

Theme: Automation New technology and better solutions

Despite weaker global economic growth, there are areas where demand may remain strong. Electrification, sustainability, digitisation and automation are potential future growth areas that should have good resilience in these turbulent times. The general downturn in stock markets this year may be a good opportunity to invest in sectors and companies with favourable long-term prospects.

Automation will be an important tool for the future development of companies. By creating more and bigger opportunities in flexibility and efficiency, companies can reduce costs and thus boost profitability. One driver for increased automation is the development of new solutions that combine new advanced technology, more data and better software. Data from new modern higher-precision sensors will create totally new prerequisites for a more efficient flow of services and products throughout the value chain, from purchase to delivery. In this theme article, we consider various forces driving increased automation – including cost-effectiveness, employee safety, geopolitical uncertainty, inflation and interest rates. We will examine in greater detail some sectors and companies whose profitability outlook may be affected by changes. Despite global challenges and the risk of weaker global economic growth in 2023, new solutions can create conditions for more stable or increased profitability for successful companies.

Not just a cost argument

In the 1990s, many Swedish companies with labour-intensive operations moved their production structures from Western Europe and the United States to nearby low-cost countries in Eastern Europe and Mexico. It also became increasingly common for them to make more purchases from countries in Asia, especially China. With growing prosperity in these countries, combined with the increasing complexity of supply chains, their comparative advantages – for example in terms of wages and production costs – have weakened. Geopolitical uncertainty and reduced dependence on individual suppliers and their subcontractors are drivers in changing and improving production and delivery structures.

Aside from the ambition to continuously improve the cost-effectiveness of their operations, other factors affect companies' investments in automation:

- An attractive workplace
- Employee safety
- Quality
- Flexibility
- Environment

In recent years, many advanced economies have been characterised by a shortage of workers with the right skills. Most of these countries face a major demographic challenge – their population is ageing while the share of people of working age is falling. Rising payroll costs heighten the need for increased productivity, with one factor being the high priority companies always give to employee safety. Bottlenecks in the delivery of both input materials and finished goods are another argument for automation.

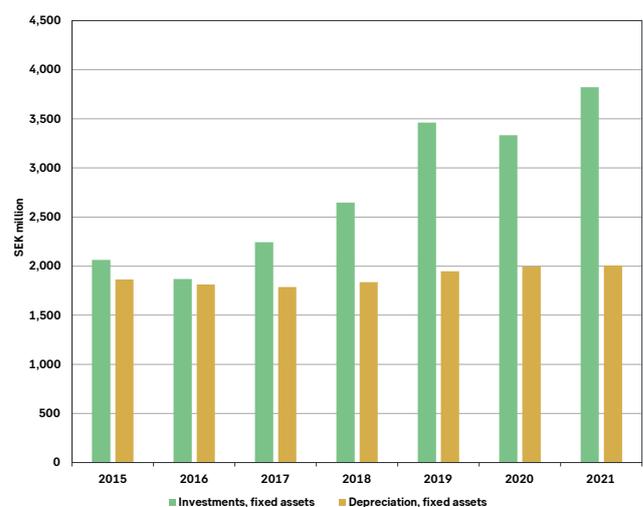
Companies have also largely announced targets for the reduction of greenhouse gas emissions in their own operations and in their supply chain. Many companies have committed themselves to global environmental and sustainable development goals, with the aim of sharply reducing greenhouse gas emissions. These developments, which are followed closely by financial advisors and investors, have created a need for increased investments to enable these companies to carry out their climate transition.

The unthinkable became reality – a war in Europe and a global pandemic. These events have forced companies, their executives and owners to take action in order to mitigate the effects of external events and increase their own flexibility. In the past two years, many companies have succeeded in offsetting increased costs by raising prices, thus to some extent preserving their profit margins. But increased outlays for logistics pose a great challenge for most companies, and most of them have not been able to offset this cost to the same extent as other expenditures. So it is natural for companies to focus to a greater extent on costs throughout the value chain – from purchasing, logistics and production of goods and services to marketing and sales. One way to reduce a company's outlays is to scale down payroll costs by increasing the share of technology and capital throughout the value chain and automating manual processes.

