

Economic Outlook

Technology Industries of Finland

4 | 2018

**Global And Finnish
Economic Outlook**
Growth continues to slow down
s. 3

Technology Industries In Finland
Growth of new orders and tender
requests stalled
s. 4

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Growth continues to slow down

The growth of the global economy has, in general, continued to slow down during the summer and autumn. There is one exception: in the US, economic growth has strengthened rather than weakened since 2017. The tax reform that entered into force in the beginning of 2018 has given a clear boost to the US economy. Business investment has seen the strongest increase due to the expanded expensing of capital purchases and otherwise lighter corporate taxation.

Over the year, business investment in the US has increased by as much as 7 per cent compared to 2017. Private consumption has also contributed to the US GDP growth of almost 3 per cent. Growth of construction, however, has slowed down. The housing market in general seems to be losing momentum.

The trade war, in particular between the US and China, and other geopolitical tensions have increased uncertainty. The situation is beginning to have an impact on business investment and consumer confidence in both Europe and Asia. At least for the time being, there has been a soft economic slowdown or stagnation.

Increasing uncertainty in many emerging countries has had a particular impact in terms of significant weakening of their currencies against the US dollar and, at the same time, the euro. The Argentine peso has weakened by more than 100 per cent, and the Turkish lira by 60 per cent against the 2017 annual average euro

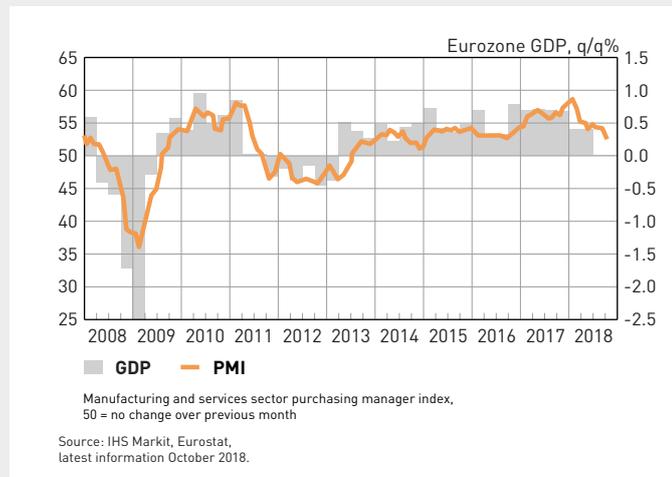
exchange rate. Currency rates have also become significantly weaker in Iran, Brazil, Russia, Indonesia, India and South Africa.

In China, the slowdown is deepening. Property prices are in decline in several cities and there has also been a continued downward trend on the Chinese stock market. Industry outlook has become more subdued and auto sales in China have dropped, for European brands in particular. More than 80 per cent of China's machine and equipment exports to the US are affected by the US import tariffs. These are expected to rise from the current 10 per cent to 25 per cent in the beginning of 2019.

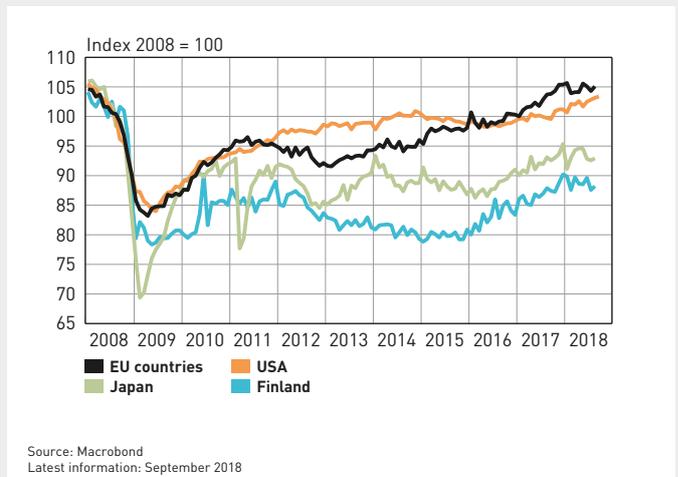
Growth is also slowing down in Western Europe. During the first half of the year, GDP growth rate has about halved from 2017. The purchasing managers' indices for the manufacturing and service sector indicate that this downward trend will continue for the rest of 2018. Of the large countries in the euro area, Italy and Spain have the lowest growth rates. In the EU, industrial production has contracted since the end of 2017.

