No. 21 | April 23

RISK&OPPORTUNITIES

Société Générale Economic and Sector Studies

Euro area: normalisation of inventory dynamics will weigh on growth in 2023

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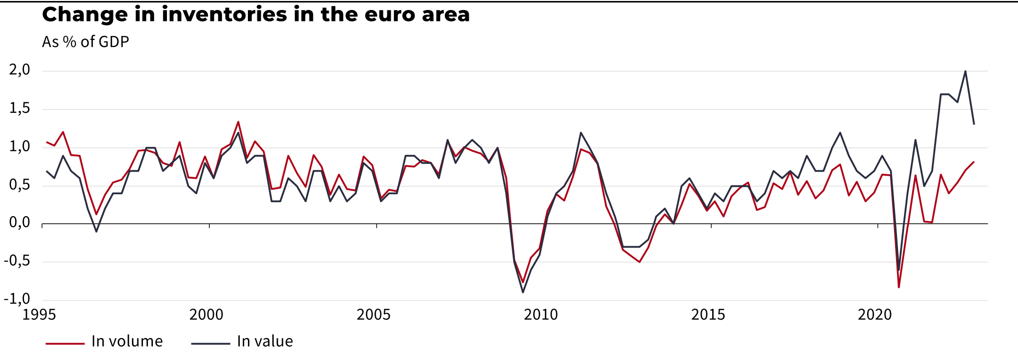
While the positive change in inventories observed in the euro area in 2022 supported growth, there is a risk that the normalisation of this dynamic produces the opposite effect in 2023. Indeed, if the dynamics of the change in inventories were like those observed in 2019, growth would be adversely affected by 0.3 pp. in 2023, all other things being equal. In a more conservative scenario of a return of the volume of stocks to their 2019 level, growth would be reduced by 2 pp, all other things being equal. Germany, France and, to a lesser extent, Spain are the economies most exposed to these normalisation scenarios. Italy, on the other hand, where inventories have been falling in volume since 2020, would benefit from a normalisation.

In 2022, higher inventories have supported growth

In a previous publication, we analysed the mechanisms underlying the pro-cyclicality of the change in inventories on growth (Risk & Opportunities N°20 - Euro area: beware of the bullwhip effect) and already pointed out the downside risk that the rise in inventories observed in 2022 posed to growth in 2023. The idea of this second publication on the subject is to detail the dimension of the risk to growth.

As a reminder, the replenishment of inventories by European companies was one of the key phenomena of the economic situation in the euro area in 2022: almost nil during the pandemic, the increase in the volume of inventories in the euro area was greater in 2022 than in 2019, representing 0.7% of GDP. Moreover, this increase in the quantities stored was accompanied by a surge in their prices, which greatly increased the value of inventories, which rose at a rate not seen for 20 years, representing 1.7% of GDP in value terms in the euro area in 2022.

Inventories regain their pre-pandemic momentum in volume, value jumps



Source: Eurostat, SG Economic and Sector Studies

The acceleration of stockpiling has had a non-negligible impact on euro area real growth, although it is not obvious a priori. Indeed, the change in inventories explains 0.3 pp. of the 3.5% growth recorded by the euro area in 2022, which is a small contribution. However, considering that the growth carry-over for 2022 was already 1.7% excluding inventories[1] at the end of 2021, the contribution of inventories to the dynamics of activity in 2022 was in fact greater than this first figure suggests. Moreover, the combination of rising inventories and falling growth in 2022 (over the second half of the year) leaves the euro area in a situation where inventories account for half of the very low growth carry-over for 2023 of currently 0.4%[2].

The acceleration of stockpiling in 2022 is a consequence of the impact of the pandemic on the global business cycle and, more recently, of the impact of the war in Ukraine on the management of gas reserves ahead of the winter of 2022-23. First, companies had to replenish, from 2021 onwards, the stocks of finished products sold in 2020 when health restrictions hampered the operation of production lines. At the same time, with the lifting of the health restrictions and the subsequent sharp upturn in demand, companies had to rapidly increase their purchases of production inputs to meet the rapid increase in orders. Faced with the extension of delivery times and the concomitant surge in the price of intermediate goods, they adapted their purchasing strategies, moving from just-in-time management with a view to optimising operating costs to a more precautionary approach, sometimes purchasing more inputs than necessary to ward off possible future shortages and an acceleration of in-