Automation can also lead to faster development of new products and services as well as improve flexibility and quality. Another important argument for automation is improvements in scalability, since increased volumes do not affect expenses to the same extent. A company's capital costs are also affected by external factors such as inflation and interest rates, which influence future investment decisions. Automation is expected to have a positive effect on a company's ability to predict future costs, since investments will be made closer to its current business structure and end-market.

Increased production efficiency creates conditions for building structures in the US and Western Europe that are just as cost-effective as operations set up in low-cost countries (if the cost of logistics and transport is included). One example is a company like Swedish bearing manufacturer SKF, which is investing in both automation and value creation by region. This has led to increased investments in fixed assets and, in particular, a higher relative level of depreciation in recent years.

The investment level at SKF has increased



Source: SEB, SKF annual report

The chart shows the level of fixed asset investments in SEK million annually for SKF and the amount of depreciation. SKF's increased investment level may be an indication of the growth potential for automation if the trend continues and if other companies choose to make similar investments.

Technological advances

The field of sensors plays a key role in increased automation. Today's new high-tech sensors – used in cameras, radar, LiDAR, lasers and other devices – completely transform the opportunities for automation. Along with the potential of vision technologies for computers and robots, other important input variables are touch and measurement of temperature, pressure and flows. The next step is to connect data rapidly, safely and reliably to and from sensors with software systems that react to deviations or with screens that allow the visualisation of flows. Some of this development involves translating physical objects into virtual models of reality. Virtual simulation possibilities give users the opportunity to test how systems react to problems and to optimise flows prior to placing a system in service. In order to optimise automation, systems must be self-learning and self-improving. That is one reason why machine learning and artificial intelligence are expected to be increasingly common features of future processes.

Investment ideas in automation may enable a company either to lower costs or boost revenue with market-leading solutions – or a combination of the two. Companies that successfully implement these strategies in their value chains create good conditions to be winners in the long term. Below are some examples of companies that may benefit from the growth potential of automation based on their exposure to megatrends.

Programmable networks

The Swedish networking and telecommunications company Ericsson has an explicit strategy of expansion in the business-to-business (B2B) market, providing new solutions and software as the quantity of data grows with the connection of more and more devices. The company's ambitions are reflected in two major acquisitions in the past three years outside of its Networks division, totalling SEK 70 billion.

Ericsson's latest acquisition, Vonage, provides two B2B communications solutions, which means companies do not have to invest and develop their own communications platforms. SMS, video, chat and voice can all be integrated in a company's own IT structure, or the company can choose a cloud solution for all of its communications needs. The next step for Vonage and Ericsson is to develop interfaces with programmable 5G networks so that different data sources can communicate with one another, which will make it easier for developers to create new 5G-based services. This new technology is important in making the automation solutions of the future a reality for factories, mines, ports and transport facilities.

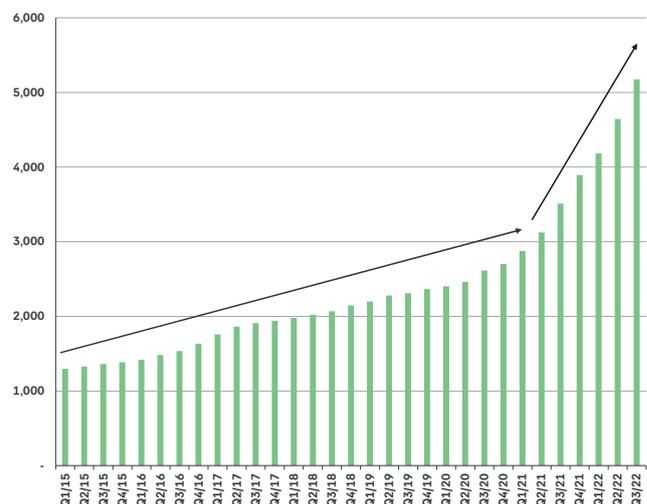
To date, Ericsson has endured major losses on its B2B investment. The stock market has reacted with great scepticism to the company's performance and prospects so far. In the past 12 months, the newly created Enterprise Wireless Solutions division showed a SEK 3.2 billion operating loss, excluding amortisation on the excess purchase price. In one quarter, Vonage contributed revenue of SEK 2.9 billion and an operating loss of SEK 0.8 billion but, excluding depreciation and impairment losses related to the acquisition, had a positive effect on performance.

