CHEMICAL INDUSTRIES ASSOCIATION

CIA Quarterly Economy Report 2024

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Executive summary

This report has two sections. The first is a CIA analysis of government data via the Office for National Statistics (ONS). This section assesses the UK chemical industry's performance against that of the wider economy and is followed by a look at what challenges lay ahead. The second section presents the results and further analysis of our Q4 2023 Business Survey.

As we enter 2024, the global economy continues to grapple with international conflicts that exert pressure on global industries, while inflation in most major economies is still above the 2.0% target level. At the beginning of the year, most forecasters anticipated the UK to plunge into a recession. However, resilient consumer spending and robust international demand enabled the UK to avert this scenario, and 2023 GDP is estimated to have been around 0.3%.

The combination of high borrowing costs and weakened demand for goods had a negative effect on industrial production throughout 2022 and 2023. Given that chemicals serve as intermediate goods, meaning that they are used to manufacture other products, the downturn in industrial production directly affected chemical output. Consequently, 2023 marked one of the worst performing years on record for the sector.

The latest data published by the Office of National Statistics looks at GDP, production, trade, inflation, and labour market for 2023. In Q3, GDP contracted by 0.1% due to contractions across all sectors. In November, GDP expanded by 0.3% as a result of a 0.4% expansion of services' output. In 2022, UK chemical production fell by 4.7% and is estimated to have fallen by 8.5% in 2023, and it is currently 20.9% below pre-pandemic levels. Forecasts suggest that whilst 2024 will be a transition year for the sector, chemical output should expand by 3.5% in 2025.

The value of the UK chemical trade fell in the second quarter of 2023 as both exports and imports contracted. Nevertheless, in the year to November we exported roughly £65 billion worth of chemicals and remain the second largest manufacturing exporter of the UK.

Headline inflation decelerated from 10.1% in January 2023 to 4.0% in December 2023. We expect the Monetary Policy Committee to withhold cuts to interest rates until the second half of Q2, and their decision will likely be based on pay data and prices.

Chemical prices deflated for the eighth consecutive month due to lower energy prices and weakening demand. Input prices have been higher than output prices for almost two years, and their gap has almost doubled throughout 2023.

Turning to our survey, Q4 2023 marked the sixth consecutive quarter of contraction for the industry as sales fell with quicker than in Q3. Amid improvements in new orders, capacity utilisation, EU exports, and margins offer a glimmer of hope as we enter 2024.

Expectations over Q1 are more positive with over a third of respondents expecting to see higher sales, new orders, production levels, and capacity utilisation than in Q4 2023 . Further contractions are expected for slower moving variables, especially employee numbers and business investment. The Red Sea crisis is driving up the predicted cost of trade. Medium term estimates are more optimistic with over 60% of respondents expecting an increase of the previously mentioned variables. Nevertheless, with energy costs not expected to fall to pre-energy crisis levels, less than 40% of companies are expecting an increase of margins.

The main three challenges this quarter were 'weakening demand', ' labour cost increases', and 'labour shortages'. Labour and Freight related issues are expected to worsen in the short-term, whilst Raw Materials' ones to marginally improve. Whilst 'energy cost increases' was ranked fourth, members are vocal that current levels are uncompetitive by international standards.

The open-ended part of the survey uncovered that a fifth of respondents is experiencing maintenance issues due to contractors' shortages. The most common business priorities for 2024 concerned business growth through filling and building capacity, market expansions, and sales initiatives. It is worrying seeing 10% of members mentioning survival as their business priority as it highlights that whilst 2023 might have ended, the industry continues to struggle.

Lastly, we asked members if they were seeing signs of dumping and if it was negatively impacting their business. Whilst 44% of respondents said they were impacted by dumping, another 44% say they are either not seeing it or not being negatively impacted by it. Our trade specialist will address the issue with individual member companies and support them through any anti-dumping process.

Steve Elliott
Chief Executive
Chemical Industries Association

CHEMICAL INDUSTRIES ASSOCIATION

UK Chemical Sector Contraction Continues

GDP and Chemical production

Globally, 2023 was ambivalent, with the rise of AI boosting the US and Chinese economy, stronger than expected consumer spending in the US, India continuing to grow and hosting the G20, Germany entering recession due to the energy crisis, declarations of war in the middle east, continuing of the Russia-Ukraine conflict, and toughening of the economic and political environment in South America.

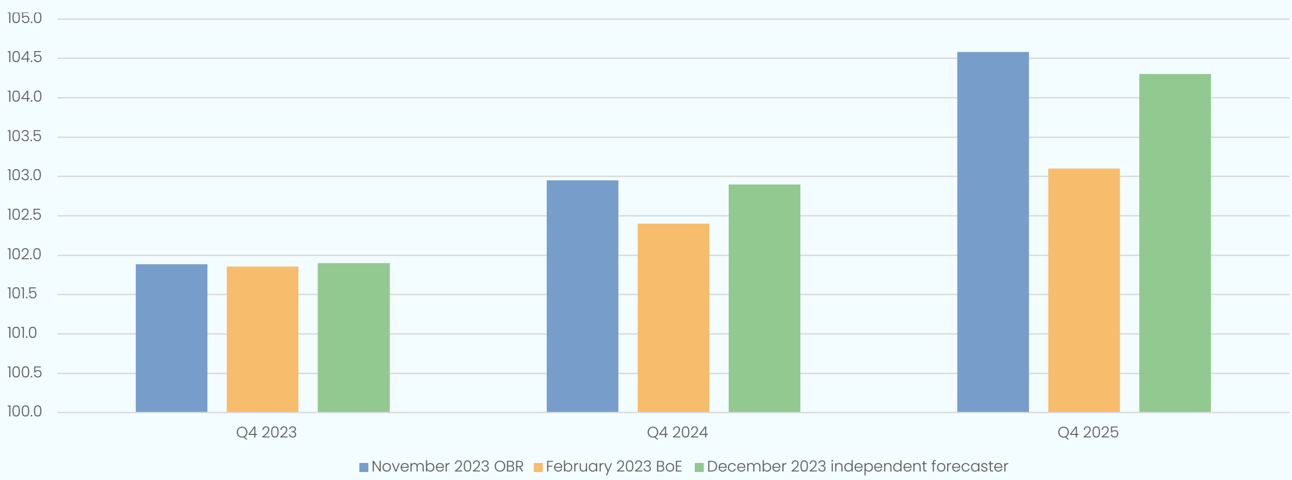
In the UK, 2023 was characterised by battling inflation through tight monetary policy, weakening demand for goods, workers' strikes, and inflation-driven pay negotiations, as well as the Coronation of King Charles III, National Insurance and Full Expensing tax cuts, progression of negotiations with the EU regarding BREXIT, and the avoidance of a recession.

Official data from the Office for National Statistics (ONS) shows that between January and November 2023, GDP contracted by less than 0.1%, significantly above the conservative estimates of -1.9% and -0.6% made, respectively, by the Bank of England (BoE) and Office for Budget Responsibility (OBR) in November 2022. Before the beginning of the year, most policymakers and economists expected the UK to enter a recession, but thanks to strong consumer demand for services and stronger than expected international trade, the country's GDP did not contract for two consecutive quarters.

Focusing on the data currently available for Q4, in October, GDP contracted by 0.3% because of weakening across three of the four sectors: Production (-1.3%), Services (-0.1%), and Construction (-0.4%). In November, the 0.4% expansion of Services' output drove a 0.3% expansion in GDP. With consumer spending always stronger in December, we expect December's data to show an amid expansion from November, ending the year slightly better than how it started.

