was up 6 per cent year-on-year. About half of the increase has been attributable to volume growth and half to increase in sales due to rising world market prices of raw materials and components. In 2017, the turnover amounted to EUR 72.7 billion. In 2008, prior to the financial crisis, the turnover of technology industry companies in Finland totalled EUR 85.7 billion.

The value of technology industry companies' new orders decreased in the April-June period in comparison to the same period in 2017. The decrease is due to a significant ship order in the comparison period. Order books were down slightly from March.

There has been a downward trend in the calls for tenders received by technology industry companies during the summer. This means that we can anticipate weaker order development in the autumn. The global economic challenges are starting to have an impact on the market situation.

The technology industry companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between April and June was 1 per cent lower than in the preceding quarter and 9 per cent lower than in the corresponding period in 2017.

cent lower than in the corresponding period in 2017.

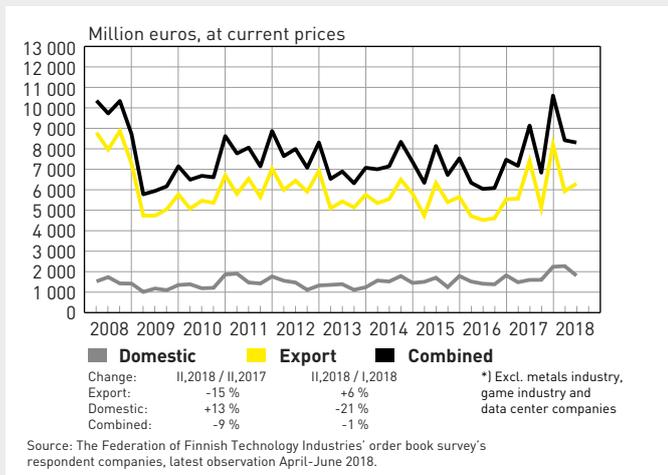
At the end of June, the value of order books was 3 per cent lower than at the end of March, but 12 per cent higher than in June 2017.

Judging from order trends in recent months, the turnover of technology industry companies is expected to be slightly higher in the autumn of 2018 than in the corresponding period last year. Significant portion of the turnover growth is attributable to rising producer prices.

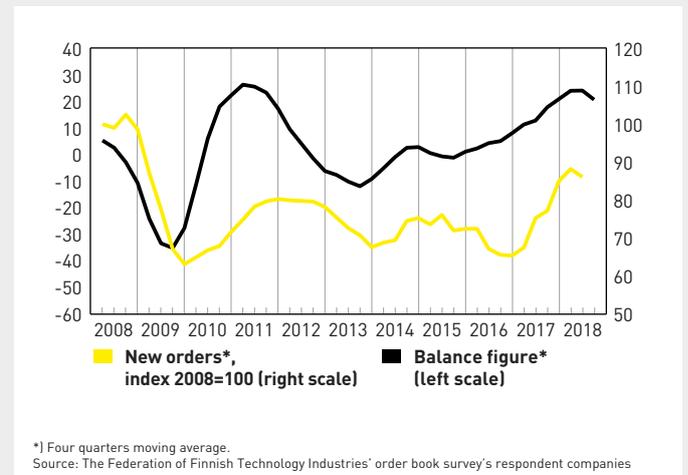
The number of personnel employed by technology industry companies in Finland grew by slightly more than 3 per cent between January and June 2018 from the 2017 average. At the end of June, the industry employed some 310,000 people, up 10,000 from 2017. The industry also provided a record-high number of summer jobs, 19,000 in total.

The recruitment activities of technology industry companies were very robust between April and June. They recruited a total of 26,000 new employees between January and June. In 2017, total recruitments came to 42,500. Sixty-two per cent of these employees were hired by SMEs. Some companies were increasing their personnel, while others were hiring new employees due to retirements and employee turnover.

