Since the health crisis, fluctuations in corporate margin rates have been due mainly to the energy and transport services branches

On average over 2024, the margin rate of non-financial corporations was a little more than one point above its pre-health crisis level, although this masked some significant disparities between branches of activity. This rise is due mainly to the energy and transport services branches, while the margin rate of other market branches (excluding financial and real estate services) was very close to its 2019 level. These two branches have also contributed very significantly to quarterly fluctuations in margin rate since the health crisis, due to the volatility of the price of electricity and, to a lesser extent, the cost of sea freight. Indeed, in these two branches, variations in these two market prices are quickly passed on to export prices, ultimately affecting value added prices and therefore the margins of companies in these two branches. By mid-2025, the margin rate for these two branches is expected to decline, contributing -0.4 points to change in the margin rate for all companies. On the one hand, the fall in freight prices since autumn 2024 is likely to be passed on to the value added price of transport services in H1 2025. On the other hand, although electricity prices on the European market were still high at the beginning of 2025, thus boosting export prices in the energy branch and hence their margin rate, the value added price of this branch is, conversely, significantly affected by the drop in the regulated sales tariff in February 2025.

Gaston Vermersch

In 2024, the corporate margin rate was higher than its pre-health crisis level, but only due to the energy and transport services branches

In 2024, the margin rate of non-financial corporations (NFCs), although down over the year as a whole, was still +1.2 points higher than its pre-health crisis level (►**Sheet** Entreprises' earnings). However, this rise in the overall margin rate of NFCs masks some disparities between branches of activity. In order to break down the contributions of the different branches to change in margin rate, a corporate margin rate is reconstructed using branch accounts: the branches selected correspond to market branches, excluding financial and real estate activity.[1]

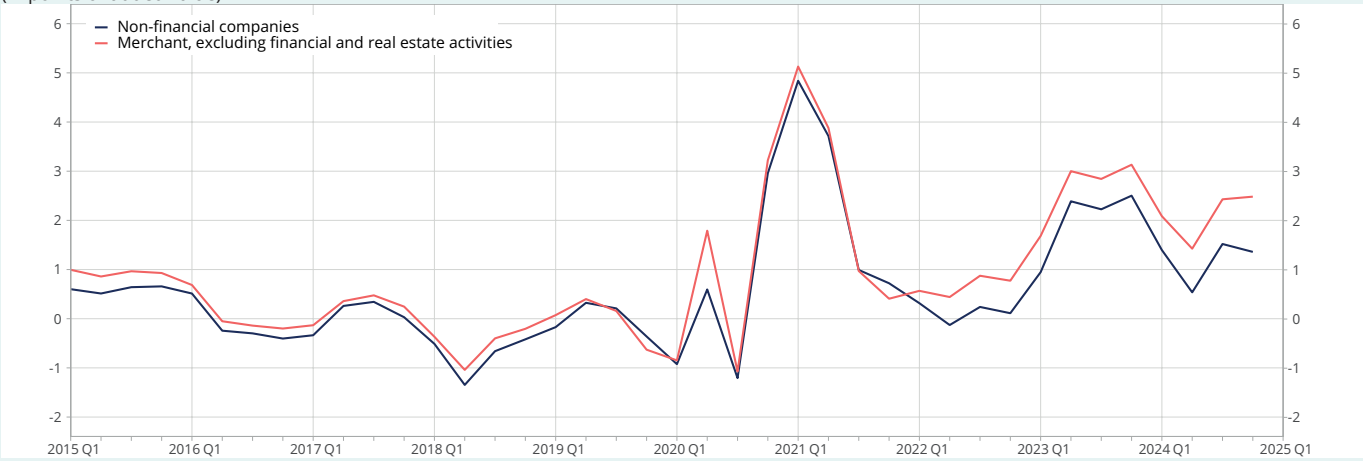
The difference between the sectoral margin rate of the NFCs and the margin rate reconstructed from the branch accounts was constant but small before the health crisis. It has increased slightly since 2022, but the quarter by quarter change remains very similar (►**Figure 1**).

