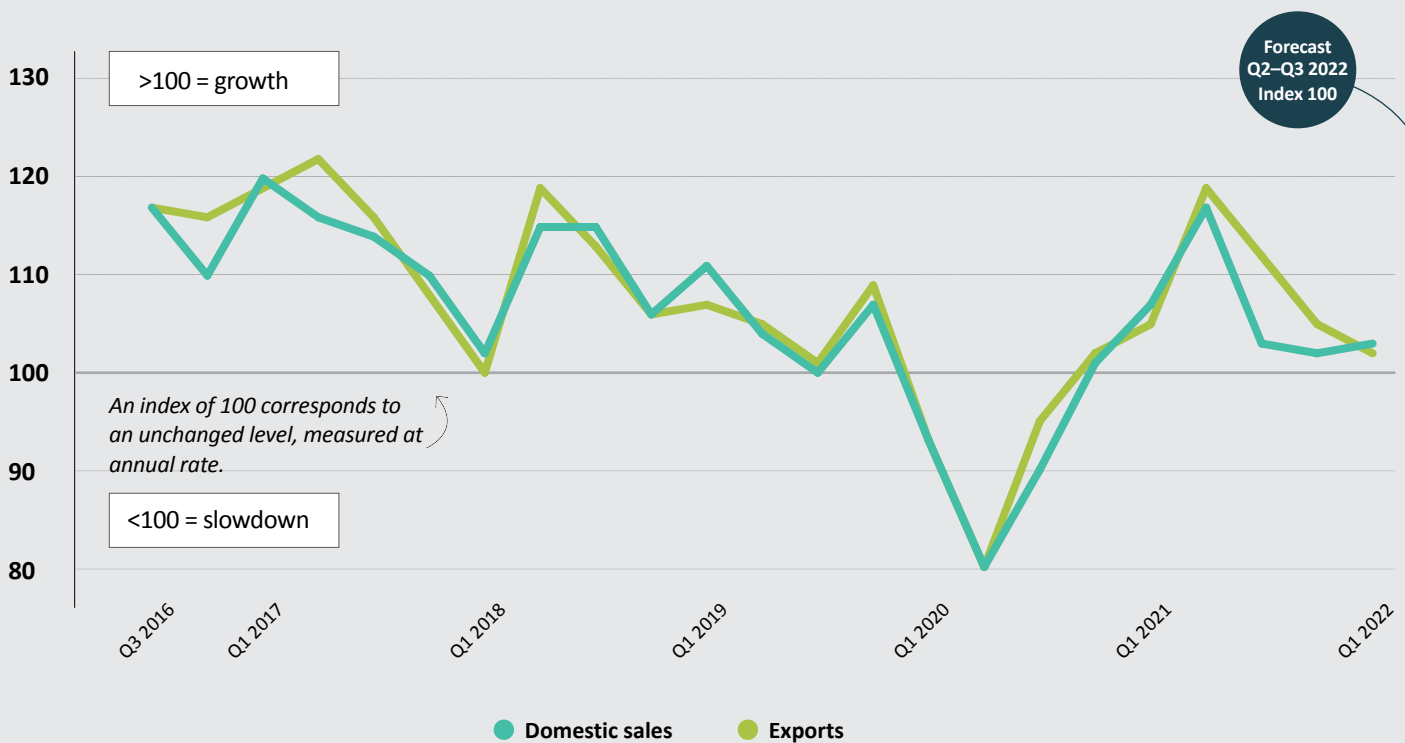


ECONOMIC SUMMARY

FIGURE 1. IKEM INDEX FOR THE PERIOD Q3 2016–Q1 2022 FOR DOMESTIC SALES AND EXPORTS (VOLUME AT ANNUAL RATE). AN INDEX VALUE BELOW 100 INDICATES A SLOWDOWN (CONTRACTION).

Source: IKEM



Russia’s invasion of Ukraine has a major impact on the chemical industry

The first quarter of the year saw continued challenges for the Swedish chemical industry. Russia’s invasion of Ukraine not only brings enormous human suffering and mass destruction, it also affects the global economy. This comes at a time when the global economy has only just begun to recover following two years of pandemic.