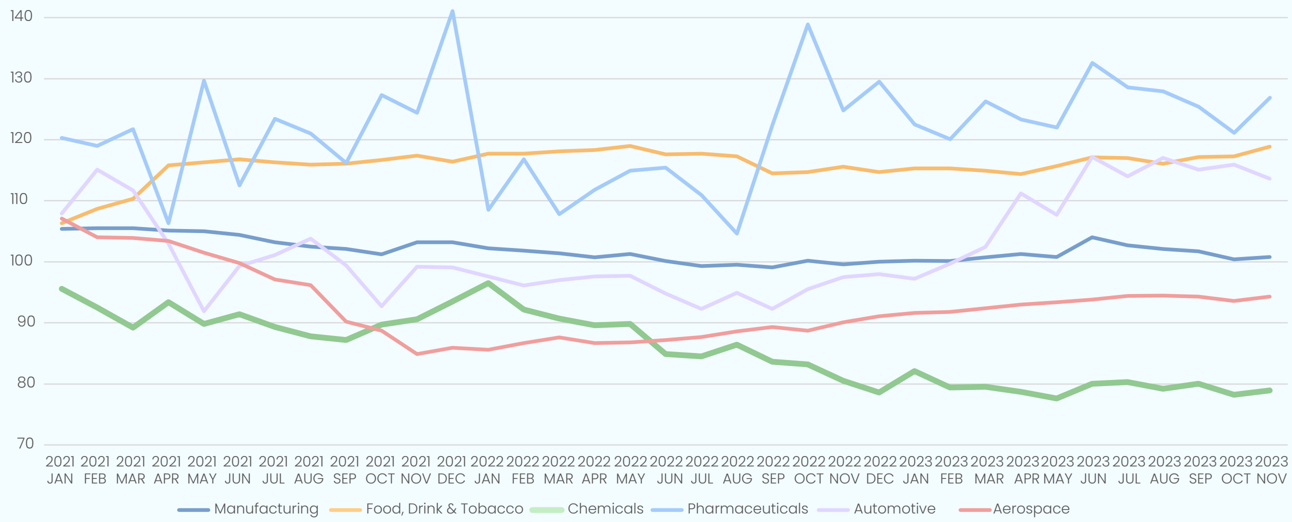
Given 2023's data and expected future trends, the UK is expected to skirt a recession in 2024, which will be characterised by alternating flat and small growth. With interest rates expected to ease in H1 2024 and inflation to reach the 2% around the same period, the economy should pick up in the second half of the year. Our independent forecaster estimates a 0.4% expansion in 2024 followed by a further +1.4% in 2025. The OBR after the Autumn Statement projected that the policies introduced in 2023, real GDP will grow by 1.0% in 2024 and by an additional 1.6% in 2025. The Bank of England, which is generally more conservative, expects real GDP not to change in 2024 and an amid 0.4% growth in 2025.

Graph 1: Real GDP forecasted level in Q4 2024 and Q4 2025 from the Office for Budget Responsibility, the Bank of England, and an Independent Economic Forecaster



Source: CIA analysis of OBR, BoE, and OxfordEconomics data

Graph 2: Index of Output of Manufacturing and the five biggest manufacturing industries from January 2021 to November 2023, 2019=100



Source: CIA analysis of ONS data

Graph 2 compares monthly index of production for the chemical industry to the UK's food and drink, pharmaceutical, automotive, aerospace industries, and general manufacturing sector. Food and Drink, Pharmaceuticals, Automotive and Aerospace industries along with the chemical industry are colloquially referred to as the 'Manufacturing five' or 'M5' industries. Indexes show contractions or expansion from a determined level, in this case each sector's 2019 average production level. Levels below 100 shows a contraction, whilst above 100 an expansion.

The **light blue line** shows the best performing sector since the pandemic, pharmaceutical manufacturing. Increased demand and focus on health care services during COVID-19 boosted investment and sales for pharmaceuticals whose production output in December 2021 and October 2022 was over 40% higher than pre-pandemic level. Given its dependency on the NHS, Pharmaceutical output is highly volatile and through 2023 it fluctuated between 20% and 30% higher than pre-pandemic.

The second best performing sector since the pandemic is Food, Drink & Tobacco manufacturing represented by the **orange line**. Due to the increased demand during the holidays, Food, Drink & Tobacco output increased in November to the highest level since May 2022 and is currently 17% higher than pre-pandemic. The key issue that the sector has faced in 2023 was weakening demand as high food inflation incentivised people to consumer cheaper products and increased production costs for manufacturers.

Automotive output, **purple line**, increased through 2023 after stagnation through 2022. In 2022 automotive manufacturers struggled with demand leading to excess inventory and high debt. Through 2023 and 2024 the key challenges identified for the sector are: more restrictive rules of origin with the EU, high interest rates increasing the cost of borrowing, and the relative competitive advantage of American and Chinese electric vehicles (EVs) brands. On the other hand, automotive was directly targeted by the £4.5bn investment into the Green Transition introduced by the Chancellor during the Autumn Statement, and demand has picked up especially for EVs.

The **red line** represents Aerospace's output. Similarly to automotive this sector struggled through 2022 but increase output in 2023, remaining 10.6% below the last pre-pandemic quarter. Aerospace was also one of the direct targets of the £4.5bn investment, so we expect output to continue growing through 2024 especially as air traffic returns to pre-pandemic levels.

Lastly, chemical output is represented by the **green line**. Since the second half of 2022, chemicals are the worst performing M5 sector, as in May 2023 chemical output level was the lowest since November 2016. The continue decline of output and low highest levels made 2023 the worst performing year for the industry since 2016. Since January 2023, chemical output has contracted by 4.0%, but by 8.5% when considering 2022's average level, and it is currently 20.9% below pre-pandemic levels. The main challenges for the sector were high energy prices and weakening demand, which impacted margins on both ends (sales and costs).

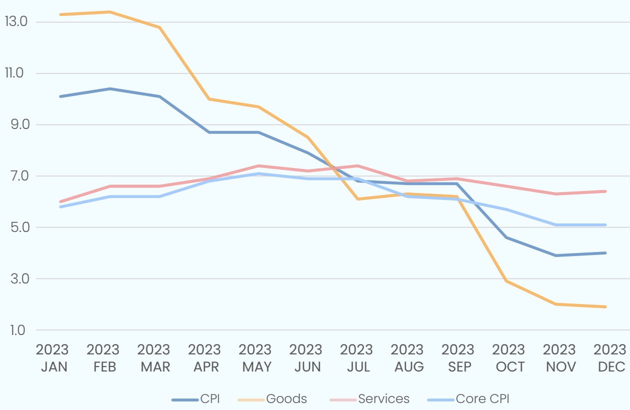
Our independent forecaster expects 2024 to be a transition year for the chemical industry as output will continue to stagnate resulting in year-on-year growth of 0.2%, 2025 and 2026 should be better years for the sector with forecasted growth of 3.5% and 4.1% respectively. The main driver for the growth are linked to pick up in demand and the opportunity represented by Net Zero and sustainable innovations.

Consumer Side Inflation

Steep price increases over the past three years originated the cost-of-living crisis. Higher cost of energy started with the reopening of the economy and were exacerbated by the Russian invasion of Ukraine. High production costs were transmitted onto consumers through higher retail prices which led the BoE to increase interest rates to disincentivise economic activity and keep the cost of living under control.

Graph 3 shows inflation of goods and services, headline inflation (CPI), and core CPI over 2023.

Graph 3:
CPI, core CPI, Goods, and Services inflation through 2023



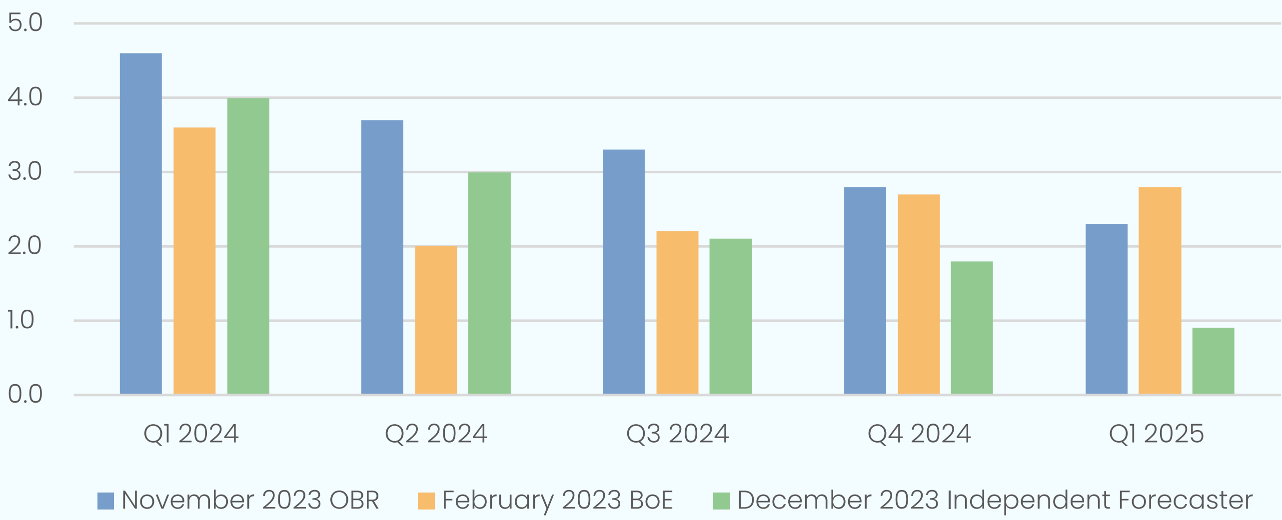
Source: CIA analysis of ONS data

The **orange line** shows the price of goods from January to December 2023. Good prices were heavily affected by the higher production costs linked to the energy crisis. As energy prices stabilised and demand for goods was substituted with demand for services, their inflation fell from 13.3% in January to 1.9% in December.