Growth is slowing down in Finland too, and industrial output has not increased since the end of 2017. Likewise, the downward trend in the number of building permits indicates that construction will decrease. The GDP annual growth rate has dropped from some 3 per cent in early 2018 to some 2 per cent.

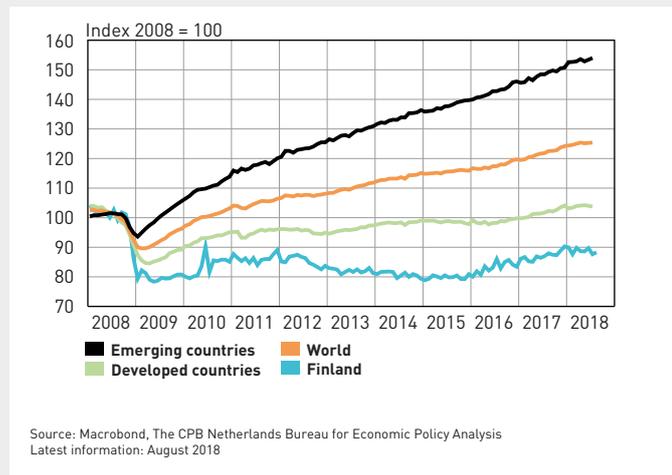
GDP Growth Rate in Euro Countries Has about Halved from 2017



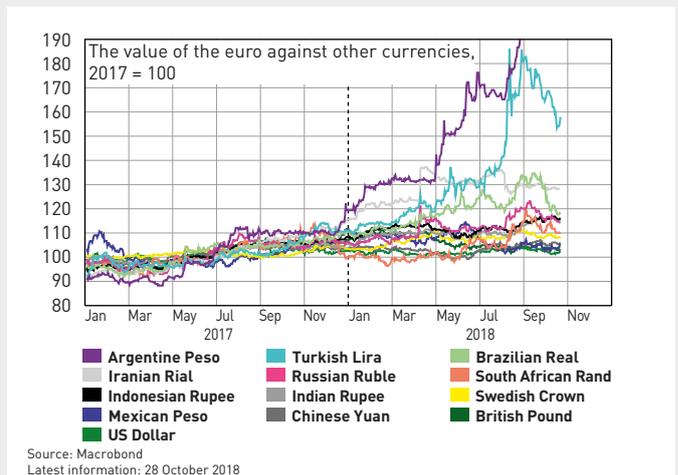
Industrial Production Has not Grown since the End of 2017, except in the United States



Growth in Industrial Output Has also Slowed down Globally



Changes in Foreign Exchange Rates Reflect Uncertainty about Customs and Economic Sanctions



Growth of new orders and tender requests stalled

The turnover of technology industry companies in Finland grew by 7 per cent in 2017 from 2016. In January-July 2018, the turnover was up 5 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, the turnover of technology industry companies in Finland totalled EUR 85.7 billion.

The value of technology industry companies' new orders remained at the same level in the July-September period as in the first half of the year. Without a significant new ship order, the value of new orders would have taken a downward turn. The increase from the same period last year is mostly due to the low level in the comparison period. The ship order also contributed to the strengthening of the order books after a slight decrease during the spring and early summer. More than 60 per cent of the strengthening of the order books since early 2014 is attributable to ship orders.

Growth in tender requests received by technology industry has ceased entirely during the autumn. This means that we can anticipate weaker order development during the rest of the year and winter. The overall slowdown of the global and Finnish economy is having an impact on the market situation.

The companies that took part in the Federation of Finnish

Technology Industries' survey of order books reported that the monetary value of new orders between July and September was at the same level as in the preceding quarter, but 22 per cent higher than in the corresponding period in 2017.