Overall, Russia is a minor player globally, but it controls significant assets in terms of energy and metals. Together with the lingering effects of the pandemic, this has had an impact on the supply side within all sections of the Swedish chemical industry: chemicals, plastics and rubber, pharmaceuticals and

refineries. Nevertheless, at the margin, the chemical industry managed to surpass last year’s production volumes.

Broken down by subsector, volumes decreased slightly within chemical production, while increasing slightly in plastics and rubber and in pharmaceuticals and refineries. Overall, the first quarter ended in line with the companies’ expectations from quarter-end Q4 2021.

Aggregated for the chemical industry as a whole, the quarter ended in line with the volume forecast for 74 per cent of the companies, while there was an equal split among the remaining

TABLE 1. IKEM INDEX. TREND DURING Q1.

An index of 100 corresponds to an unchanged level (annual rate). Minimum value = 50, maximum value = 150.

Source: IKEM

	Domestic deliveries, volume	Deliveries to the export market, volume	Number of employees	Investment	Cost of raw materials/ input goods	Profitability of the company (EBIT margin)
Plastics/rubber	100	107	99	101	147	99
Chemicals	97	93	99	97	150	100
Pharmaceuticals/refineries	108	107	107	99	136	97
Total	103	102	103	99	142	98

companies between those reporting weaker performance than forecast and those reporting stronger performance. The forecast for the next six months is for the companies to maintain last year's production volumes and retain the same staffing levels.

BOTTLENECKS AN ONGOING CHALLENGE

Ever since the full force of the pandemic hit in spring 2020, supply and delivery issues have been a constant problem for the Swedish chemical industry. This remains the case in the first quarter of 2022, as Russia's invasion of Ukraine on 24 February exacerbated an already strained situation and had an impact on the last five weeks of the quarter. Production at almost eight out of ten companies was slowed to a greater or lesser extent by various types of bottlenecks and supply problems during the quarter.

Companies in some subsectors felt the impact of the problems much more than those in other subsectors. For example, half of the chemical companies experienced major bottleneck problems while the corresponding figure for pharmaceuticals and refineries was only three per cent. Meanwhile, 43 per cent of plastics and rubber companies experienced major bottleneck problems during the quarter. These bottlenecks were mainly related to shortages of raw materials/input goods and transport, with the availability of packaging being less problematic.

Which specific raw materials/input goods were in short supply for the companies? This turned out to be a range of different components. As Figure 2 shows, a large number of companies mention plastic raw materials, chemicals, aluminium and paper, but a wide range of other raw materials are also mentioned. The supply shortages are clearly widespread and cover a diverse range of critical components for Swedish chemical-related production. The companies still expect to experience problems in the future. Nine out of ten companies anticipate varying degrees of disruption to supply affecting production in the second quarter. The plastics and rubber companies are expecting to be hit hardest, while the pharmaceuticals companies and refineries are anticipating slightly milder supply problems.

TABLE 2. HAS THE COMPANY'S PRODUCTION BEEN AFFECTED BY INERTIA IN THE GLOBAL VALUE CHAINS BECAUSE OF LOGISTICS PROBLEMS, TRADE SANCTIONS AND/OR SUPPLY SHORTAGES IN Q1?

Source: IKEM

	Plastics/rubber	Chemicals	Pharmaceuticals/ refineries	Total
Yes, considerably	43%	50%	3%	24%
Yes, somewhat	45%	22%	37%	34%
Yes, to a small extent	11%	5%	4%	6%
No	0%	22%	56%	36%

TABLE 3. IN WHICH AREAS HAVE YOU EXPERIENCED SUPPLY SHORTAGES IN Q1? PROPORTION OF ALL PARTICIPATING COMPANIES.