Services prices, **red line**, rose less steeply than goods prices but -especially for services that rely on goods, like restaurants- felt the pressure from higher costs and increased prices charged to consumers. Services inflation tends to be domestically generated and driven by higher costs, both in terms of cost of living and higher input costs.

The **light blue line** and **dark blue one** represent core CPI – which excludes direct impact of energy, food, alcohol, and tobacco- and CPI respectively. One of the reasons CPI decelerated quickly throughout the year, especially in Q4 2023, is the direct impact of energy. In Q4 2022, energy prices peaked, leading to higher inflation, this year thanks to a more reliable European energy market and relatively mild winter, as energy prices increased less than in 2022, resulting in decelerating inflation.

Graph 4: Inflation forecasts for 2024 and Q1 2025 from the Office for Budget Responsibility, the Bank of England, and an Independent Economic Forecaster



Source: CIA analysis of OBR, BoE, and OxfordEconomics data

The **above graph** shows forecasts over CPI inflation from three different entities: the OBR responsible for forecasting ahead of the Spring Budget and Autumn Statement, the BoE in charge of the UK monetary policy, and Oxford Economics our independent forecast provider. Since the BoE has the most recent forecast they are the ones more in line with current inflationary trends and they forecast inflation to reach the 2.0% target in Q2 but bounce back until Q4 2026 when it will settle below the 2.0% target level. Both Oxford Economics and OBR expect inflation to decelerate slower but not bounce back after reaching the target.

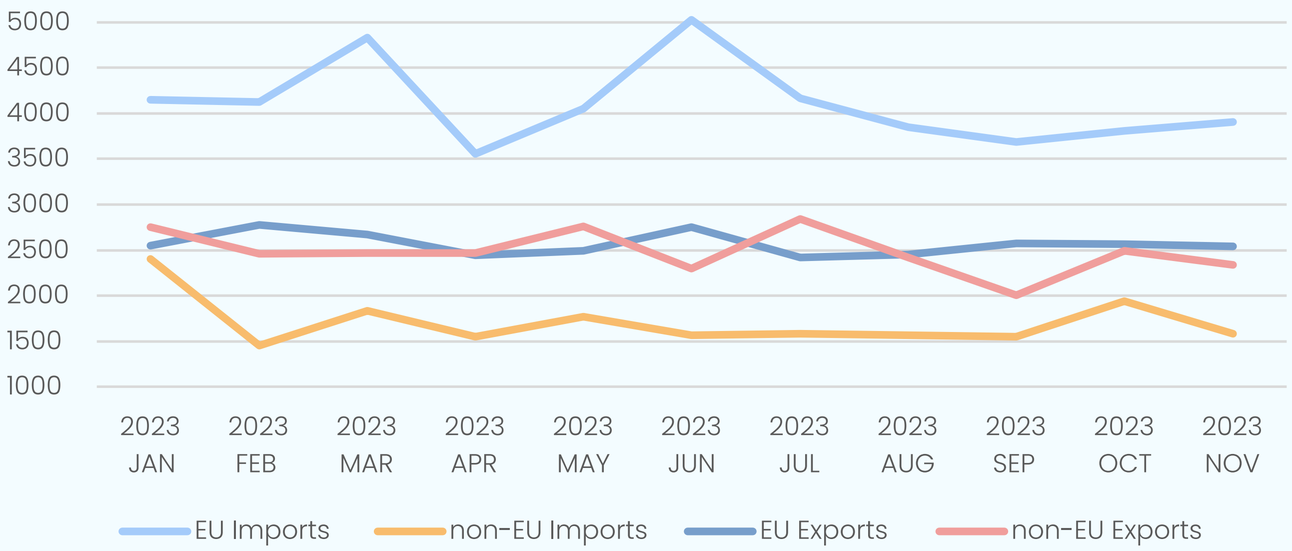
On the first of February, the Monetary Policy Committee decided to maintain interest rates at 5.25%. The factors that we identify having driven this decision are: increase of minimum wage from £10.42 to £11.44, general trend of growing salaries due to cost-of-living crisis, sticky core CPI, and the expectation of further tax cuts in the Spring Budget. We expect the Bank to start cutting interest rates towards the end of Q2.

Inflation remains above the 2.0% also for the US - 3.5% in December -, Germany - 3.7% -, France – 4.1% -, the Eurozone – 2.9% -. China continues to battle through a subdued domestic market and recorded inflation of 0.3% in December.

Trade

Alongside the publication of official GDP and production data, the ONS published the value of trade in the first half of the year. The value of chemical imports in Q3 2023 was £16.4bn, £1.1bn lower than in Q2 2023. Chemical exports in Q3 2023 were valued at £14.7bn, £0.5bn lower than in Q2 2023. Even if quarterly exports decreased, in the year to November the total value of UK chemical exports was above £65 billion. Nevertheless, due to the nature of chemical industry, the 6.5% drop in imports is not the result of higher domestic production, rather of industries that use chemicals as inputs slowing their productions.

Graph 5: Chemical imports and exports with EU and non - EU countries through 2023 in value terms (£ millions)



Source: CIA analysis of ONS data

Graph 5 represents chemical imports and exports towards EU and non-EU countries. The **two blue lines** represent trade flows with the EU and the **two orange lines** trade flows with non-EU countries. Exports are illustrated by the two **darker lines (dark blue** and **dark orange)** and imports are the two **lighter lines (light blue** and **light orange)**.

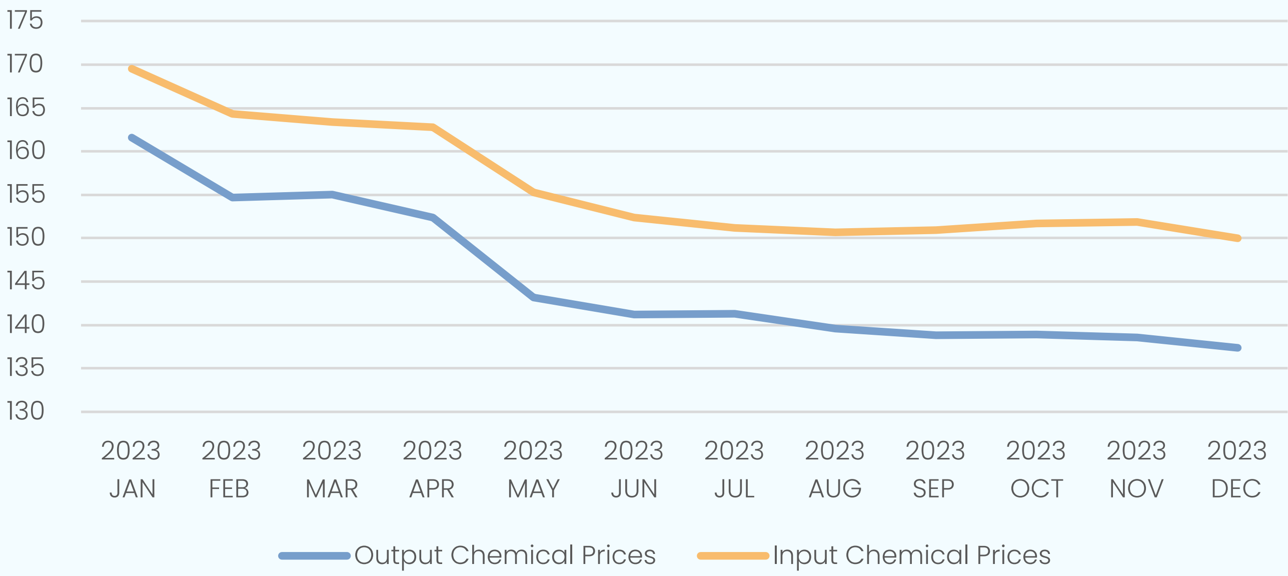
Focusing on imports first, the **light blue line** is consistently higher than the **light orange line** indicating that imports from EU countries are higher than imports from non-EU countries. Through summer imports from EU countries diminished by almost £1bn because of lower imports from Ireland and the Netherlands, but they increased marginally though October and November.

