The sectors most affected by soaring energy prices

The effects of soaring energy prices are being felt by almost all companies. Aviation, shipping and chemical firms are directly impacted by higher energy prices. The food industry, travel agencies and hospitality are impacted by second-round effects. Corporate decision-makers have some tools available to mitigate the impact

Energy prices are likely to remain high for much longer, affecting some industries more than others

High energy prices are the new normal for business leaders

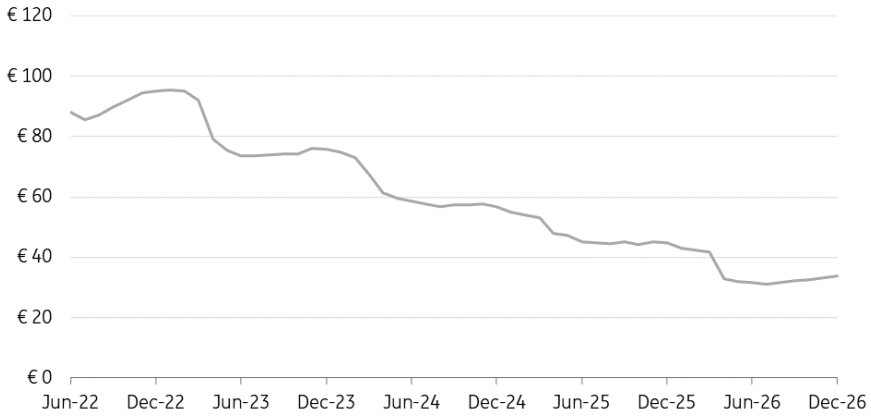
European energy markets became very tight and volatile in the autumn of 2021 due to concerns about limited gas reserves for the winter months. Luckily, Europe was saved by a relatively mild winter, but by the time concerns in the market diminished, Russia invaded Ukraine. Energy markets have remained very volatile and tight with energy becoming part of the conflict. Europe has implemented a ban on coal and oil. In turn, Russia has reduced gas flows to the EU in several small steps that now amount to around 23 billion cubic metres (bcm), which is about 15% of the total Russian gas supply to the EU.

The implication for corporate decision-makers is that energy prices are likely to remain high for much longer. Gas prices are expected to stay above €70/MWh until 2023 and oil prices well above $80 until 2024. We first assessed the impact of high energy prices on sectors in our article The

ripple effects of soaring energy prices. This article provides an update.

Gas prices are expected to stay above €70/MWh until 2023

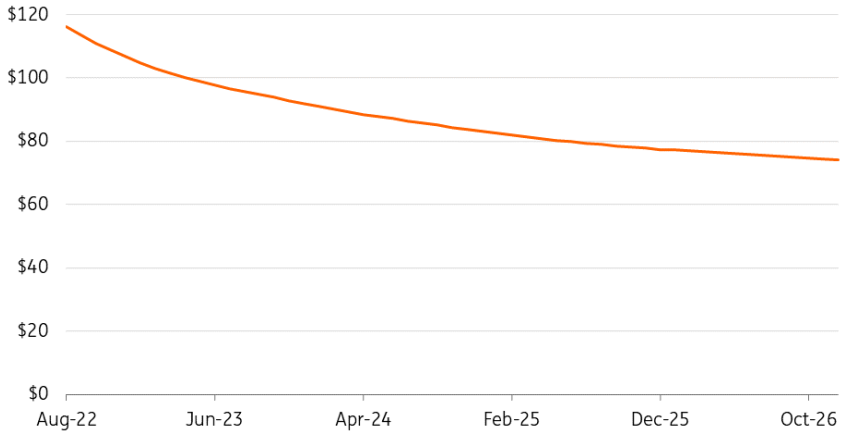
TTF natural gas futures for the Netherlands in €/MWh as of 2 June



Source: ING Research based on Refinitiv

Oil prices are expected to stay above $80 until 2024

ICE Brent oil price futures in $/barrel as of 2 June



Source: ING Research based on Refinitiv

First and second-round impacts of high energy prices

Higher energy prices can impact companies in many ways. The immediate impact is through higher costs from rising energy prices (first-round impact).