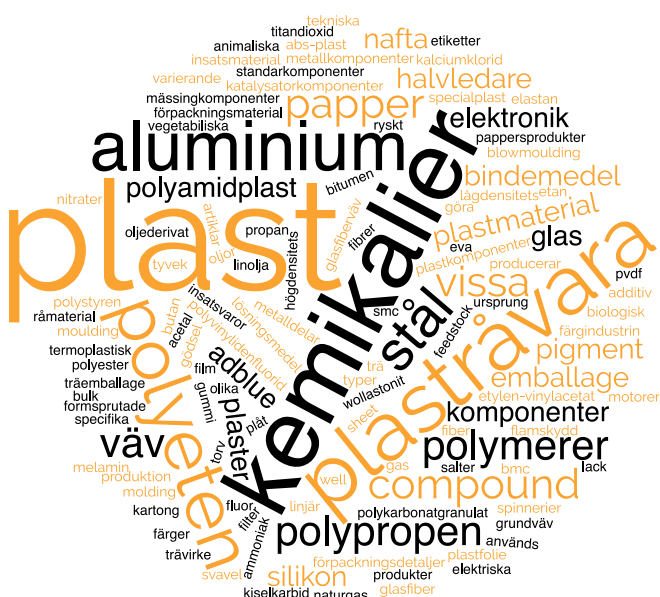
Source: IKEM

	Raw materials/ input goods	Transport	Packaging
Very extensive shortage	6%	3%	0%
Significant shortage	28%	23%	3%
Some shortage	29%	35%	24%

SUPPLY SHORTAGES PUSHING UP PRICES

The current supply shortages are resulting in cost increases in all areas of production. The index values for the period relating to the size of cost increases for raw materials/input goods, electricity and transport are all at very high levels. At 142, the value for raw materials/input goods is the highest recorded in the six-year

FIGURE 2. WHICH RAW MATERIALS ARE THERE SHORTAGES OF? Source: IKEM



history of IKEM’s economic summary. An index value of 100 indicates an unchanged level at annual rate, while 150 represents the strongest increase/growth. The minimum value is 50.

Broken down by subsector, the chemical companies hit the maximum value of 150 for raw material purchasing during the quarter. The plastics and rubber companies reported an index of 147. The cost increase for IKEM as a whole reached an index of 140 for electricity costs and 135 for transport costs.

The forecast for the second quarter is for continued broad cost increases on everything from raw materials and electricity to transport, while expectations in terms of packaging materials are clearly more cautious.

In the chemical industry, cost inflation has had a clear grip on activity for just over a year now, following a year of falling costs for raw materials/input goods in 2020. Developed economies have not experienced consumer inflation rates as rapid as this for 30–40 years. Few have escaped the fact that the global economy is in a rapid inflationary spiral. It is clear that many companies are well aware that this cost inflation is outside the direct control of their subcontractors and so are more willing to accept the price increases requested. Just over a quarter of the companies say they are experiencing a high degree of acceptance of increased delivery prices, while just under a fifth of the companies indicated little acceptance of the need for increased delivery prices.

RUSSIA’S IMPACT ON THE COMMODITIES MARKET

Russia’s invasion of Ukraine, with the enormous human suffering and mass destruction that the war brings, came at a time when the global economy had just begun to recover following two years of more or less extensive pandemic restrictions. Although

TABLE 4. DOES THE COMPANY EXPECT PRODUCTION TO BE AFFECTED BY INERTIA IN THE GLOBAL VALUE CHAINS BECAUSE OF LOGISTICS PROBLEMS, TRADE SANCTIONS AND/OR SUPPLY SHORTAGES IN Q2?

Source: IKEM

	Plastics/rubber	Chemicals	Pharmaceuticals/refineries	Total
Yes, considerably	50%	50%	4%	26%
Yes, somewhat	45%	28%	36%	35%
Yes, to a small extent	5%	0%	57%	31%
No	0%	22%	3%	8%

TABLE 5. WHAT IS THE COMPANY’S VIEW ON COST TRENDS (PURCHASE OF RAW MATERIALS/INPUT GOODS, ELECTRICITY, TRANSPORT, PACKAGING, ETC.) IN Q2? ANNUAL RATE.

Source: IKEM

	Raw materials/input goods	Electricity	Transport	Packaging
Costs will decrease considerably (> -20%)	0%	0%	0%	0%
Costs will decrease (< -20%)	1%	2%	0%	0%
No change	5%	11%	7%	65%
Costs will increase (< 20%)	81%	73%	84%	31%
Costs will increase considerably (> 20%)	12%	13%	9%	4%

Russia is a minor player overall in the global economy, it controls vital and significant assets in terms of energy and metals. With the West now rapidly trying to cut ties with Russia, this is creating supply shortages that are leading to large price increases for energy and various types of raw materials where Russia (as well as Belarus and Ukraine) has a large market share. These include, for example, palladium, phosphate, titanium and platinum. This has been observed to a great extent by the chemical industry towards the end of Q1. Russia accounted for just under 4.5 per cent of chemical-related imports to Sweden in 2021. The subgroup with the largest import share was “chemical elements and inorganic chemical compounds” with a share of 20 per cent. The Swedish share of exports of chemical-related products to Russia was 1.5 per cent in 2021.