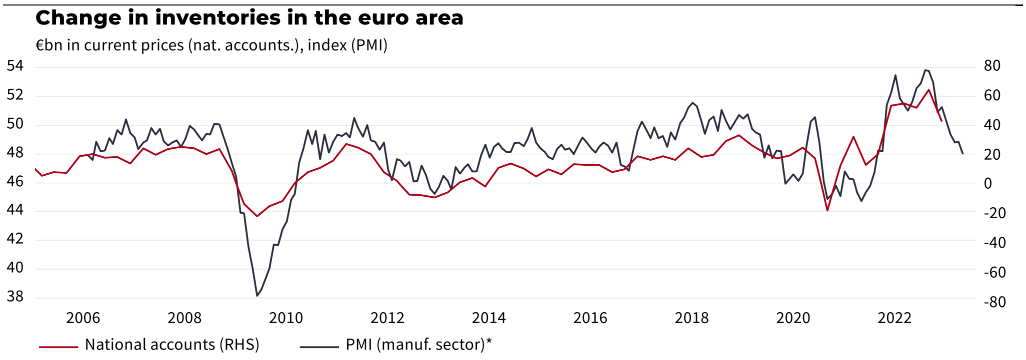
[1] The growth carry-over for a year *n* corresponds to the growth rate between year *n-1* and year *n* obtained if the level of GDP remained at the level of the last known quarter until the end of year *n*. In this case (without considering the contribution of the change in inventories), growth for the year 2022 would have been 1.7% in the euro area if the level of GDP at the end of the year 2022 had remained at the level it was at the end of the year 2021.
[2] In line with the previous footnote, understand here that growth in the euro area in 2023 would reach 0.4% if the level of GDP at the end of 2023 remained at its level at the end of 2022.

flation on intermediate goods. Finally, the replenishment of gas reserves, at abnormally low levels at the end of the winter of 2021-22, has also increased the stockpile, particularly in the third quarter.

Towards a normalisation in the dynamics of inventories in 2023

With the slowdown in activity, a smaller increase or no increase in the volume of inventories is the most likely scenario. This shift is already visible in the surveys of purchasing managers in the manufacturing sector, which indicate a decline in purchases of intermediate goods and stocks of finished goods.

Purchasing managers are already anticipating a smaller increase in stocks



Source: Eurostat, S&P Global, SG Economic and Sector Studies

** Simple average of the sub-components of the Purchase Manager Index for the manufacturing sector relating to the evolution of stocks of production inputs and stocks of finished products.*

Indeed, with the drop in new orders and the deterioration of anticipated demand, the need for intermediate goods has clearly decreased. Precautionary inventories are also disappearing because of the normalisation of delivery times and the disinflation of intermediate goods. Companies will also favour the disposal of stocks of finished goods rather than the production of additional goods. Finally, with the rapid rise in interest rates, the financing of working capital needs has become more expensive and is encouraging companies to reduce their inventories.

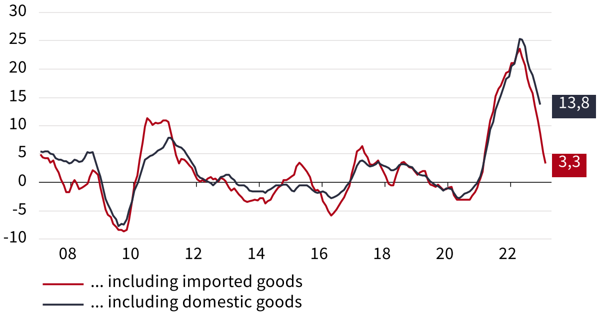
In terms of gas storage, Europe started the year with a much higher level of reserves than at the same time in 2022. As a result, the rebuilding of stocks after the winter will certainly contribute positively to the variation of stocks this year, but certainly less than in 2022.

In parallel to the normalisation of volumes, a decline in the value of stocks is also very likely. Indeed, as the chart below shows, disinflation is already well underway on the production input side, and it is not impossible that it will shift to deflation during the year. At the end of the production chain, this should fuel the disinflation of final consumption products and thus the price of finished goods stocks. In this respect, the net flows of short-term bank credit, whose publication frequency (monthly) is higher than that of the national accounts (quarterly), already point to a decline in the value of stocks in the first quarter of 2023.

Inflation on production inputs is falling rapidly and short-term bank credit is already pointing to a decline in the value of inventories

Prices of intermediate goods in the euro area

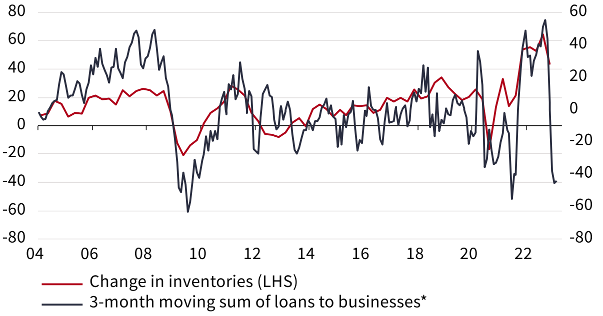
Year-on-year change, %



Source: Eurostat, OECD, SG Economic and Sector Studies

Inventories and credit in the euro area

€bn in current prices



Source: Eurostat, ECB, SG Economic and Sector Studies

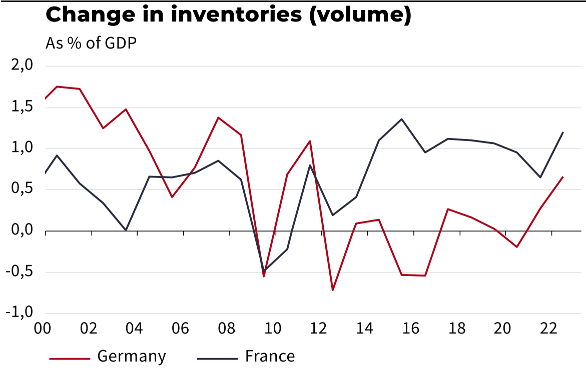
** with a maturity below one year*

What is the impact of a normalisation of the change in inventories on growth?