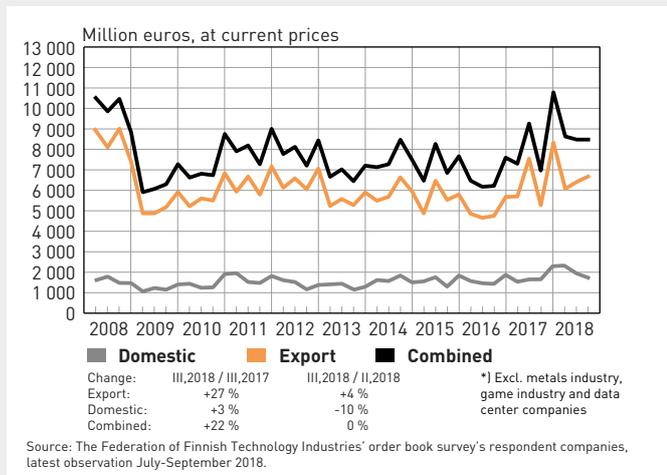
At the end of September, the value of order books was 6 per cent higher than at the end of June, and 20 per cent higher than in September 2017.

Judging from order trends in recent months, the turnover of technology industry companies is expected to be slightly higher during the rest of the year than in the corresponding period in 2017.

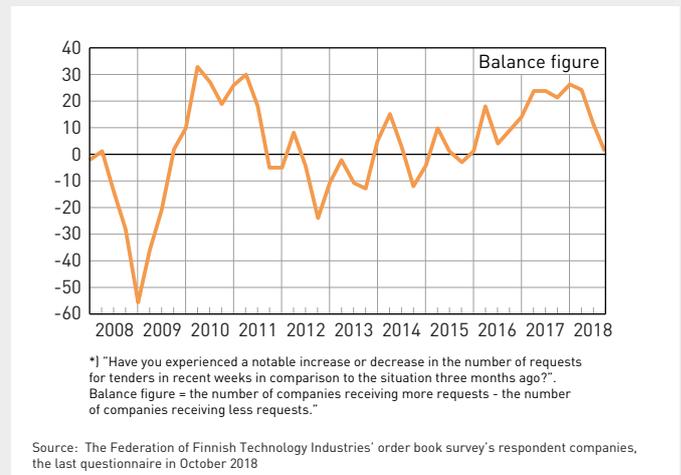
The number of personnel employed by technology industry companies in Finland grew by slightly less than 5 per cent between January and September 2018 from the 2017 average. At the end of September, the industry employed some 314,000 people, up almost 15,000 from 2017.

The recruitment activities of technology industry companies were very robust between July and September. They recruited a total of 40,000 new employees between January and September. In 2017, total recruitments came to 42,500. Sixty-seven 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.

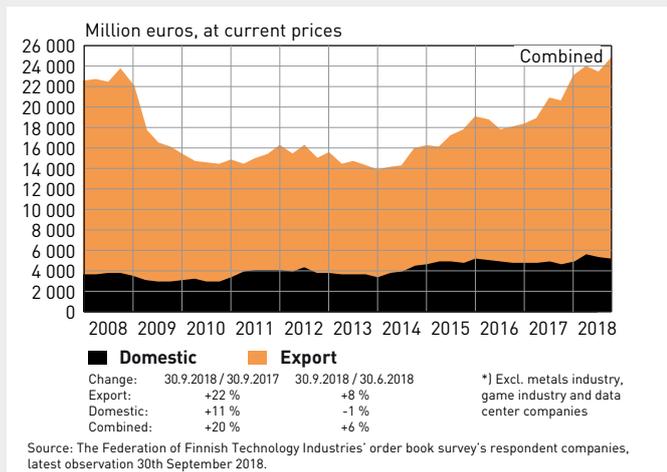
Value of New Orders in the Technology Industry* in Finland



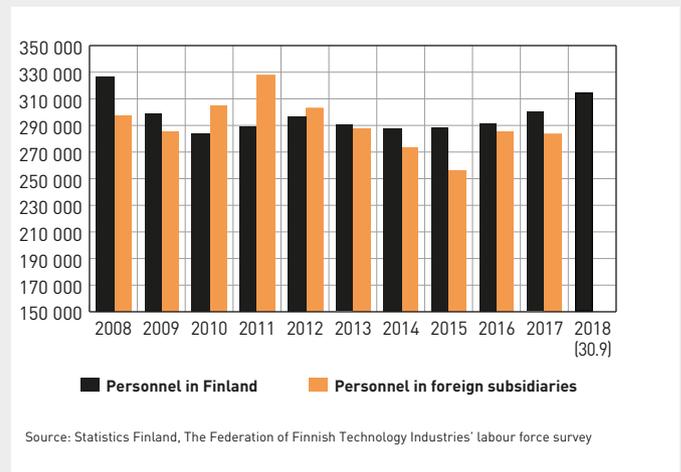
Tender Requests* Received by Technology Industry Companies in Finland