IS IT POSSIBLE TO CUT TIES WITH RUSSIA?

Decades of increased global trade have created a finely meshed cobweb of supply chains between all the countries of the world. Only when an unexpected event occurs that knocks out an individual country or company does it become apparent to the outside world just how central an individual company/country is to global supply chains. It has become obvious, for example, that Russia has been an important player in chemical-related production.

With two months now passed since Russia invaded Ukraine, nine out of ten Swedish chemical companies have been able to obtain a picture of their direct and/or indirect dependence on raw materials/input goods from Russia, as well as from Belarus and Ukraine. It turns out that seven out of ten companies have been directly and/or indirectly affected by broken supply chains linked to these countries.

The greatest direct impact of broken supply chains is reported in chemicals, pharmaceuticals and refineries, where just under six in ten companies are affected.

It is, of course, a welcome ambition for individual countries, the EU and individual companies to break with Russia in relation to the purchase of oil, gas and other raw materials and so withdraw hundreds of billions in sales revenues that could be used to build up the Russian military forces. At the same time, we must be humble about the fact that eliminating dependence on Russia is both a time-consuming and costly process. Deposits of oil, gas and minerals are not evenly distributed among the countries of the world and Russia controls proportionally large shares of the world's assets across a range of specific commodities. All in all, this means that it will take a relatively long time to completely replace Russian shares of supply on the global market.

In terms of chemical-related production in the EU and its dependence on Russia, eight out of ten IKEM companies envisage that in the short term, up to a year, it will be possible to find replacement supplies for the raw materials/input goods from the three countries involved in the war. This is likely to be partly dependent on the stocks available in the EU and the rest of the world in relation to specific raw materials/input goods. For example, a number of EU countries have replenished their gas stores in order to build up a buffer ahead of closed off/cut back supplies of Russian gas.

In the medium term, between one and four years, however, the companies envisage increasing difficulties in finding replacement supplies for Russian raw materials/input goods.

Four out of ten companies in the Swedish chemical industry believe it will be difficult for chemical-related production to manage without Russian raw materials/input goods. In the longer term, however, more companies, 73 per cent, believe this will be possible, while 19 per cent say that they do not know.

TABLE 6. HAS THE COMPANY BEEN AFFECTED BY THE WAR IN UKRAINE THROUGH BROKEN SUPPLY CHAINS FROM RUSSIA, BELARUS AND/OR UKRAINE? MULTIPLE ANSWERS POSSIBLE.

Source: IKEM

	Plastics/rubber	Chemicals	Pharmaceuticals/ refineries	Total
Yes, we are experiencing direct effects of broken supply chains	38%	56%	57%	53%
Yes, we are experiencing indirect effects of broken supply chains	40%	15%	9%	17%
No, we have not been affected	21%	28%	34%	29%
Don't know	1%	0%	0%	0%

TABLE 7. IN YOUR OPINION, CAN CHEMICAL-RELATED PRODUCTION WITHIN THE EU MANAGE WITHOUT RAW MATERIALS AND INPUT GOODS FROM RUSSIA, BELARUS AND UKRAINE?

Source: IKEM

	In the short term	In the medium term (> 1 year)	In the long term (> 4 years)
Yes	79%	54%	73%
No	17%	40%	7%
Don't know	3%	5%	19%

IKEM's member companies operate across a broad range in the production of plastics, rubber, chemicals and pharmaceuticals. The total value added by the industry represents almost one-fifth of total industrial production in Sweden. The value of exports was SEK 352 billion in 2021. Unless otherwise indicated, all the responses reported from the economic survey are weighted according to the company's turnover. The economic summary is reported every quarter.



If you have any questions, please contact:
Carl Eckerdal, Chief Economist
070-497 11 98
carl.eckerdal@ikem.se

IKEM

Innovation and Chemical Industries in Sweden
Innovations- och kemiindustrierna i Sverige
Box 55915 | SE 102 16 Stockholm | Sweden
www.ikem.se