Moving on to exports, the **dark lines** are much closer together and they intersect multiples times indicating that the UK exports similar values of chemicals towards EU and non-EU countries. The **dark blue line** has remained roughly constant throughout 2023, since these numbers do not account for inflation it might indicate a slight intensification of trade in Q4. On the other hand, exports towards non-EU countries show more volatility and in November were lower than January.

Whilst exports to EU and non-EU countries are comparable, the UK remains highly dependent on the EU for chemicals and efforts to maintain a stable relationship with the continent's trading block is essential for the future of UK manufacturing.

Chemical prices

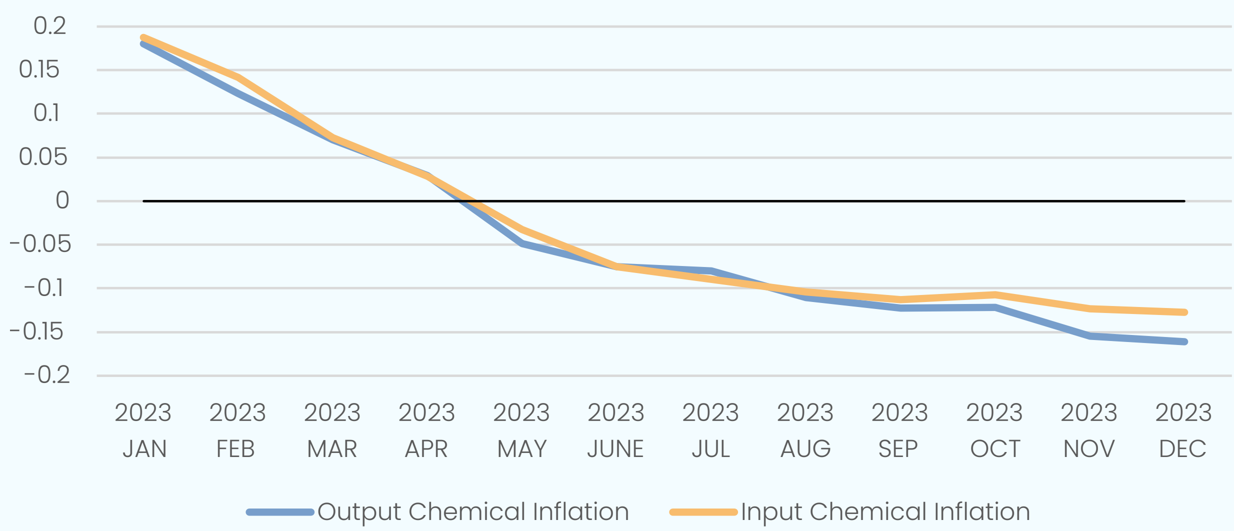
Graph 6.2: Chemical input and output price levels through 2023, 2019=100



Source: CIA analysis of ONS data

Graph 6.2 shows the growth rate of chemical input and output prices through 2023, where the **blue line** represents output prices and the **orange one** input ones. Both prices have been deflating since April 2023, meaning that input and output prices for chemicals were lower in 2023 than in 2022. The driving factor for the deflation of input prices was the stabilisation of energy costs, whilst for output prices is likely linked to low demand. Throughout the year chemical input prices have grown quicker (and shrunk slower) than chemical output prices as shown by the **orange line** being more or less consistently above the **blue one**. The increasing gap between the input and output prices is represented in **Graph 6.1**, where the **orange line** is constantly higher than the **blue one** indicating that input prices through the year were consistently higher than output ones. In January chemical input prices were 4.9% higher than output prices, in December 9.2% higher.

Graph 6.1: Growth rate of chemical input and output prices through 2023

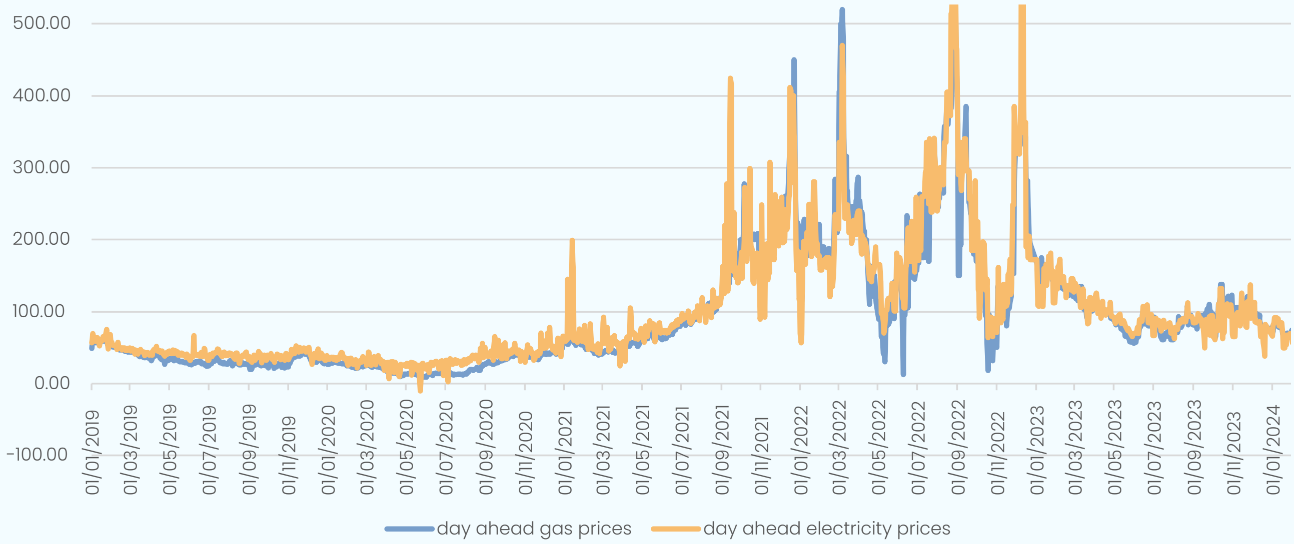


Source: CIA analysis of ONS data

Between December 2023 and December 2019 chemical input prices have increased by 34% and chemical output prices by 20%. With subdued demand for chemicals, these trends in input and output prices for chemical manufacturers put additional strain on margins.

Graph 7 displays the day-ahead wholesale gas and electricity prices in the UK over the last year. UK gas and electricity prices have settled at the lowest level since summer 2021 but they remain roughly two times higher than pre-pandemic and extremely uncompetitive on an international-base. Given the peaks reached in 2022 and volatility through 2023, 2024 should mark a relief for energy intensive industries as prices will settle at a new equilibrium, but with European LNG being more expensive than Russian pipeline gas, the new prices will be higher than the historic average.