Using this accounting approach, the contribution of each branch to change in the overall margin rate can be isolated and, in particular, a margin rate can be calculated that excludes the energy ("Energy, water, waste") and transport services branches. Thus, while the margin rate for all market branches excluding real estate and financial activities increased by 2.1 points on average in 2024 compared to 2019, it in fact remained virtually

1 The value added of the financial services branch is generated primarily by the institutional sector of financial corporations, whereas the real estate services branch (real estate agencies, social landlords) reflects mainly the production of a housing service by owner households. In addition, the non-market services branch (public administration, education, health, and medical and social care) is also not included among those branches likely to correspond to the non-financial corporation sector, as its value added is mainly generated by general government. However, this is an approximation. Part of the value added of real estate services and non-market services is generated by non-financial corporations. Conversely, not all of the value added in the market sector excluding financial and real estate activities is generated only by non-financial corporations. In particular, a change in the share of value added generated by sole proprietors is likely to affect the margin rate of these branches of activity (►**Laurent T. and Quévat B., 2022**).

►1. Change in the margin rate of non-financial corporations and market branches excluding financial and real estate activities, compared to 2019

(in points of added value)



Last point: Q4 2024.
How to read: in Q4 2024, the margin rate of NFCs increased by +1.4 points of value added, compared to the 2019 average.
Source: INSEE.

stable (+0.2 points) once these two branches are excluded (►**Figure 2**). Almost all of the increase in the corporate margin rate between 2019 and 2024 can therefore be attributed to these two branches.

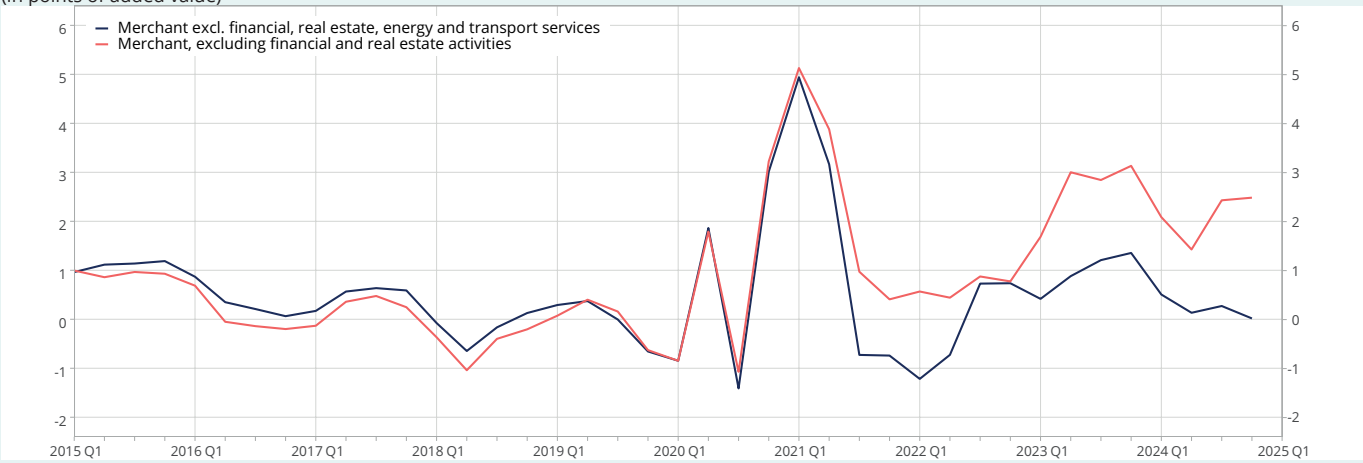
In fact, the margin rate increased sharply in the energy and transport services branches (►**Figure 3**). As the pandemic was coming to an end in 2021, bottlenecks appeared in supply chains (►**INSEE, 2022**), resulting in a sharp rise in the price of sea freight. As there are some major international transport companies among French resident units, this increase helped to raise the margin rate of all companies.