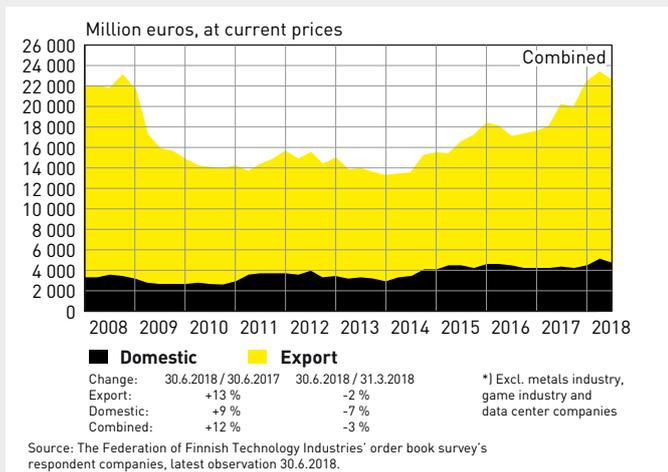
Value of New Orders in the Technology Industry\* in Finland



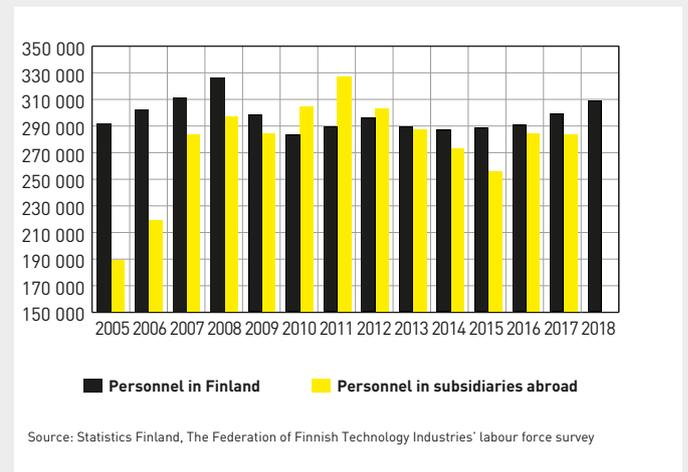
Tender Requests\* Received by Technology Industry Anticipate Weaker Order Development in Autumn



Value of Order Books in the Technology Industry\* in Finland



Technology Industry Personnel in Finland Has Grown by 10,000 this Year





## Electronics and Electrotechnical Industry in Finland

### Orders remain steady

The turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment and medical technology) in Finland grew by 5 per cent in 2017 from 2016. In January-April 2018, the turnover was up 4 per cent year-on-year. In 2017, the turnover amounted to EUR 14.4 billion. In 2008, prior to the financial crisis, the industry turnover in Finland totalled EUR 30.4 billion.

Year-on-year, the value of new orders was slightly higher between April and June, but order books shrank.

The electronics and electrotechnical companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders in the industry between April and June was one per cent lower

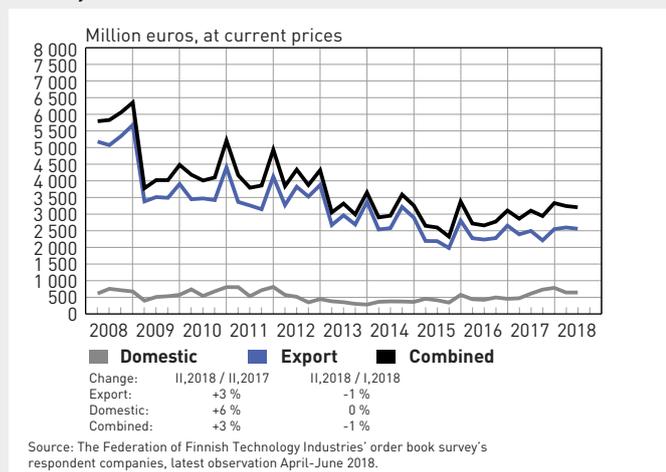
than in the preceding quarter, but 3 per cent higher than in the corresponding period in 2017.