In the new normal, where energy prices are likely to stay high for at least the next two years, there will be second-round effects too. Energy-intensive companies pass on higher energy prices to their clients in varying degrees. As a result, clients are also confronted with higher costs. The production of energy-intensive products could also become unprofitable due to high energy prices. Producers might lower production levels which could create temporary shortages further up the supply chain.

In this article, we look at the impact of higher energy prices on companies in different sectors, in

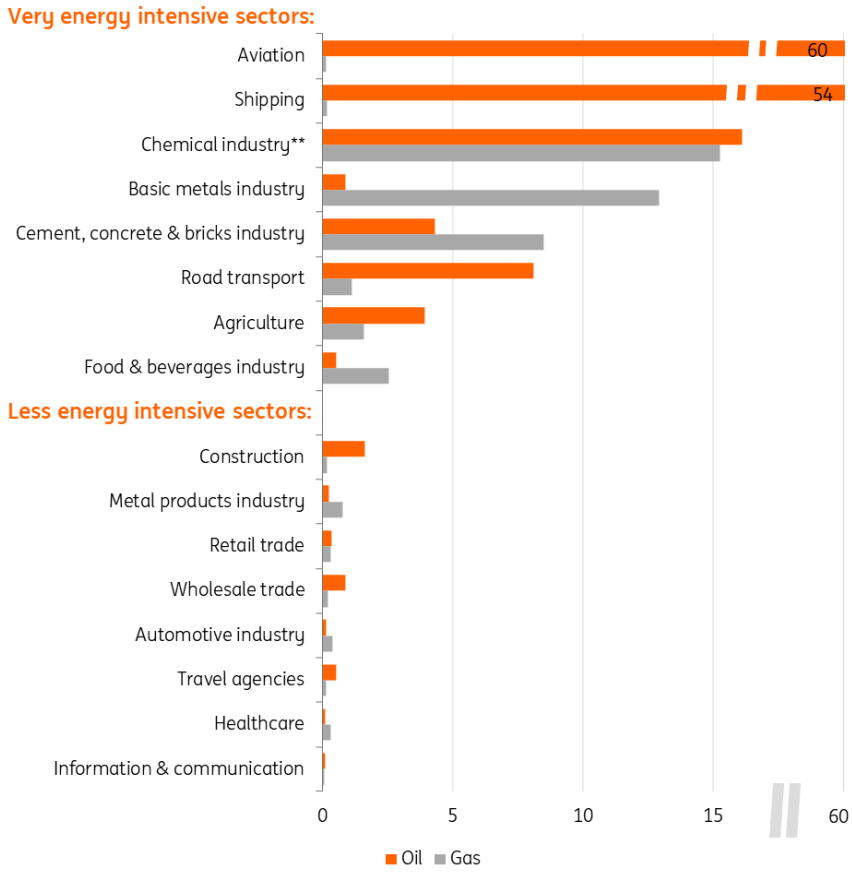
terms of both first and second-round price effects. We find that sectors are impacted differently according to their energy intensity and the type of energy they use. Aviation and shipping, for example, are the most energy-intensive sectors and are especially impacted by high oil prices.

Highest first-round effects in aviation and shipping

Most industrial sectors are energy-intensive, too, but they rely more on gas for heating and feedstock purposes, where prices have skyrocketed. There are also sectors that are less energy-intensive such as construction, trade and the automotive industry.

High energy use in aviation, shipping and chemical industries

Use of terrajoule energy per € 1 million Value added output, EU-27 in 2018*



Source: Eurostat, ING Research

Second-round effects could be substantial in the food and rubber industries, and for travel agencies and hospitality