Value of Order Books in the Technology Industry* in Finland



Technology Industry Personnel in Finland and Abroad





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Electronics and Electrotechnical Industry in Finland

Orders up slightly

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-July 2018, the turnover was up 3 per cent year-on-year. In 2017, the turnover amounted to EUR 14.4 billion. In 2008, prior to the financial crisis, the turnover of technology industry companies in Finland totalled EUR 30.4 billion.

Both new orders and order books grew slightly in the July-September period in comparison to the year before and the preceding quarter.

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 July and September was 1 per cent higher

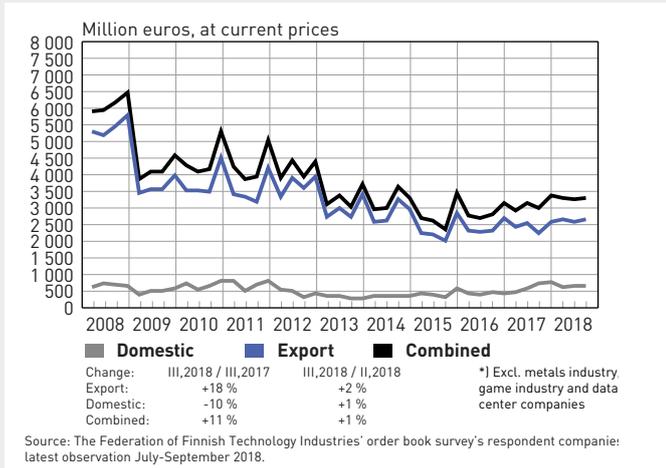
than in the preceding quarter and 11 per cent higher than in the corresponding period in 2017.

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

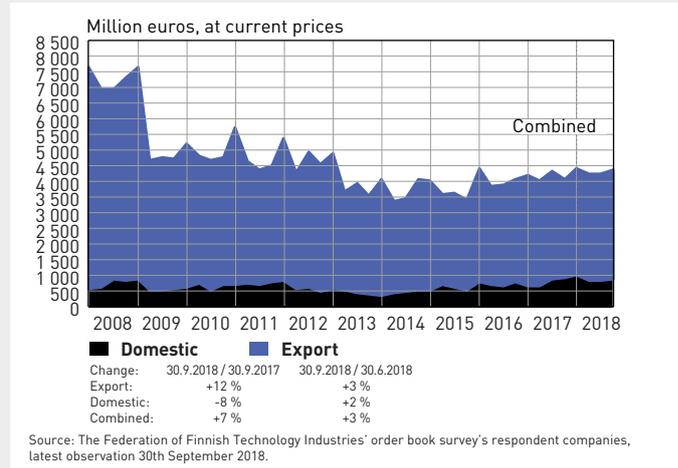
Judging from order trends in recent months, the turnover of electronics and electrotechnical industry companies is expected to be slightly higher during the rest of the year than in the corresponding period in 2017.

The number of personnel employed by electronics and electrotechnical companies in Finland was up less than 3 per cent between January and September 2018 from the 2017 average. At the end of September, the industry employed 38,800 people, up some 1,000 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

Boost to new orders from a significant ship order

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

The value of new orders in mechanical engineering grew slightly in the July-September period in comparison to the previous quarter. Without a significant new ship order, the value of new orders would have dropped. The increase from the same period last year is mostly due to the low level in the comparison period. The ship order also contributed to the strengthening of the order books after a slight decrease during the spring and early summer. Almost 80 per cent of the strengthening of the order books since early 2014 is attributable to ship orders.