Graph 7: Day ahead gas and electricity prices from January 2019 to February 2023

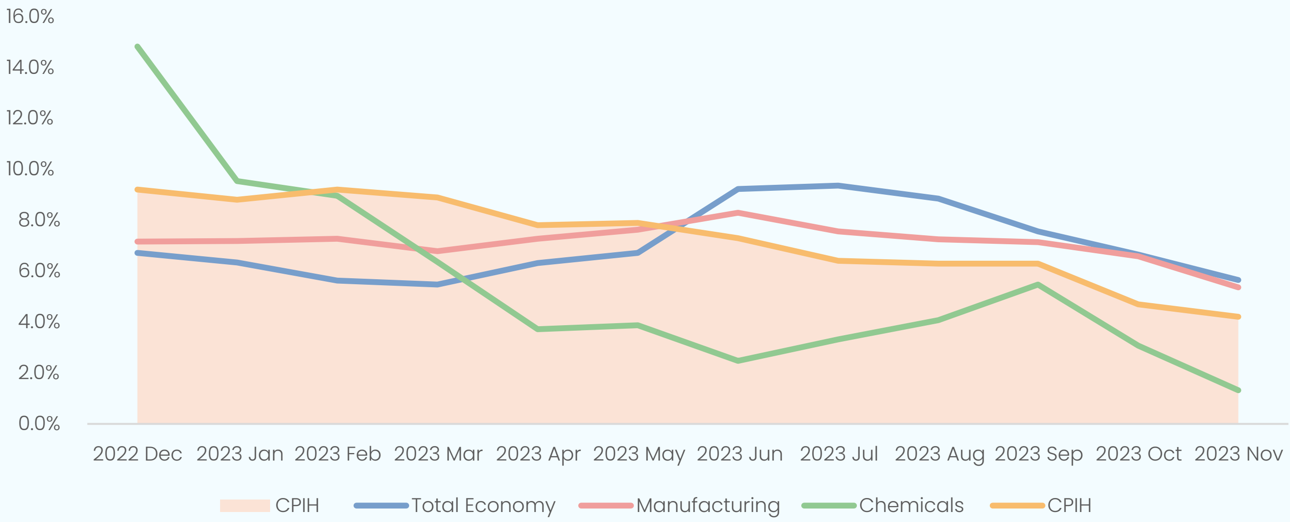


Source: Inspired PLC

Labour market

The labour market remains challenging especially for manufacturers. Brexit marked the loss of numerous European skilled and seasonal workers, and with COVID-19 there were further cuts to the labour force linked to higher inactivity rates due to long term illness and early retirements. Changes to the value of money -through inflation- and the diffusion of hybrid working further impacted workers for the manufacturing sector as numerous transferred to more flexible service-based fields like consulting, and insurances. We collected anecdotal evidence of member companies struggling to recruit for high skilled and specialised positions together with the increase of retention costs for experienced chemical engineers.

Graph 8: Growth rate of total economy, manufacturing, and chemical pay compared to CPIH inflation over the past 12 months



Source: CIA analysis of ONS data

Graph 8 shows the growth rate of pay in the economy, manufacturing sector, and chemical industry compared to CPIH inflation. CPIH inflation is considered to be the most accurate measure of the cost of living as it includes owner occupiers' housing costs.

The **orange line** indicates the level of CPIH inflation and any point within the **orange area** is below inflation, so resulted in real terms pay cuts.

The **blue and red line** shows that until the three month to June 2023, average pay growth rates in the general economy and manufacturing were below inflation. For general economy, latest data shows that regular pay grew by 5.8% and total pay (which includes bonuses) by 5.6%, with CPIH at 4.2%, these resulted in effective pay increases of 1.6% and 1.4%, respectively. For the manufacturing sector, in the three months to November regular pay grew by 6.0% and total pay (which includes bonuses) grew by 5.4%, resulting in effective pay increases of 1.8% and 1.2%.

The same cannot be said for chemical employees, whose pay is represented by the **green line**. Whilst in the last quarter of 2022 chemical pay increased significantly higher than inflation resulting in real terms pay increases, pay growth rates decreased throughout the first half of the year and reached 12 months low in the three months to November 2023. In that period, regular pay grew by 3.1% and total pay by 1.3%, resulting in effective pay cuts of 1.1% and 2.9%.

Rounding up the official data

Last year continued to be challenging for the industry as chemical output fell to 2016's levels. The UK, on the other hand, performed significantly above expectations and skirted entering a recession, contrarily to what forecasted at the beginning of the year. Most recent forecasts and estimates suggest that the UK GDP has grown by 0.4% in 2023, in 2024 the forecasted growth is between 0.5% and 1.0%, and in 2025 between -0.1% and 1.5% but more likely above 1.0%. Chemical output is expected to have contracted by 8.5% in 2023, 2024 is likely to be a transition year with a mere 0.2% growth leading to a more significant growth of 3.5% in 2025.

In 2023 headline inflation decelerated from 10.1% in January to 4.0% in December and is expected to reach the 2.0% target level in Q2 2024. Given the increase of minimum wage from the Chancellor and higher pay to mitigate the cost-of-living crisis from employees, the Bank of England has decided to maintain interest rates at 5.25% and cuts to the rate are not to be expected before their Q2 meetings.

Moving on to chemical trade, the UK remains highly reliant on the EU as over a third of imports come from member countries, but trade is intensifying with non-EU countries especially in terms of export.

Chemical prices have been deflating eight consecutive months due to lower energy prices and weakening demand. Input prices remain significantly higher than output prices and the gap has been increasing through the year.

The UK's labour market remains challenging and chemical businesses companies are experiencing difficulties recruiting, and pressure to increase remuneration to ensure retention of experienced workers. In the chemical industry, total pay -which includes bonuses- rose by 1.3% in the three months to November 2023 but resulted in a 2.9 % pay cut due to inflation. The 1.3% increase in total pay in the three months to November 2023 is linked to a baseline effect as last year numerous companies offered one-off payments due to inflation which were not necessary this year.

CHEMICAL INDUSTRIES ASSOCIATION

Survey results

At the close of each quarter, we survey member companies of the Association to get on-the-ground data about current trading conditions and views on what lies ahead. The information from this is incredibly useful in our work and we are grateful to all who respond.

The CIA's Q4 2023 Business Survey was live between the 10th and the 24th of January 2024. The survey received responses from around 50% of CIA membership. This edition of the survey was split into three sections. The first and second sections contained the standard industry performance and challenges & opportunities questions. In the third sections we asked respondents three questions focusing on shortage of contractor maintenance workers, business priority for the year, and unfair trade. In the industry performance section there were three questions that asked respondents whether the 19 variables listed below had increased, decreased or stayed the same in the fourth quarter of 2023 compared to the third quarter of 2023 and expectations for these variables in the first quarter of 2024 and 12 months' time.

Industry performance variables:

1. Total sales
2. Domestic sales
3. Exports
4. EU exports
5. Rest of the world exports
6. New orders
7. Production levels
8. Capacity utilisation
9. Employee numbers
10. R&D spend
11. Business investment
12. Your level of business optimism
13. Time to deliver
14. Raw material (input) prices
15. Cost of importing
16. Cost of exporting
17. Your energy costs
18. Finished goods (output) prices
19. Your company / site profit margins

When displaying the industry performance data diffusion indexes are used. These are an easy to interpret statistical tool that can be read in the same way as S&P Global's Purchasing Managers Indexes (PMIs), therefore any figure below 50 indicates a contraction, above 50 an expansion while 50 means it remained constant. To compute these indexes, we combined the percentage of respondents that reported experiencing an increase with half of those that reported experiencing no change.

Industry performance

Performance in fourth quarter

Table 1 displays the diffusion indexes for the 19 variables mentioned in 'about the survey' and the percentage of respondents that reported experiencing a decrease in the variables. The first column is the diffusion index for the performance in the fourth quarter, the second column contains the diffusion index for what was expected for the fourth quarter of 2023 when respondents were asked in the CIA's Q3 2023 Business Survey, the third column contains the diffusion index for the performance in the third quarter of 2023, and the final two columns contain the percentage of respondents that experienced a decrease of that variable in the current quarter and in the previous one. This allows comparisons to be made between the performance in the fourth quarter of 2023 compared to expectations and the prior quarter.