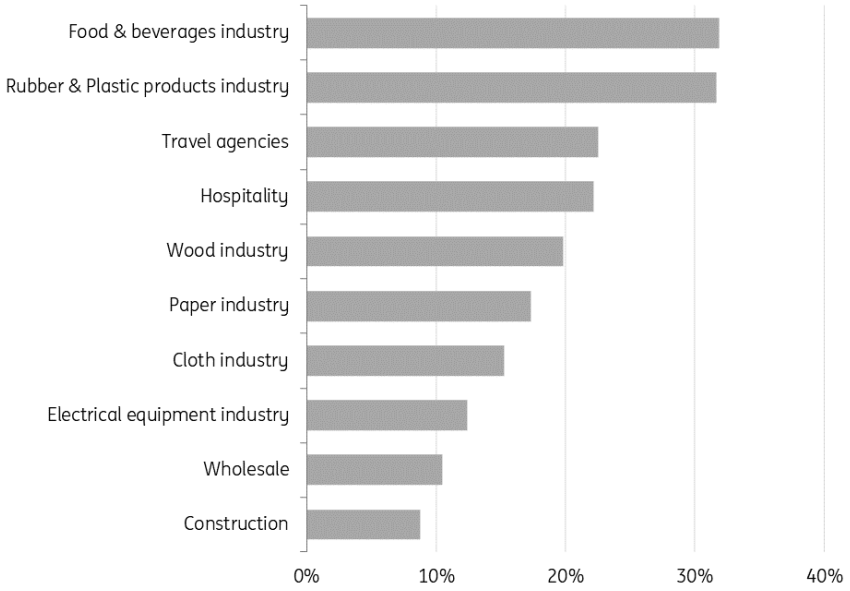
Companies with high oil and gas use are not the only ones dealing with soaring energy prices. High energy users will, to varying degrees, pass on high energy prices, albeit with some delay.

For instance, the food and beverage industry procures many products from agriculture. If farmers have to increase their prices due to higher energy costs, the food industry faces higher prices too.

Travel agencies also purchase a lot from energy-intensive sectors such as aviation and road transport. They are faced with more expensive plane tickets when airline carriers are forced to increase ticket prices due to higher kerosine costs.

Second-round effects of high energy prices are largest in the food and beverage industry

Procurement from very energy-intensive sectors (see graph above) as a share of total production, 2018*



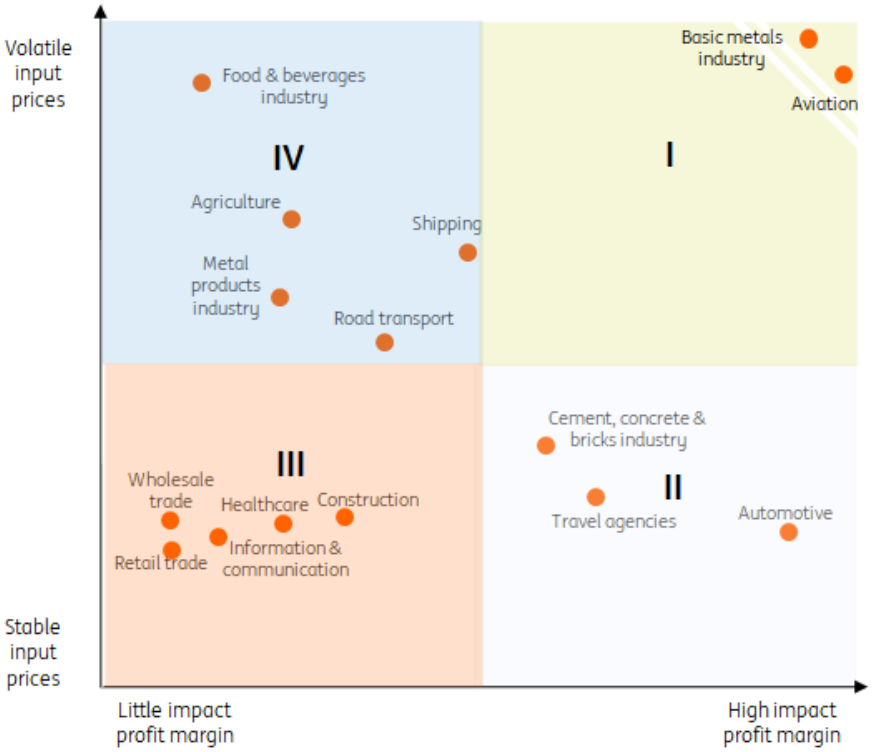
Source: Eurostat input-output tables, ING Research *Unweighted average of EU countries with data available. Note that the other part makes up for procurement of other materials, goods and services, wages and profit margins.

Four different ways in which sectors are impacted by high energy prices

Sectors that use a lot of energy are not by definition hit hard by rising energy prices. The impact depends on their profit margins and the ability to pass on price increases to clients. A previous article by us provides more detail on our methodology.