The mechanical engineering companies that took part in the

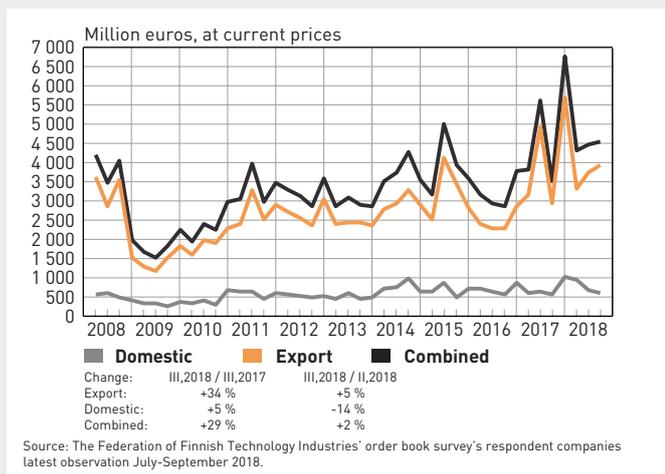
Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 2 per cent higher than in the preceding quarter and 29 per cent higher than in the corresponding period in 2017.

At the end of September, the value of order books was 7 per cent higher than at the end of June, and 25 per cent higher than in September 2017.

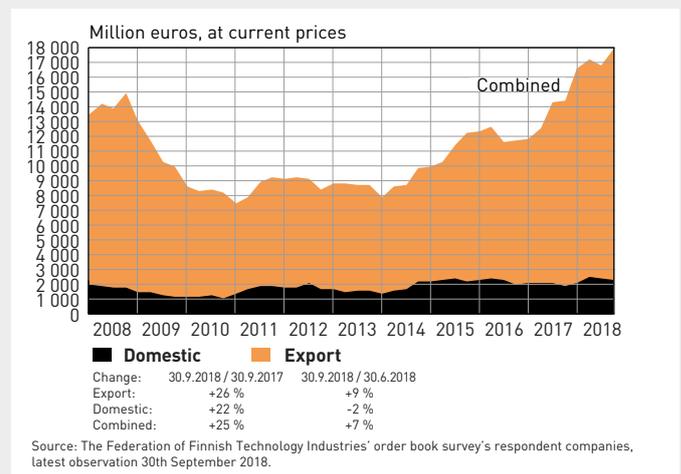
Judging from order trends in recent months, the turnover of mechanical engineering companies is expected to remain at the same level during the rest of the year than in the corresponding period in 2017.

The number of personnel in mechanical engineering companies in Finland grew by some 5 per cent between January and September from the 2017 average. At the end of September, the industry employed 134,500 people, up 6,700 from 2017.

Value of New Orders in the Mechanical Engineering in Finland



Value of Order Books in the Mechanical Engineering in Finland





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Metals Industry in Finland

Output up slightly

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 January-July 2018, the turnover was up 8 per cent year-on-year. In 2017, the turnover amounted to EUR 10.1 billion. In 2007, prior to the financial crisis, the metals industry turnover in Finland totalled EUR 11.1 billion.

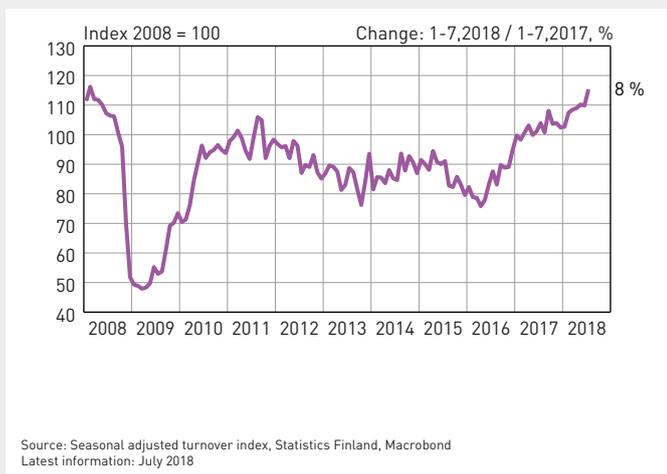
The total production of steel products, non-ferrous metals, castings and metallic minerals in Finland between January and August increased by 2 per cent year-on-year.

In comparison to the corresponding period in 2017, global steel production increased by almost 5 per cent between January and September. Production increased by almost 6 per cent in Asia, by 1 per cent in the EU and by more than 3 per cent in North America.