Ericsson's price-earnings (P/E) ratio, based on projected future profits, is historically low. Clearly, this has been affected by questions about how the company has conducted its business in Africa and the Middle East and by the potential risk of major sanctions in the form of fines and other penalties. With big losses in Ericsson's future-oriented businesses, it is also uncertain whether the Enterprise Wireless Solutions division's growth rate and earnings contribution will offset any decrease in Ericsson's more profitable Networks division. This will depend on whether and when the development of 5G networks peaks over the next few years. During the last quarter, there were signs of a slowdown in 5G expansion in North America. Growth in new regions initially shows lower profitability.

The aim is for new solutions in the B2B market to create historically larger new business opportunities and larger growth potential for the Ericsson Group.

For Swedish telecom operator Telia, there is a clearly accelerating growth trend in subscriptions for connected devices, as shown below. Growth was stable during the latter phase of 4G expansion, and quarter-on-quarter growth in new subscriptions was 2-8 per cent from 2015 to early 2021. There are indications that 5G has accelerated Telia's growth rate in Sweden, which has been just over 10 per cent since the second half of 2021. Sweden has the highest growth, but all Telia regions are growing in the number of machine-to-machine subscriptions.

Dramatic increase in subscriptions for machine-to-machine communication at Telia



Source: SEB, Telia quarterly reports

The chart shows the number of Telia subscriptions in Sweden, Denmark, Norway, Lithuania, Estonia and Latvia for machine-to-machine communications. The reasons why companies are supplementing or replacing their existing communications infrastructure with mobile solutions include cost benefits, better coverage, better scalability, expansion potential, security and flexibility.

Boliden is ahead of its competitors

The Swedish mining company Boliden is a world leader in productivity, measured as ore mined per man-hour. Its mines have moved deeper underground in recent years, while total cash flow cost per metal extracted has also gone down compared to its competitors. The same is true of its smelting operations. One explanation is a higher degree of automation compared to competitors, which reduces the operational risk of falling prices, since mines with higher costs are taken out of service first. This can prevent prices from falling to the point where mining activity is threatened by a negative operating cash flow.

Boliden's mine in Kristineberg, Sweden, was the world's first underground mine to use a combination of wireless networks with IP telephony and positioning systems; similar systems have also been introduced at the company's Garpenberg and Kankberg mines. Using this new technology, operational planning improves since people working above ground can follow what is happening deeper inside the mines in real time. Better planning is lowering emissions and improving occupational safety. Working remotely with self-driving vehicles and more automation means fewer employees down in the mine, which can reduce the need for costly ventilation.

Three-dimensional positioning solutions

Hexagon is one of the bigger companies on the Stockholm stock exchange offering a leading platform in automation. It has expanded quickly over time, both organically and through acquisitions. The company's solutions include three-dimensional positioning systems featuring maps of physical places, simulation and virtual copies of physical objects, and bringing leading technologies together in a single ecosystem to develop optimal automation solutions.

Using a combination of advanced sensors for precise positioning and data processing software, advanced solutions can be created that reduce manual labour in such sectors as mining, vehicle technology, electronics, energy, aviation and defence. Hexagon's solutions range from the design of automation processes to day-to-day operation of facilities and continuous software upgrades. "Digital twins" is one area the company has great hopes for.

Given the lack of data from any customer who has started to use the company's automation solutions, we are using revenue per employee at Hexagon and rolling 12-month net earnings to monitor changes in the company's productivity and any correlation with net earnings. These are shown in the chart in the next column. During the pandemic, Hexagon's business model showed great resilience, with a limited decline in earnings bolstered by a high proportion of sales of software and services as well as a large proportion of recurring revenue.