Sectors vary in the degree to which volatile input prices impact profit margins

Sector development in The Netherlands, 1997-2020*



Source: Eurostat input-output tables, ING Research *Based on statistical input-output tables. Volatility input prices: standard deviation of prices development Intermediate consumption Impact profit margins: standard deviation of calculated operating surplus Whol

Wholesale and healthcare sectors are the least impacted

In the left corner (Quadrant III) we find sectors that aren't that exposed to procurement price shocks. Consequently, their profit margins are quite stable as they aren't regularly faced with price increases. In this quadrant, we find the retail, healthcare, wholesale and construction sectors. We have seen that the latter two sectors are vulnerable to second-round effects but historic data reveals the impact is marginal.

The aviation and metals industries are most impacted

In Quadrant I, we find aviation and the basic metals industry. These sectors face high, volatile input prices and profit margins. The extreme energy intensity (see first graph) and the homogeneous product that is delivered in these sectors make it very hard to react to energy price fluctuations.

Profit margins in automotive, the cement industry and travel sector come under pressure due to slow pass-through

High profit margins are a cushion for higher procurement prices. It is often thought that market power gives companies the opportunity to pass through higher input prices. However, this is not generally the case. Often, these firms have already increased their sales prices to an optimum

level for themselves that clients are able (or willing) to pay and maximise their margins. As a result, they can't increase prices further without losing too many sales. Consequently, higher energy prices will harm the high profit margins of these companies with market power.

This is the case for many firms in the sectors in Quadrant II of the graph. For instance, building material companies of concrete, cement and bricks operate in a small local market. This is due to the characteristics of their products and materials. They are large and heavy and therefore difficult and costly to transport. This makes these local markets less competitive. The pass-through of energy price fluctuations is, therefore, slower as these companies already have relatively high output prices. Appreciating energy prices will therefore be mainly absorbed by a drop in their profit margin.

Profit margins in food, shipping, road transport and agriculture are less impacted due to price negotiations

In general, sectors with high competition will have firms with lower profit margins due to price battles in these markets. What will happen in these markets when companies are confronted with higher costs from soaring energy prices?

Due to the low profit margins, firms in these markets aren't able to swallow the higher procurement prices, otherwise they will be loss-making and in a worst-case scenario could potentially go bankrupt. There will be severe price negotiations, and in some cases suppliers might stop or threaten to stop delivering for a while, but eventually the price will go up. So, these companies don't have a huge profit cushion but they can and have to pass through higher procurement prices. The market output price will go up because all competitors are facing the same problem. These sectors are found in Quadrant IV, for example the food industry and road transport.

How companies can cope with energy price risks

As profit margins are often thin and many sectors are energy-intensive, firms have to closely follow oil and gas prices. There are several strategies that companies can follow to mitigate price fluctuations. All of them have their pros and cons and most companies make use of a combination of these strategies. Therefore, we should point out that the exposure, risk appetite and market situation for every single company is different:

Minimise energy use: By using energy-efficient production processes, the amount of energy will be diminished and the vulnerability to energy price hikes will diminish. Air carriers can, for instance, invest in more energy-efficient aeroplanes. This strategy however takes time and is less suitable to accommodate the immediate impact of high energy prices.

Use a price escalation clause: This makes it possible for firms to pass on energy price increases to the customer. This is mainly done in B2B markets. Price clauses with private consumers (B2C) are more difficult to achieve and therefore not common.

Directly procure inputs: Firms can directly procure oil, gas or power at the moment a sales deal is closed. This secures the calculated energy price at the moment of closing the deal. They can do this in two ways. First, they can agree on the price with a supplier and ensure delivery of the fuel at the moment needed in the production process. However, it must be said that suppliers are sometimes reluctant to lock in such long-term contracts as the price

risk is handed over to them. Second, firms can buy the needed energy directly and have it delivered directly and stored until needed. Yet, this results in (high) storage costs and a decrease in working capital.

Commodity futures: If the above strategies are not possible, a hedge with a commodity future is an option. However, futures are complicated financial products which have to be fully understood and constantly monitored.

Corporate decision-makers face a new normal. Energy prices are likely to stay high for much longer. Both gas and oil markets are extremely tight and future prices indicate no return to the low energy prices of recent years any time soon. Our analysis shows that the impact of high energy prices differs per sector. Irrespective of a company's sector, corporate decision-makers have some tools at their disposal to mitigate the impact of high energy prices.

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