In a situation of strong geopolitical tensions in 2022, energy commodity prices surged. Rising energy prices increased the cost of intermediate consumptions for energy-intensive companies, thus affecting their value added, but at the same time increased the price of the value added of the energy branch (►**Vermersch G., 2024**). This surge in prices in 2022 nevertheless occurred in a national context of declining nuclear power production due to maintenance and inspection operations, but amplified by stress corrosion phenomena (►**Activity sheet box** in Economic Outlook published in July 2024). Prices fell but remained high in 2023 and 2024 as domestic production picked up: thus the margin rate of companies in the energy branch was significantly higher in 2024 (79.9%) than in 2019 (67.6%).

The energy and transport services branches account for most of the quarterly fluctuations in margin rate for all companies since 2022

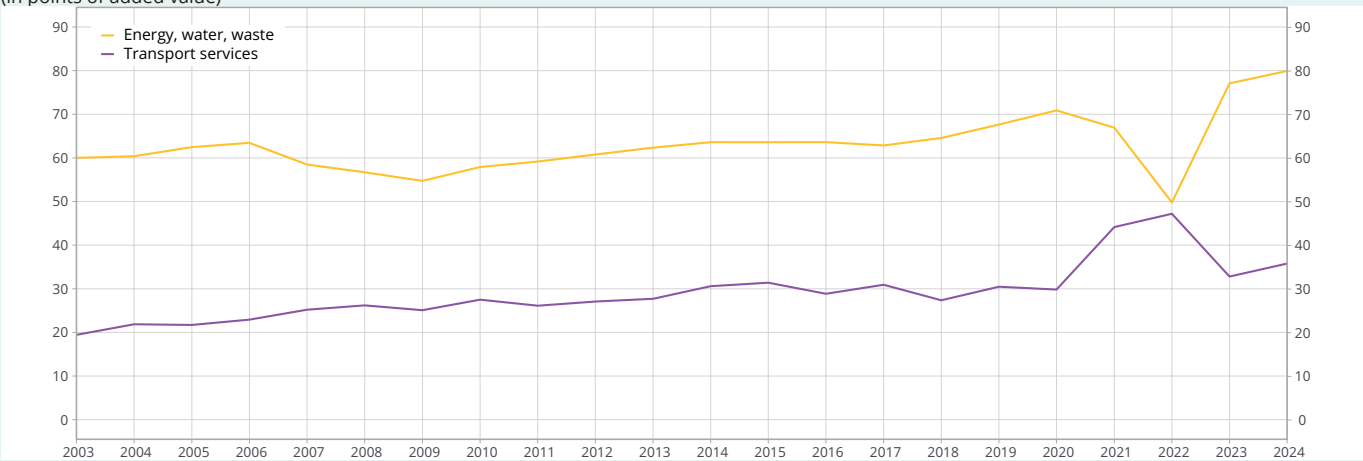
In addition to the margin rate level for all companies, the energy and transport services branches account for most of its quarterly variations since the health crisis. Thus, in 2021, the transport services margins contributed more than in the past to change in the overall margin rate, before falling in H2 2022 and finally rebounding in 2024, at a time of higher freight prices caused by attacks on commercial shipping in the Bab el-Mandeb Strait.

►2. Change in the margin rate of market branches excluding financial and real estate activities, with or without its energy and transport services component, compared to 2019
(in points of added value)



Last point: Q4 2024.
How to read it: in Q4 2024, the margin rate of market branches, excluding financial and real estate activities, and excluding the energy and transport services branches, was stable.
Source: INSEE.

►3. Annual margin rate of energy and transport services branches
(in points of added value)



How to read it: in 2024, the margin rate of the energy branch was 79.9%.
Source: INSEE.