At the end of June, the value of order books was at the same level as at the end of March, but 3 per cent lower than in June 2017.

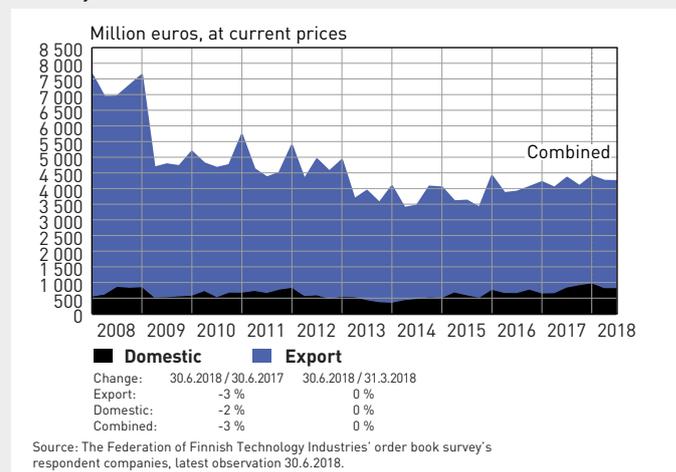
Judging from order trends in recent months, the turnover of electronics and electrotechnical industry companies is expected to remain at around the same level in the autumn of 2018 as in the corresponding period last year.

The number of personnel employed by electronics and electrotechnical companies in Finland was up 2 per cent between January and June 2018 from the 2017 average. At the end of June, the industry employed 38,500 people, up 700 from 2017.

Value of New Orders in the Electronics and Electrotechnical Industry in Finland



Value of Order Books in the Electronics and Electrotechnical Industry in Finland





## Mechanical Engineering in Finland

### Continued high level of orders

The turnover of mechanical engineering companies (machinery, metal products and vehicles) in Finland increased by 6 per cent in 2017 from 2016. In January-April 2018, the turnover was up 8 per cent year-on-year. In 2017, the turnover amounted to EUR 30 billion. In 2008, prior to the financial crisis, the industry turnover in Finland totalled EUR 33.3 billion.

The value of new orders in mechanical engineering decreased in the April-June period in comparison to the same period in 2017. The decrease is due to a significant ship order in the comparison period. While the order books shrank slightly from December, they remained at a significantly higher level year-on-year. The effect of the ship orders included in the order books will be reflected gradually in the production and export volumes, lasting several years.

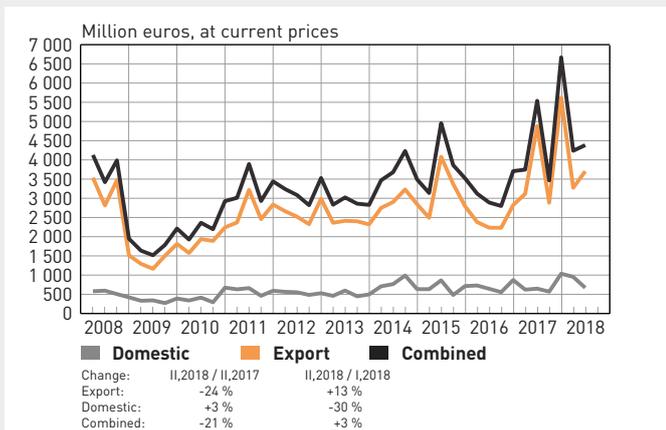
The mechanical engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between April and June was 3 per cent lower than in the preceding quarter and 21 per cent lower than in the corresponding period in 2017.

At the end of June, the value of order books was down 4 per cent from the end of March, but 17 per cent higher than in March 2017.

Judging from order trends in recent months, the turnover of mechanical engineering companies is expected to be higher in the autumn of 2018 than in the corresponding period last year.