Correlation between change in Hexagon's productivity and net earnings



Source: SEB, Hexagon quarterly reports

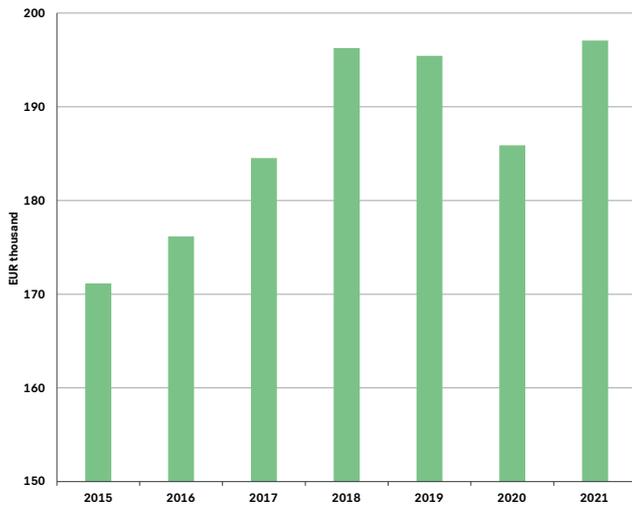
The chart shows revenue per employee (in green), with figures on the left-hand scale, and 12-month rolling net earnings in euros (in yellow), with figures on the right-hand scale. We see a correlation between the change in sales per employee and the net earnings trend.

From sensors to robots

The Swedish-Swiss engineering group Asea Brown Boveri (ABB) offers a wide range of solutions for automated processes, from hardware for visualisation to software and robots. The company has enjoyed a strong position and product range for many years, particularly in robotics. At ABB's capital markets day last spring, the company presented its future strategy in the process automation field. Annual revenue of this business area is about USD 5.5 billion and operating income is USD 610 million. Its end-markets include oil and gas extraction and processing; the mining, metal and forest product industries; and shipbuilding. Early this year, operations saw sustained double-digit growth in industrial software and digital services; annual growth since 2017 has averaged more than 15 per cent.

ABB's sensors for measuring temperature, pressure, flows and levels are expected to show market growth of 4-5 per cent over the next four years. Investments in analytics are expected to make this one of the fastest-growing segments, with drivers being production efficiency, emissions monitoring, regulatory requirements and greenhouse gas emission reduction. Automation solutions are also integrated with the company's electric and digital systems and with its customer offering in robotics.

Increased productivity except for the pandemic years



Source: SEB, SKF annual report

The above chart, which shows revenue per employee at SKF in thousands of euros, illustrates the company's productivity trend in terms of revenue per employee. Productivity grew by 3-6 per cent annually except in 2019 and 2020, when there was an economic slowdown (in 2020 due to the pandemic).

Fewer and more efficient factories

SKF's ambition is to grow its operations in machine condition monitoring and sell circular and automatic lubrication systems to its customers. However, this will be overshadowed in the short term by the company's cost-cutting programme. SKF's goal is to increase value creation in every region and reduce the number of factories through greater automation.

A consolidation in the number of factories and increased automation will lower SKF's cost of goods sold by more than SEK 5 billion by 2025. Some of this cost-cutting has already affected profitability, with each step in the value chain having a digital connection. For the three years until 2021, the gross margin trend was positive. Increased automation will make it possible to close five factories a year. To achieve this, the investment level has increased significantly since 2016. Investments in new fixed assets have exceeded depreciation by 60 per cent over the past five years, as shown in the chart on page 19.

These examples show that there is great market potential in automation, as an ever-growing number of companies raise their ambitions. Automation not only increases productivity and profitability, but also provides many other benefits – for example, reduced emissions, flexibility, safety both for employees and elsewhere in the value chain, and quality. The growth prospects for this sector can be positive even in a world where the economy slows down in 2023.