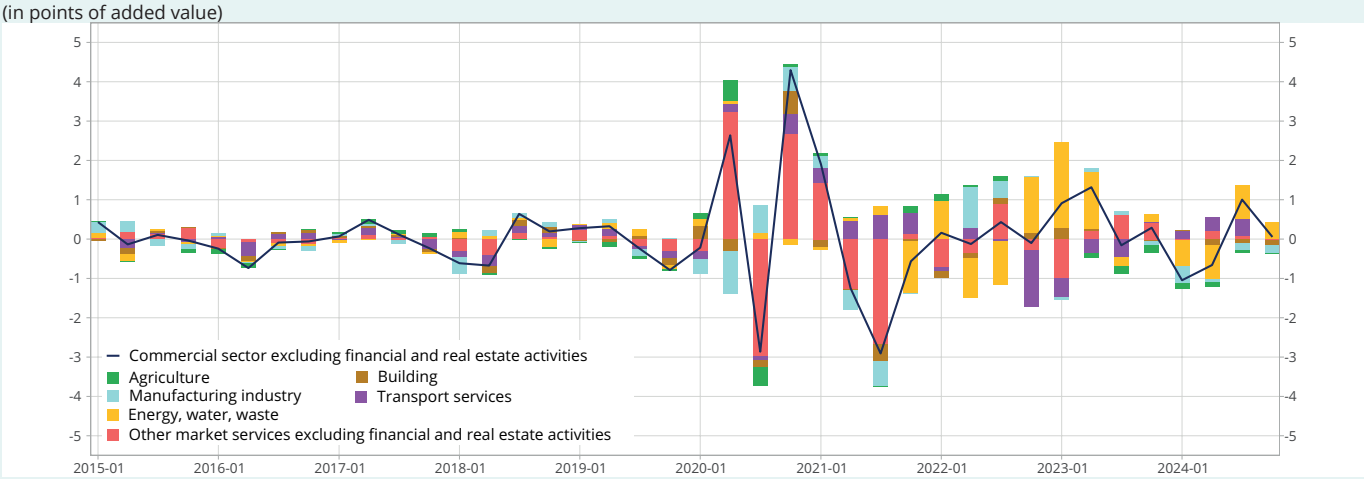
The margin rate for the energy branch fell back sharply in 2022, due to the decline in nuclear power generation in France after the closure of a large number of reactors, but it then rebounded automatically in 2023, and benefitted from the rise in electricity prices in summer 2024. Thus, in Q3 2024, the margin rate of non-financial corporations increased by 1.0 point, driven mainly by contributions from the energy branch (+0.8 points) and transport services (+0.4 points) (►**Figure 4**).

Finally, since 2022, the volatility of the margin rate (►**Methodology box**) has been three times higher than that observed over the period 2015-2019. Energy has contributed 61% of the volatility of the overall margin rate since 2022 compared to 3% previously, and transport services 18% since 2022 compared to 11% before the health crisis (►**Figure 5**). Conversely, market services excluding transport, real estate and finance now contribute only 10% of the overall variance, much less than their weight in value added.

The growing importance of the energy branch in margin rate volatility over the recent period should be considered in light of the powerful rise in renewable capacity in Europe over the same period. Price volatility on the European wholesale electricity market is explained by the pricing of the kilowatt/hour at the marginal cost of the last power plant called upon to meet instantaneous consumption. This marginal cost is determined by the variable operating cost to produce an additional kilowatt/hour (►**RCE, 2024**). Renewable energies (mainly wind and solar) are called upon first on the grid and, depending on weather conditions, they are sometimes sufficient to meet demand, at almost zero cost. The upward trend in renewable capacity installed in Europe, whose production is unpredictable, is therefore a factor of volatility for the wholesale price of electricity. In addition, when demand is high or weather conditions are unfavourable, fossil fuel power plants (gas, coal, fuel oil) are called up to the grid: it is then the marginal cost of production by this type of unit that determines the price on the wholesale electricity market in Europe. The high volatility of the gas market since 2022 (►**Sheet Energy and commodities**) and of the price of the emissions allowance are therefore transmitted to the wholesale electricity market.

►4. Sectoral contributions to quarterly change in the margin rate of market branches excluding financial and real estate activities

(in points of added value)



Last point: Q4 2024.
How to read it: in Q4 2024, the margin rate of market branches, excluding real estate and financial activities, increased by 0.1 points of value added. The energy branch contributed +0.4 points.
Source: INSEE.