	Q4 Actual	Q4 Expected	Q3 Actual	Percentage that experienced a decrease in Q4 2023	Percentage that experienced a decrease in Q3 2023
Total sales	27	47	34	52%	47%
Domestic sales	30	45	27	50%	51%
Exports	33	46	35	46%	41%
EU exports	32	47	30	46%	45%
Rest of the world exports	31	46	38	46%	37%
New orders	35	48	29	40%	47%
Production levels	26	45	26	56%	57%
Capacity utilisation	30	44	22	50%	57%
Employee numbers	41	38	34	29%	39%
R&D spend	44	43	40	15%	20%
Business investment	36	43	46	31%	20%
Your level of business optimism	36	41	24	35%	57%
Time to deliver	46	46	43	15%	18%
Raw material (input) prices	41	45	40	35%	41%
Cost of importing	56	48	49	8%	12%
Cost of exporting	58	51	50	4%	10%
Your energy costs	46	67	44	27%	33%
Finished goods (output) prices	49	45	39	25%	39%
Your company / site profit margins	34	36	24	42%	57%

Source: CIA Q4 2023 Business Survey

Key take away.

2023 ended on a sour note for our members as sales diminished for over 50% of respondents and capacity utilisation was lower than in Q3, leading to lower margins. Modest increase in new orders numbers brings a shed of positivity.

The past two years were tough for chemical manufacturers and since Q3 2022 our surveys have reported contractions across the board, the last quarter of the year with 52% respondents reporting lower sales than in Q3 was no different. This contraction was once again driven by lower domestic sales, which have been contracting more than exports since Q2 2023, even though in Q4 less companies reported a decrease than in Q3. EU exports show early signs of recovery as they increased more than rest-of-the-world export, unlike in the past two CIA Business Surveys. With more than a third of respondents reporting higher new orders than in Q3, this variable is another sign that we are approaching the bottom of the cycle. Capacity utilisation remains in contractionary territory but with 7% less companies reporting a decrease than in Q3 it indicates that whilst we might be approaching the bottom of the cycle, the recovery has not started yet.

Six consecutive quarters of contracting sales and tight margins are impacting slower moving variables. In Q3, 39% of respondents reported lower employee numbers, that percentage has decreased to 29% in Q4 indicating less retirements and redundancy programmes. R&D spending also remain in contractionary territory but marginally improved from Q3 as 5% less respondents recorded a decrease. Lastly, business investment deteriorated at the quickest rate of the year with 31% respondents reporting a decrease and the lowest index value on record.

Costs remained vastly unchanged as majority of responses indicated unchanged cost of importing, exporting and energy, nevertheless more respondents experienced an increase in the cost of trading than in Q3. Regarding energy costs, they have also mildly increased from Q3 despite remaining substantially lower than last year. The only variable that outperformed expectations was output prices which can be considered an early sign of recovery of demand.

Expectations on margins were fairly accurate, whilst margins remain in heavy contractionary territory with an index of 34, less companies reported a decrease than in Q3, this is likely the result of lower business investment and cost management initiatives rather than better operating conditions and stronger sales.

Expectations for the first quarter for 2024

Table 2 displays the diffusion indexes for what is expected for each of the 19 variables in the first quarter of 2024 and the percentage of respondents that expects to see an increase. The discrepancy observed between 'Q1 expected' index values and 'percentage that expects an increase in Q1 2024' for variables like 'Domestic sales' and 'R&D spending' is primarily due to the fact that the majority of respondents anticipate no change in these specific variables so the index results upward skewed.

	Q1 Expected	Percentage that expects an increase in Q1 2024
Total sales	63	38%
Domestic sales	56	23%
Exports	58	25%
EU exports	59	29%
Rest of the world exports	57	25%
New orders	63	38%
Production levels	59	38%
Capacity utilisation	60	40%
Employee numbers	38	10%
R&D spend	47	6%
Business investment	42	13%
Your level of business optimism	52	27%
Time to deliver	52	13%
Raw material (input) prices	53	25%
Cost of importing	60	25%
Cost of exporting	61	25%
Your energy costs	54	25%
Finished goods (output) prices	53	25%
Your company / site profit margins	49	19%

Source: CIA Q4 2023 Business Survey

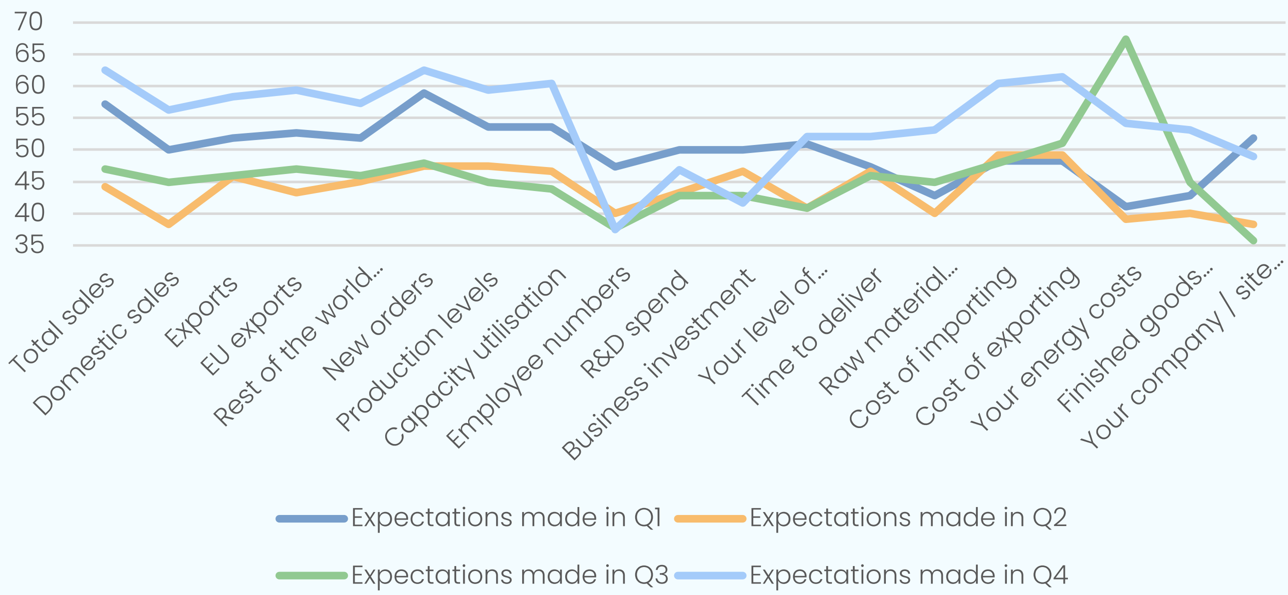
Key take away.

Expectations over most variables are optimistic. Sales, New orders, production levels, and capacity utilisation are expected to recover by over a third of respondents. Little change is expected over slower moving variables with more contractions in employment and investment.

Last quarter marked the end of one of the toughest years on record for the industry, whilst operating conditions are not expected to radically improve in Q1 2024, respondents are optimistic regarding total sales, new orders, production levels, and capacity utilisation. Domestic and international demand are expected to pick up by roughly 24% of respondents, with international sales driven by increases of EU exports, likely linked to expectations of a recovery of German industrial production boosting EU demand. Even if 40% of respondents expects production levels and capacity utilisation to increase from Q4's levels, almost 20% expects further deterioration, moreover 35% of respondents expects to see further deterioration of employee numbers and 30% lower business investment.

Business optimism remains subdued and cost of trade is expected to increases due to the Red Sea crisis. An index of 49 for margins shows contraction and more members expect it to contract than to expand.

Graph 9: Expectations for the following quarter made through all of 2023's CIA Business Surveys



Source: CIA 2023 Business Surveys (Q1, Q2, Q3, and Q4)

Graph 9 shows quarterly expectations made throughout the year. The **light blue line** shows respondents expectations for Q1 2024 as expressed in Q4 2023, whilst the **green line** is expectations for Q4 2023 as expressed in Q3 2023. The graph shows that respondents were optimistic at the beginning of the year -**dark blue line**- but as the year continued expectations started to decrease. In Q2 and Q3 members showed similar levels of optimism regarding the next quarter, except for energy prices expectations made in Q3 where members expected to see a bigger increase (likely linked to higher demand of energy through winter and 2022's energy prices peaks). Expectations in Q4 are higher across most variables, except for employee numbers and business investment.