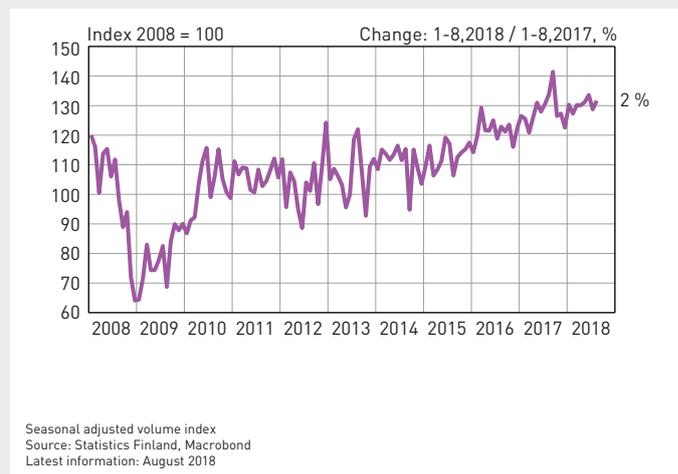
China, Japan, India, the United States, Russia and South Korea were the largest producers in September. China accounted for 52 per cent of global steel production.

The number of personnel employed by metals industry companies in Finland grew by some 2 per cent in the January-September period from the 2017 average. At the end of September, the industry employed 16,500 people, up 350 from 2017.

Turnover of the Metals Industry in Finland



Metallien jalostuksen tuotannon määrä Suomessa





Consulting Engineering in Finland

Order books remain strong

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-July 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 consulting engineering turnover in Finland totalled EUR 5.5 billion.

Favourable development of order books continued between July and September after a slight decline during the spring and early summer. However, new orders have passed their peak. Most of the orders for the industry come from Finland.

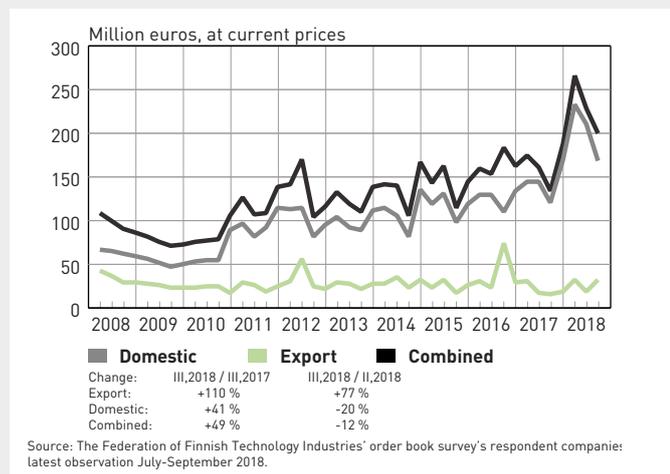
The consulting engineering companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between July and September was 12 per cent lower than in the preceding quarter, but 49 per cent higher than in the corresponding period in 2017.

At the end of September, the value of order books was 11 per cent higher than at the end of June, and 32 per cent higher than in September 2017.

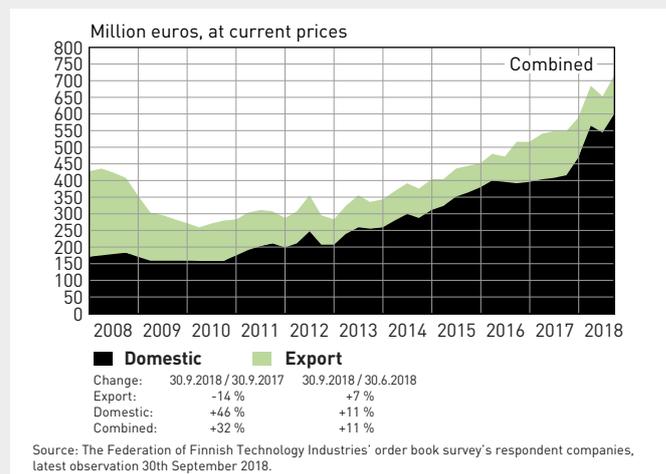
Judging from order trends in recent months, the turnover of consulting engineering companies is expected to be higher during the rest of the year than in the corresponding period in 2017.

The number of personnel in consulting engineering companies in Finland grew by more than 8 per cent between January and September 2018 from the 2017 average. At the end of September, the industry employed more than 55,000 people, up 4,300 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

Slight growth of turnover continues

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

Strong fluctuation of order volumes continued in the July-September period. While new orders were down from the previous quarter, they were higher than twelve months earlier. The order of values in September was up slightly year-on-year.