►5. Sectoral contributions to the volatility of the margin rate of market branches excluding financial and real estate activities, before and after the 2022 energy crisis

Branch / Période	Average weight in value added		Total variance / Contributions to variance (%)	
	2015-2019	From 2022	2015-2019	From 2022
Weight / total variance	**100%**	**100%**	**0.32**	**0.97**
Agriculture	*3%*	*3%*	*0%*	*0%*
Manufacturing industry	*19%*	*17%*	*6%*	*8%*
Energy, water, waste	***4%***	***5%***	***3%***	***61%***
Construction	*9%*	*9%*	*3%*	*2%*
Transport services	***7%***	***8%***	***11%***	***18%***
Other market services excluding financial and real estate activities	*58%*	*58%*	*78%*	*10%*

Source: INSEE.

By mid-2025, the margin rate of the energy and transport services branches is expected to decline, due to the downturn in the selling price of electricity and the fall in freight prices

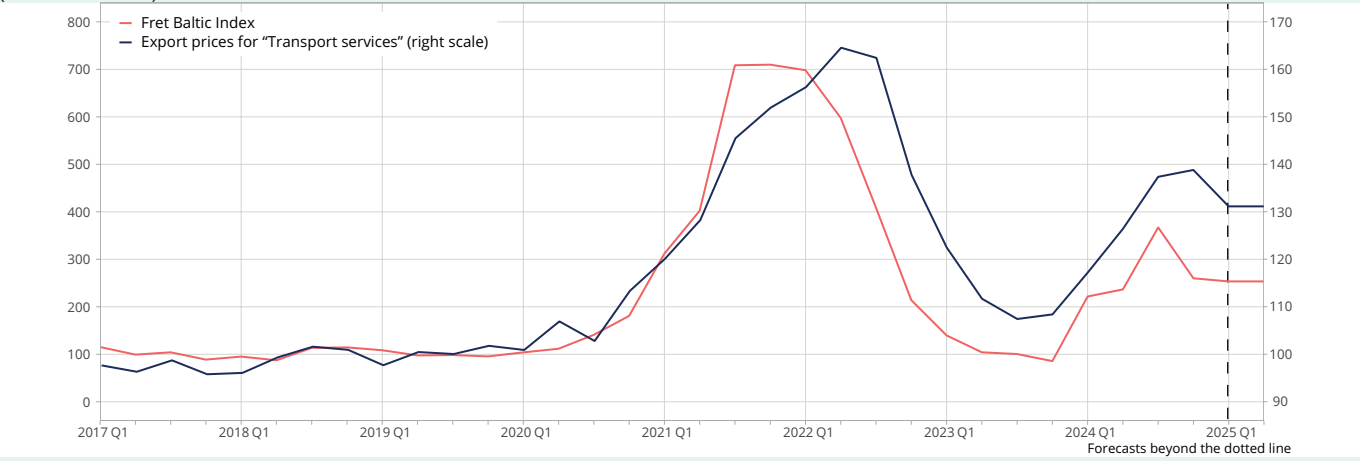
To predict the effect of the volatility of sea freight and electricity market prices on the value added price of the energy and transport services branches, it is possible to simply model the export price of each of these two branches using these two market prices (►**Box methodology**). This export price forecast is then used to calculate the value added price of each branch in the forecast and thus trace the contribution of freight and electricity prices to the overall margin rate.

In the transport services branch, the export price is adjusted with a time lag of one quarter to a variation in the sea freight rate (►**Figure 6**), for an elasticity of 0.2: a 10% increase in the sea freight rate results in a 1.7% increase in the export price for transport services in the following quarter, all other things being equal. With this assumption, given the decline in the sea freight rate since autumn 2024, the export price in the transport services branch is expected to edge down 6% by mid-2025, which would contribute a 0.1-point drop in the overall margin rate in H1 2025.