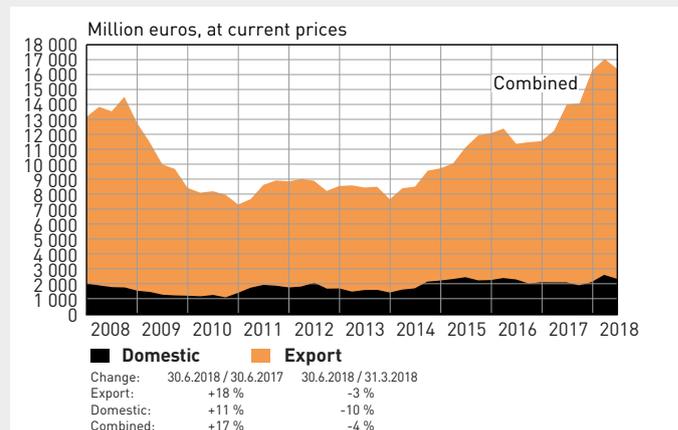
The number of personnel in mechanical engineering companies in Finland grew by 3.5 per cent between January and June from the 2017 average. At the end of June, the industry employed some 132,000 people, up 4,500 from 2017.

Value of New Orders in the Mechanical Engineering in Finland



Source: The Federation of Finnish Technology Industries' order book survey's respondent companies, latest observation April-June 2018.

Value of Order Books in the Mechanical Engineering in Finland



Source: The Federation of Finnish Technology Industries' order book survey's respondent companies, latest observation 30.6.2018.



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## Metals Industry in Finland

### Turnover and production volumes up

The turnover of metals industry companies (steel products, non-ferrous metals, castings and metallic minerals) in Finland grew some 17 per cent in 2017 from 2016. In the January-April period, the turnover was up 6 per cent year-on-year. In 2017, the turnover amounted to EUR 10.1 billion. In 2007, prior to the financial crisis, metals industry turnover in Finland totalled EUR 11.1 billion.

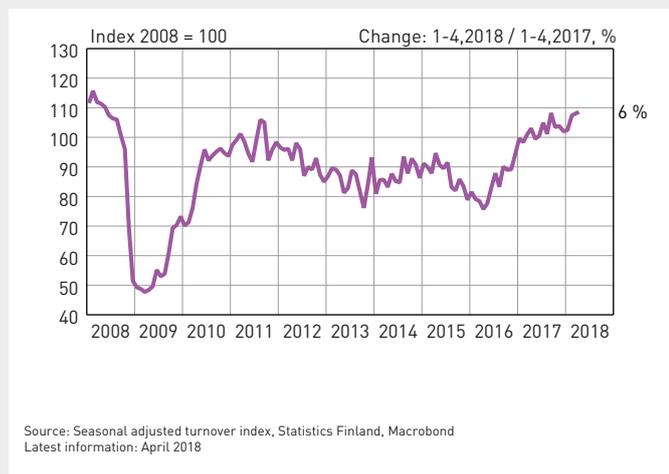
Total production of steel products, non-ferrous metals, castings and metallic minerals in Finland between January and May increased by 4 per cent year-on-year.

In comparison to the corresponding period in 2017, global steel production increased by almost 5 per cent between January and June. Production increased by 5 per cent in Asia, by almost 2 per cent in the EU and by more than 2 per cent in North America.

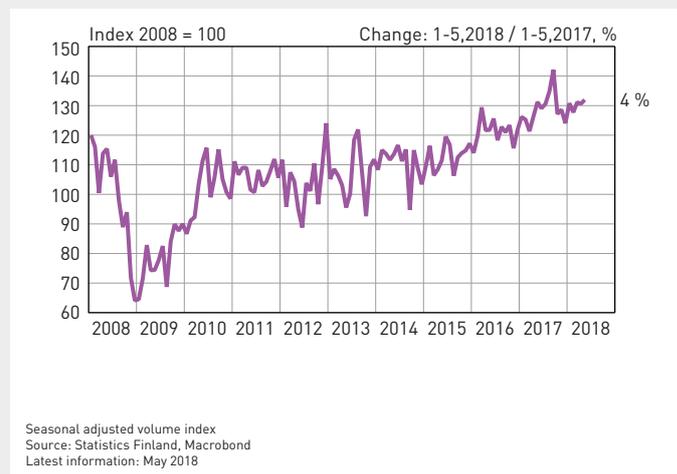
China, Japan, India, the United States, South Korea and Russia were the largest producers in June. In Russia, production was down 5 per cent in early 2018 from the corresponding period in 2017. China accounted for 52 per cent of global steel production.