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 July and September was 20 per cent lower than in the preceding quarter, but 35 per cent higher than in the corresponding period

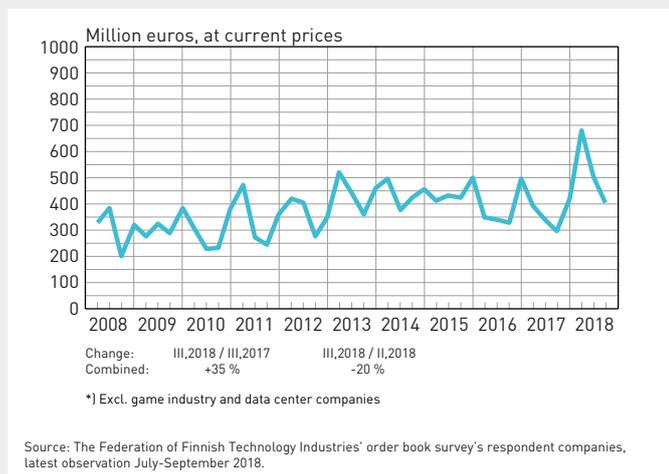
in 2017. Game industry and data centre companies are not included in the survey.

At the end of September, the value of order books was 6 per cent lower than at the end of June, but 1 per cent higher than in September 2017.

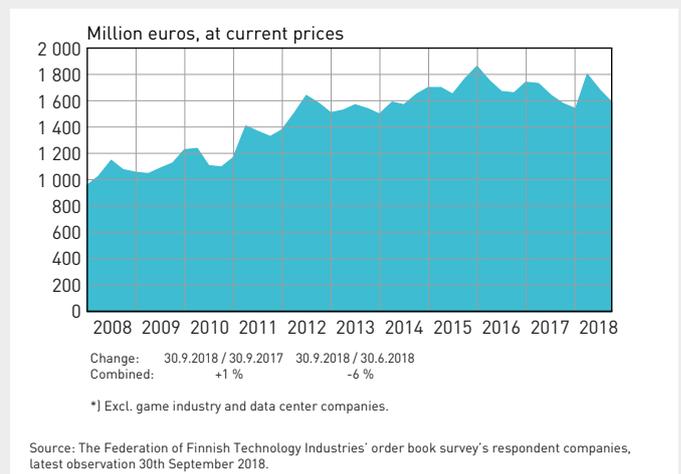
Judging by order trends in recent months, the turnover of information technology companies is expected to be slightly higher during the rest of the year than in the corresponding period in 2017.

The number of personnel employed by technology industry companies in Finland grew by slightly less than 4 per cent between January and September 2018 from the 2017 average. At the end of September, the industry employed some 69,000 people, up 2,400 from 2017.

Value of New Orders in the Information Technology* in Finland



Value of Order Books in the Information Technology* in Finland



Profitability slightly improved, with a loss of 20% of businesses

In 2017, technology industries had some 300,000 people in direct employment in Finland. Of these, 176,000 were employed by the Federation of Finnish Technology Industries' member companies. Out of the 1,587 member companies in total, 92 per cent were small and medium-sized enterprises.

According to the preliminary data collected by Statistics Finland, the profitability of the member companies improved moderately during 2017. The comparison includes the following key figures: operating profit, net profit, return on assets (ROA) and equity ratio. Close attention is paid to the median of each key figure so that differences between the companies become clear.

Operating profit indicates the result of the company before taxes and without finance income and expense.

The median of operating profit was 4.7 per cent in 2017, a level not seen since 2012. Between 2012 and 2017, the median varied between 3.5 and 4 per cent. According to the proposed guide values, at less than 5 per cent, the median of the member companies is considered weak.

Measured in terms of operating profit, 22 per cent of member companies were making a loss and 27 per cent were at a good level. Rest of the companies were either at a satisfactory or poor level.

Net profit differs from operating profit in that taxes have been accounted for, as have any finance income and expenses.

The median of net profit was 3.8 per cent in 2017. Similar to operating profit, this level has not been seen since 2012. The median of net profit was at its weakest in 2013 at 2.8 per cent. According to

the proposed guide values, the median of the member companies was at a weak level.

Measured in terms of net profit, 24 per cent of member companies were making a loss and 21 per cent reached a good level of profitability. For the rest, net profit was either weak or satisfactory.