In the energy branch, the export price adjusts in the space of a quarter to a change in the wholesale electricity market price (►**Figure 7**), for an ultimate elasticity of 0.4: a 10% increase in the price of electricity results in an increase in the export price, all other things being equal, of +4.2% one quarter later, including 2.7% from the coincident quarter. With this assumption, given the change in the wholesale electricity market price since summer 2024, the export price in the energy branch is expected to increase by a little under 20% between Q4 2024 and Q2 2025. However, exports in this branch represent only a small fraction of its output (less than 10%) and the producer price for the domestic market is likely to fall from February 2025, following the regulated sales tariff. Thus the increase in the export price would certainly boost the value added price in the energy branch, but this effect is expected to be very much offset by the decline in the consumer price for households (►**Sheet Consumer prices**). Ultimately, the value added price of this branch is likely to fall by around 6% in H1 2025, affecting the overall margin rate by -0.3 points in H1 2025.

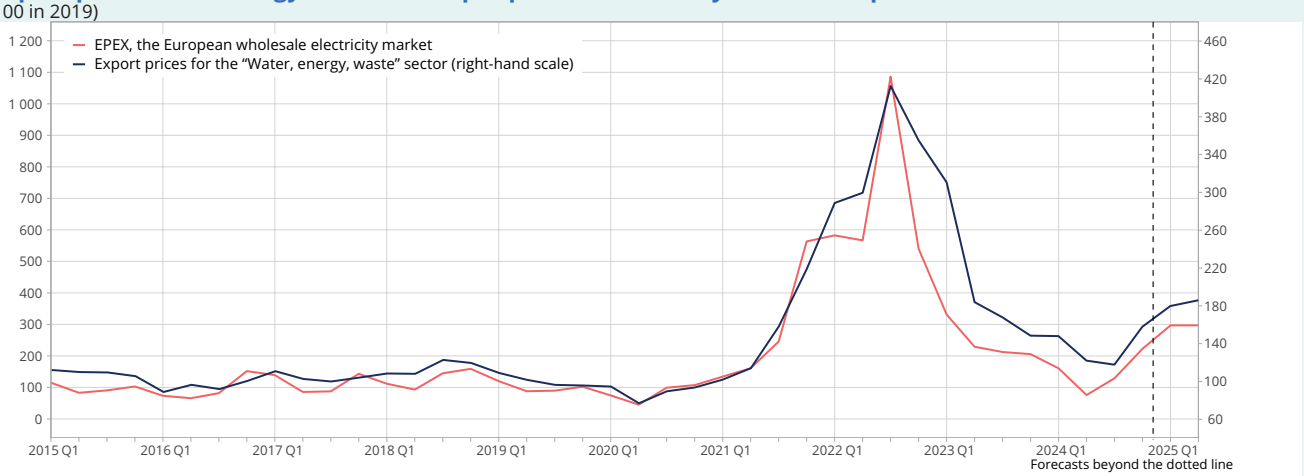
Thus, in H1 2025, the downturn in sea freight prices and the decline in the regulated electricity sales tariff, are likely to account for -0.4 points, all other things being equal, of the change in corporate margin rate. ●

►6. Export price of transport services and price of sea freight
(base 100 in 2019)



Last point: Q2 2025 (forecast from Q1 2025).
How to read it: in Q4 2024, the FBX sea freight price increased by 160.0% and the export price in the transport services branch increased by 38.8% compared to their 2019 averages.
Source: Freight Baltic Index, INSEE.

►7. Export price of the energy branch and spot price of electricity on the European wholesale market
(base 100 in 2019)



Last point: Q2 2025 (forecast from Q1 2025).
How to read it: in Q4 2024, the European electricity price EPEX increased by 122.8% and the export price in the energy branch increased by 57.1% compared to their 2019 averages.
Source: EPEX, INSEE.