Expectations for twelve months' time

The data in **Table 3** is derived from members' expectations over the next 12 months, and due to the nature of the survey this data should be used as a gage of the sentiment of the industry rather than rigid forecasts. Like **Table 2**, this data contains an index that aims to describe if the variables will increase or decrease and the percentage of respondents that estimate an increase in the next 12 months. For this reason, any discrepancy between the index value and the percentage of respondents that expects to see an increase, is linked to the respondents who do not expect any change which result in upward skewing of the index.

	12 months time	Percentage that expects an increase in 12 months time
Total sales	76	38%
Domestic sales	71	23%
Exports	76	25%
EU exports	76	29%
Rest of the world exports	71	25%
New orders	74	38%
Production levels	75	38%
Capacity utilisation	75	40%
Employee numbers	42	10%
R&D spend	47	6%
Business investment	48	13%
Your level of business optimism	65	27%
Time to deliver	46	13%
Raw material (input) prices	52	25%
Cost of importing	60	25%
Cost of exporting	58	25%
Your energy costs	44	25%
Finished goods (output) prices	58	25%
Your company / site profit margins	60	19%

Source: CIA Q4 2023 Business Survey

Key take away.

Over two thirds of respondents expect higher sales driven by higher exports, new orders, and domestic sales. Expectations over slower moving variables remain more conservative with 35% of respondents still expecting lower employee numbers. Margins are likely to take longer to recover with only 40% of respondents expecting an increase.

After six consecutive quarters of contraction and chemical output levels reported by the ONS, it is not surprising to see relatively high levels of optimism from respondents regarding operating conditions in 12 months' time. Even if this optimism might be rooted in a baseline effect and the assumption that we have reached the bottom of the cycle.

Over 60% of members expects to see improvements in sales, new orders, production levels, and capacity utilisation. Sales are expected to increase due to higher EU exports and new orders. Optimism for slower moving variables (employment numbers, R&D spending, and business investment) remains subdued with less than 25% of respondents expecting an increase. This suggests that whilst operating conditions are expected to improve, the industry remains sceptical on their position in 12 months' time.

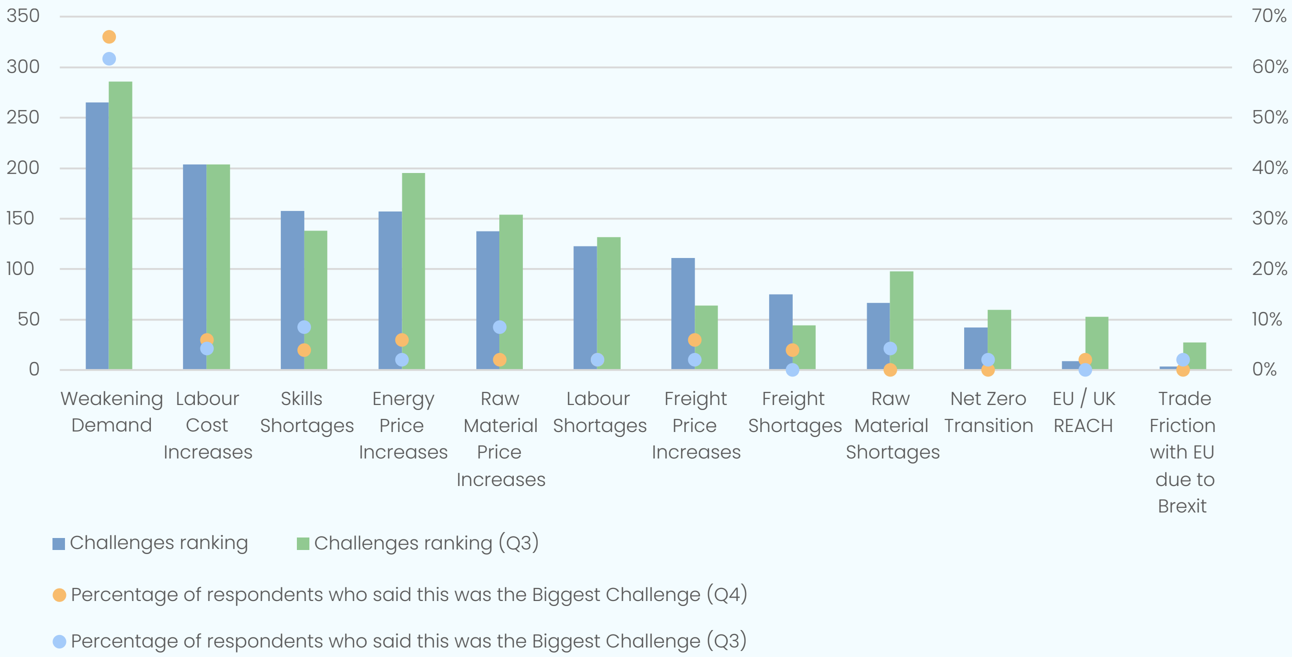
Input prices are expected to increase, whilst energy prices are not expected to increase any further. Less than 25% of respondents expects to experience lower energy prices in 12 months' time, given the current internationally uncompetitive level of energy prices in the UK absence of further energy price falls would cause long term productivity losses.

Due to high energy prices and other input costs, margins are expected to recover by 40% of respondents, whilst the remainder 60% believes that either they will not change or will contract.

Challenges and Opportunities

The second section of the CIA's Q4 Business Survey focused in more detail on the challenges faced by members and the opportunities that they identify. The first question in this section asked respondents to rank 13 challenges faced by the industry from greatest to smallest with '1' signalling the greatest issue and '13' the smallest.

Graph 10: CIA Q4 2023 Business Survey



Source: CIA Q4 2023 Business Survey

In CIA Q2 Business Survey we added 'weakening demand' as one of the challenges and it ranked first for 58% of respondents. In Q4 'weakening demand' remains the number one challenge for 66% of respondents, followed by 'labour cost increases' and 'skills shortages'. In **graph 10**, the **orange** and **blue dots** show the percentage of respondents that ranked each issue as their main one in Q4 and Q3' Surveys, respectively. The percentage of respondents who ranked 'weakening demand' as their core issue increased across the quarter, as did the ones that ranked ' energy price increases', 'freight price increases', and 'freight shortages'.

Whilst energy price increases are the primary concern for only 6% of respondents, during conversations with member companies there were numerous mentions of how internationally uncompetitive energy prices are impacting costs as well as investment. This implies that while energy prices may not be projected to rise, the existing levels still place the industry at a disadvantage. Therefore, it is crucial for both us (CIA) to persist in our efforts to secure more affordable and consistent energy costs for industrial sectors.

Even if inflationary hikes may have come to an end, labour costs remains a significant challenge for our sector and it is the main challenge for 6% of respondents. One of the main contributors to increasing labour expenses is retention. Because of skills shortages, chemical companies find themselves in competition with each other to retain talented and experienced chemical engineers, thereby driving up retention costs.

The 'smallest' challenges still pose a serious threat to the industry in the mid-to-long term. They however are not being felt as acutely as low demand, and labour frictions. It is therefore important that these challenges, including REACH, the net zero transition, and trade friction with the EU, are not underestimated.

Members were also vocal about other challenges that were not mentioned in the survey, such as: change of carbon legislation impacting trade with the EU, and global over supply pushing down output prices.

The next question asked respondents whether the 13 challenges from the previous question were improving, worsening, or remaining unchanged. **Table 4** displays the diffusion indexes of the answers with figures above 50 indicating an improvement, below 50 worsening, and 50 equals no change, and the percentage of respondents that expects a worsening in the near-by future.

	Index	**Percentage that expects this challenge to worsen**
Weakening Demand	38	36%
Labour cost increases	26	60%
Skills shortage (available labour not matching vacancies)	44	17%
Energy price increases	54	26%
Raw material price increases	51	28%
Labour shortages	48	13%
Freight price increases	36	40%
Freight shortages	38	30%
Raw material shortages	59	11%
Net Zero transition	44	17%
EU / UK REACH	46	9%
Trade friction with EU due to Brexit	52	0%

Source: CIA Q4 2023 Business Survey

'Weakening demand' and 'labour cost increases' are generally expected to worsen. Whilst 'energy price increases', 'raw material price increases' and 'raw material shortages' are expected to mildly improve even if over a fifth of respondents still expects them to worsen. Freight related issues shows an interesting pattern as for the first time most respondents expect them to worsen as the year progresses, likely related to the ongoing Red Sea crisis.