Return on assets (ROA) indicates relative profitability, or earnings from the capital invested in the company in terms of interest or other return.

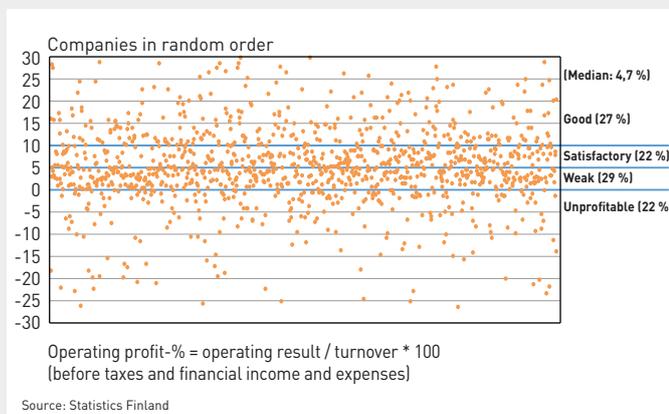
The median of ROA was 11.8 per cent in 2017. While the median was the same in 2012, it remained at a lower level up until 2016. According to the proposed guide values, the median of ROA was satisfactory in 2017. The ROA percentage is deemed good when it is more than 15 per cent, satisfactory when between 9 and 15 per cent, mediocre between 0 and 9 per cent and otherwise weak.

Measured in terms of ROA percentage, 20 per cent of member companies were weak, 42 per cent reached a good level and the rest were mediocre or satisfactory.

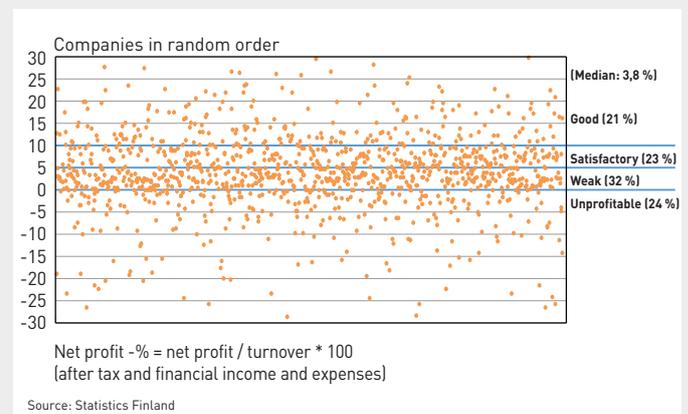
Equity ratio is the ratio of solvency. It indicates the company's solvency by comparing the equity in the balance sheet to the balance sheet total.

The median of equity ratio was 40.9 per cent in 2017 and it has remained relatively stable during the past six years. According to the proposed guide values, the median of the member companies barely reached a good level in 2017. Of the member companies, 51 per cent were at a good level, 24 per cent were satisfactory and 25 per cent weak.

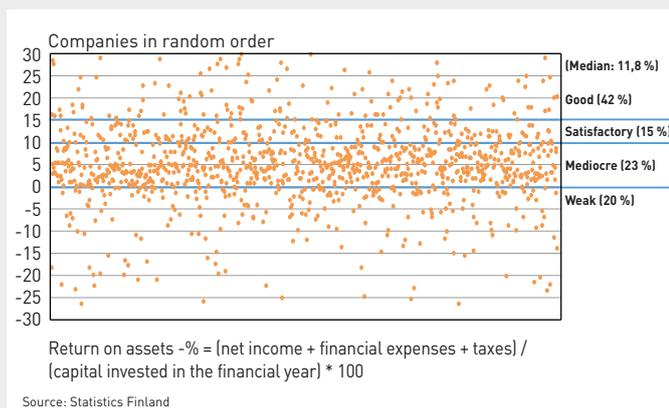
Operating Profit in the Member Companies of Technology Industries of Finland in 2017



Net Profit in the Member Companies of Technology Industries of Finland in 2017



Return on Assets in the Member Companies of Technology Industries of Finland in 2017



Equity Ratio in the Member Companies of Technology Industries of Finland in 2017



ECONOMIC OUTLOOK 4 | 2018

Information based on the situation on 26 October 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.

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Technology Industries
of Finland