Méthodology

Definition of volatility

In this Focus study, the volatility of corporate margin rate is defined as the variance in the margin rate of the market branches, excluding financial and real estate activities. It is calculated over two periods, before the health crisis (between 2015 and 2019) and from 2022 until the end of 2024. Calculation of the relative contribution of branch *i* to the overall volatility of the margin rate at period *t* is simplified, by ignoring the cross-covariance terms between the margin rates of the different branches:

$$Contribution_{Volatilité\ i} = \left(\frac{VA\ i\ ,t}{VA\ glob,\ t}\right)^2 \times Variance\left(\frac{EBE\ \ i\ ,t}{VA\ i,\ t}\right) = (\frac{VA\ i\ ,t}{VA\ glob,\ t})^2 \times Variance(Taux\ de\ marge\ i,t\ )$$

With:

VA i,t: average value added of branch *i* during period *t* by value;
VA glob, t: Average value added during period *t* of market branches excluding financial and real estate activities by value;
EBE i,t: Gross operating surplus of branch *i* during period *t*.

Due to the simplified assumption adopted, the sum of the contributions calculated in this way does not correspond exactly to the observed variance: a homothetic transformation was therefore applied to the different contributions in order to respect this equality.

Modelling export price

Change in the export price of the energy branch is modelled by calibrating it to change in the price according to EPEX, the European wholesale electricity market. The export price is modelled relative to the instantaneous and the one-quarter-lagged change in EPEX. After one quarter, the estimated elasticity is 0.4 over the period Q2 2005 to Q4 2023, including 0.27 from the coincident quarter, with an explanatory power of 57%.

Equation 1:

$$\Delta(\ P_{x\_energie,t}) = \underset{(0,01)}{0,00} + \underset{(0,03)}{0,27} \times \Delta(\ EPEX)_t^{***} + \underset{(0,03)}{0,11} \times \Delta(\ EPEX)_{t-1}^{***} + \epsilon_t$$

R^2 = 0,57; Test of Durbin-Watson = 2,17; estimation period: 2005-Q2 - 2023-Q4
****: p-value <= 0,01*

with $P_{x\_energie,t}$: export price of the "Energy, water, waste" branch in period *t*.

Change in the export price of the transport services branch is obtained by calibrating it to the one-quarter-lagged change in the Baltic Dry Index, a composite index giving sea freight prices worldwide. The estimated elasticity is 0.17 over the period Q4 2016 to Q4 2023, with an explanatory power of 54%.

Equation 2 :

$$\Delta\left(P_{x\_transport,t}\right) = \underset{(0,01)}{0,00} + \underset{(0,03)}{0,17} \times \Delta\left(Baltic\ Dry\ Index\right)_{t-1}^{***} + \epsilon_t$$

R^2 = 0,54; Test of Durbin-Watson = 2,67; estimation period: 2016-Q4 - 2023-Q4
****: p-value <= 0,01*

with $P_{x\_transport,t}$: export price of the "Transport services" branch in period *t.*

Calculating the contribution of the EPEX price and the freight price to the overall margin rate

The sensitivity of the corporate margin rate to a (relative) variation in the export price of branch *i* is obtained formally as follows:

$$\frac{\mathrm{dTM}}{dpx_i/px_i} = \frac{\mathrm{d}}{dpx_i/px_i}\left(\frac{EBE}{VA}\right)$$

with :
TM, *EBE* et *VA* the margin rate, gross operating surplus and value added for all companies, respectively;
px_i the price of exports of branch *i.*

However,

$$\frac{\mathrm{dEBE}}{dpx_i/px_i} = \frac{\mathrm{dVA}}{dpx_i/px_i} = \frac{\mathrm{d}X_i}{dpx_i/px_i} = X_i$$

With X_i the export value of branch *i.*

Therefore

$$\frac{\mathrm{dTM}}{dpx_i/px_i} = X_i.\left(\frac{1}{VA} - \frac{EBE}{VA^2}\right) = \frac{X_i}{VA}.(1 - TM) = \frac{VA_i}{VA}.\frac{X_i}{VA_i}.(1 - TM)$$

With VA_i the value added of branch *i.*

Thus, the sensitivity of the corporate margin rate to a (relative) variation in the export price of branch *i* can be written as the product of three factors:

- share of the value added of branch *i* in the overall value added;
- share of exports (by value) of branch *i* in its value added;
- initial level of the margin rate. ●

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