International lack of competitiveness of the Net Zero framework has also led 17% of respondents to expect the transition to become a bigger challenge, especially as the government is failing to establish a cohesive and long-term Industrial Strategy to attract foreign Investment. This is especially challenging for CIA members whose Head Quarters are overseas who have noticed a decrease in investment since other international government established more pro-industry legislations.

Moving onto opportunities, the most recurrent themes were:

1) **Innovations –** digitalisation, hydrogen and sustainable innovations, improved efficiency, and development of new products.

2) **Supply disruptions and Red Sea issues** are increasing demand for certain domestically produced chemicals.

3) **Acquisitions.**

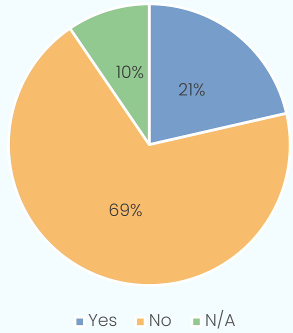
Open-ended questions

The final part of the survey asked members three open-ended questions.

In the first question we asked members if their business was experiencing any maintenance issue due to contractor workforce shortages.

During conversations with member companies, we were informed that several sites are experiencing maintenance issues due to contractor workforce shortages. For this reason, we asked a question regarding this issue on the Business Survey. The **blue slice** on **Graph 11** shows that slightly less than a fifth of respondents are impacted by this issue, whilst over two thirds are not experiencing such difficulties – **orange slice** -. Given these findings we are working closely with government on delivering a better suited VISA system.

Graph 11: Is your business experiencing any maintenance issues due to contractor workforce shortages?



Source: CIA Q4 2023 Business Survey

The second question asked members which was their business priority for the year ahead.

Majority of respondents mentioned some type of business growth as their priority for the year ahead, with volume growth, filling and building capacity, and new market expansion as the three most common types of growth. Innovation of products, infrastructure, environment protection, and net zero were mentioned by 19% of respondents.

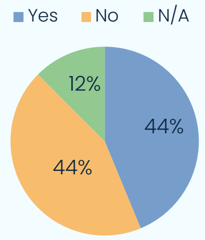
With 17% of responses mentioning cost control and 10% survival, the CIA notices that even if expectations for Q1 2024 and 12-months time are more optimistic the UK chemical sector has undergone two extremely tough years and many companies are sceptical about demand picking back up.

business growth	23%
survival	10%
cost control (fixed and variable costs)	17%
innovation (products, infrastructure, environment protection, net zero)	19%
profit restoration	8%
sales volume (sales initiatives, back to 2022 levels)	15%
safety	6%
development of people	2%

Source: CIA Q4 2023 Business Survey

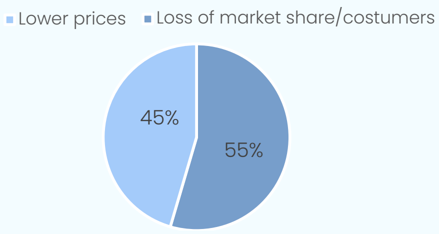
The last question in the survey focused on unfair trade experienced from foreign countries. We initially asked members if their business was negatively impacted by unfair trade (dumping) from foreign countries, if respondents selected 'YES' then they were asked how is dumping impacting their business and if they could identify from which country the products were coming from, if they responded 'NO' they were asked an open-ended question to elaborate on why they are not experiencing dumping.

Graph 13.1: To your knowledge is your business being negatively impacted by unfair trade (dumping) from unfair trade (dumping) from foreign chemical producers?



Source: CIA Q4 2023 Business Survey

Graph 13.2:
Yes - How is this impacting your business?

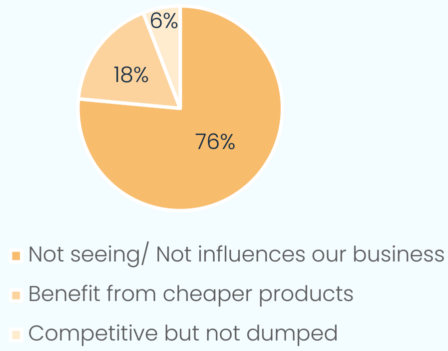


Source: CIA Q4 2023 Business Survey

The first question split our respondents as 44% reported being negatively impacted by unfair trade, and 44% did not, with the remainder 12% which preferred not to comment.

Of the respondents that are being negatively impacted by unfair trade, 55% has had to lower their prices and 45% lost some market share or costumers. When asked if they were able to identify from which country the cheap imports originated, 95% mentioned Asian countries.

Graph 13.3:
No - Why is this not negatively impacting your business?



Source: CIA Q4 2023 Business Survey

We asked respondents that were not negatively impacted why that was, 76% said that their business segment was not susceptible to the issue, either because they produce design chemicals, or because their products are difficult to transport on long distances. 18% of responses mentioned that the affordability of raw materials from foreign producers benefits their business model, whilst 6% noted cheap imports negatively impacting their business but they are not technically being dumped.

A key takeaway from the discussion with members is that other countries have some significant competitive advantages that enable them to sell the same chemicals we produce in the UK at much lower prices. Thus even in the absence of dumping, UK chemical producers have to decrease their output prices, to ensure international and domestic sales.

It is worth understanding that Dumping happens when goods are imported into a country and sold at a price that is below their 'normal value' in the country they are exported from. An anti-dumping remedy might then be needed if the dumping causes or threatens material injury to a domestic industry or makes it more difficult for one to be established. The process of proving that dumping is occurring can be lengthy and expensive to prove. The UK's Trade Remedies Authority would use a dumping margin and an injury margin to set anti-dumping duties where they are needed. A dumping margin is the difference between the export price and the normal value of the goods being dumped, described as a percentage of the export price. Countervailing investigations (which relate to subsidised goods) assess whether subsidised imports are causing material injury to a domestic industry. A subsidy exists if there is either a financial contribution by a foreign authority which confers a benefit on the recipient (usually an industry or business manufacturing goods), or a form of income or price support received from a foreign authority which confers a benefit on the recipient, this usually relates to a subsidy in the cost of energy in the production of chemicals.

Our trade specialist, Ian Cranshaw, was put in contact with companies that were keen to explore further whether the competition they face is deemed to be fair under current World Trade Organisation (WTO) rules.

Key takeaways from the survey

Q4 Business Survey marked the six quarter in a row of falling sales, exports, and new orders. Sales fell at a quicker rate than in Q3, but domestic demand, EU exports, and capacity utilisation showed marginal improvement. Slower moving variables were affected by the consecutive quarters of contraction and employment contracted for the third consecutive quarter, whilst business investment reached the lowest level on record.

Looking ahead to the first quarter of 2024, respondents are more optimistic as they expect higher sales driven by EU exports and a pick-up of production levels and new orders. The ongoing red sea crisis is increasing the expected cost of trade, whilst energy prices are expected to remain vastly unchanged. With high energy and raw materials costs, respondents are not expecting an improvement of margins. The outlook is more positive in 12 months as over 60% of respondents expects higher sales, new orders, production levels, and capacity utilisation. Yet, estimations over employment, business investment and margins still show contractions.

The main three challenges for the sector are ‘weakening demand’, ‘labour cost increases’, and ‘skills shortage’. Whilst energy cost increases were ranked fourth, during conversations with members it was highlighted that current levels are extremely uncompetitive by international standards and double what they were before the energy crisis.

Open ended questions uncovered that the CIA needs to continue engaging with government to deliver a VISA system that prevents contractor workforce shortages as they are impacting maintenance for almost a fifth of respondents. With 44% of companies being negatively impacted by unfair trade from foreign countries, our trade specialist is open to engage with members to explore this issue and the rest of the CIA team continues its job to support companies and raise industrial concerns over energy prices and green transition policies with Government.

CHEMICAL INDUSTRIES ASSOCIATION

Michela Borra

Economist
Chemical Industries Association, UK
Tel. +44(0) 20 7963 6761 Mob. +44 (0)7908 897013
Email: BorraM@cia.org.uk

Simon Marsh

Director of Communications
Chemical Industries Association, UK
Tel. +44 (0) 20 7963 6725 Mob. +44 (0)7951 389197
Email: MarshS@cia.org.uk