The number of personnel employed by metals industry companies in Finland grew slightly in the January-June period from the 2017 average. At the end of June, the industry employed 16,200 people, up 100 from 2017.

Turnover of the Metals Industry in Finland



Production Volume of the Metals Industry in Finland





## Consulting Engineering in Finland

### Favourable order development continues

The turnover of consulting engineering companies (industrial, social and construction expert services) in Finland grew by 6 per cent in 2017 from 2016. In January–April 2018, the turnover was up 5 per cent year-on-year. In 2017, the turnover amounted to EUR 6 billion. In 2008, prior to the financial crisis, the industry turnover in Finland totalled EUR 5.5 billion.

Both new orders and order books in consulting engineering were clearly higher between April and June 2018 than in the corresponding period in 2017. However, orders were slightly down from the previous quarter. Typically for the sector, order volumes fluctuate strongly from one quarter to another.

The consulting engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books

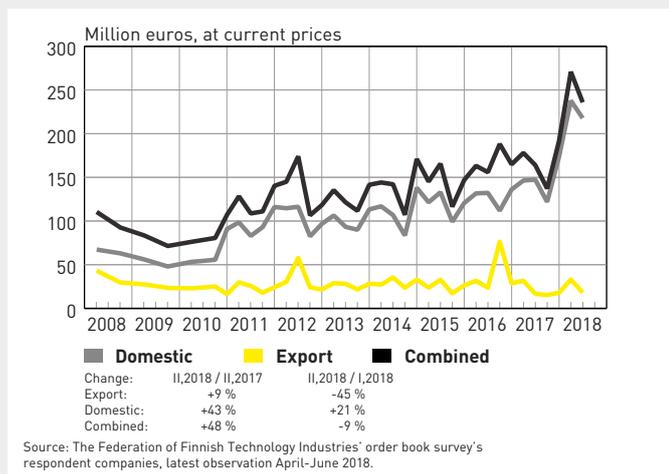
reported that the monetary value of new orders between April and June was 9 per cent lower than in the preceding quarter, but 48 per cent higher than in the corresponding period in 2017.

At the end of June, the value of order books was 2 per cent lower than at the end of March, but 23 per cent higher than in June 2017.

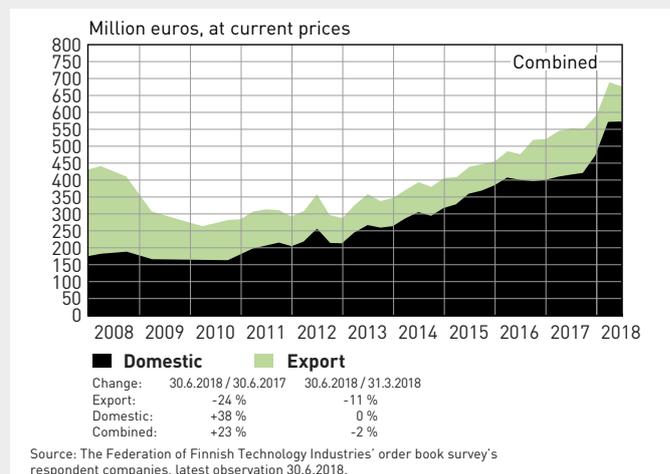
Judging from order trends in recent months, the turnover of consulting engineering companies is expected to be higher in the autumn of 2018 than in the corresponding period last year.

The number of personnel in consulting engineering companies in Finland grew by more than 5 per cent between January and June from the 2017 average. At the end of June, the industry employed some 54,000 people, up 3,000 from 2017.

Value of New Orders in the Consulting Engineering in Finland



Value of Order Books in the Consulting Engineering in Finland





## Information Technology in Finland

### Order development weakens from early 2018

The turnover of information technology companies (IT services and software) in Finland grew by 4 per cent in 2017 from 2016. In January–April 2018, the turnover was up 4 per cent year-on-year. In 2017, the turnover amounted to EUR 12.3 billion. In 2008, prior to the financial crisis, the industry turnover in Finland was EUR 6.7 billion.

Order development in information technology weakened between April and June from the preceding quarter, but remained higher than in the corresponding period in 2017. Total value of order books took a downward turn during the spring and summer.

The information technology companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between April and

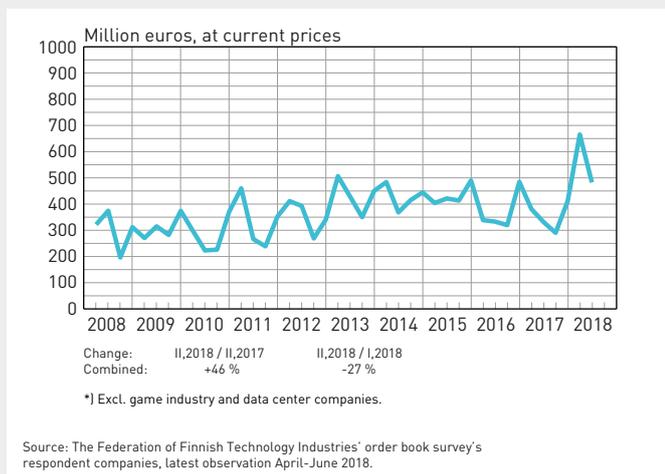
June was 27 per cent lower than in the preceding quarter, but 46 per cent higher than in the corresponding period in 2017. Game industry and data centre companies are not included in the survey.

At the end of June, the value of order books was 7 per cent lower than at the end of March, but 3 per cent higher than in June 2017.

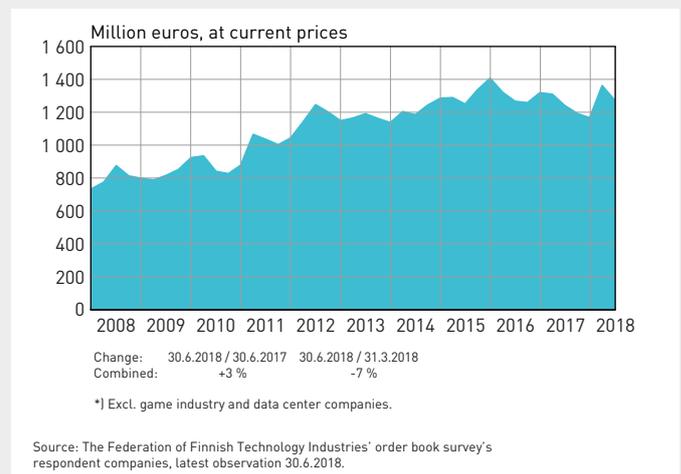
Judging from order trends in recent months, the turnover of information technology companies is expected to be slightly higher in the autumn of 2018 than in the corresponding period last year.

The number of personnel in information technology companies in Finland grew by slightly more than 2 per cent between January and June 2018 from the 2017 average. At the end of June, the industry employed close to 69,000 people, almost 2,000 more than in 2017.

Value of New Orders in the Information Technology\* in Finland



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



## ECONOMIC OUTLOOK 3 | 2018

Information based on the situation on 7 August 2018

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Please visit the homepage of the Federation of Finnish Technology Industries for additional information on technology industry turnover, exports, investments, personnel and the development of producer prices: [www.techind.fi](http://www.techind.fi).

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