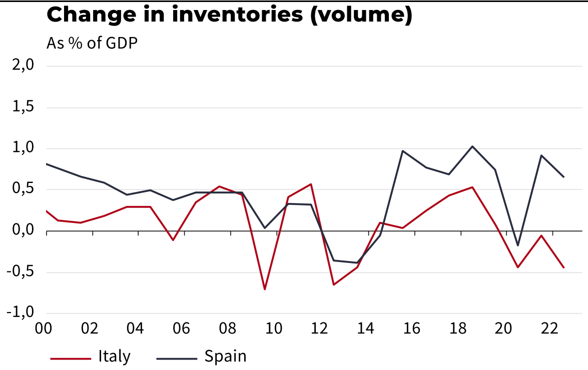
The inventory cycle is positively correlated with the dynamics of activity: when companies anticipate an increase in their commercial activity, they increase their inventories, particularly of intermediate goods, to meet demand; when they anticipate a drop in activity, companies reduce their production, their orders for intermediate goods and sell off their stocks of finished products. The change in inventories is therefore pro-cyclical. In this respect, we have provided a more detailed analysis of the mechanisms at work in stockholding and destocking cycles in our previous publication on the subject (see above).

In the current context, with the normalisation of inventory dynamics being the scenario for 2023, what would be the impact on real growth in the major euro area economies? To answer this question, we must first consider the heterogeneity of national situations. Indeed, while the euro area has experienced an acceleration of stockpiling in 2022, this is not the case for each of its component economies. Focusing on the four largest economies, we can see that stockpiling has accelerated in Germany and France (these two economies account for most of the dynamics observed at the euro area level), it has increased in Spain but at a slower pace than in 2021 and it has been falling since 2020 in Italy. Formulating a hypothesis of normalisation of the variation of stocks will therefore have a differentiated impact on the growth of these economies in view of the heterogeneity of the situations.

Beyond the aggregate dynamics in the euro area, a heterogeneity of national situations



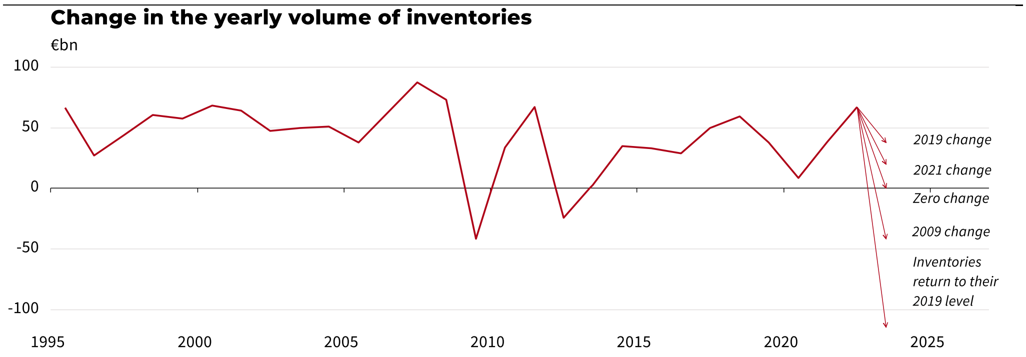
Source: Eurostat, SG Economic and Sector Studies



Source: Eurostat, SG Economic and Sector Studies

In order to cover a wider range of possibilities (without claiming to be exhaustive) of what a normalisation of the variation of stocks in 2023 could imply, five hypotheses are formulated on their variation in volume for this year: a return to the change observed in 2019, a return to that of 2020, a zero change (i.e. a stagnation of the volume of stocks), a negative change calibrated on the one observed in 2009 during the great financial crisis, and a change implying a return to the volume of inventories observed in 2019 (see the chart below).

Five assumptions for changes in inventories in 2023: example of the euro area



Source: Eurostat, SG Economic and Sector Studies

The contribution of the change in stocks to growth in 2023 is then calculated according to these different hypotheses, all other things being equal. The results of these calculations are presented in the table below.

Impact of the change in inventories on real GDP growth (pp.): five assumptions for 2023

Assumptions for the change in inventories in 2023	EA	DE	FR	IT	ES
Change as in 2019	-0.3	-0.6	-0.1	0.5	0.1
Change as in 2021	-0.3	-0.4	-0.6	0.4	0.2
Zero change	-0.7	-0.7	-1.2	0.4	-0.7
Change as in 2009	-1.1	-1.1	-1.6	-0.2	-0.6
Inventories return to their 2019 level	-1.8	-1.4	-3.9	1.3	-2.0

Source: Eurostat, SG Economic and Sector Studies

In the euro area, all our assumptions of normalisation of the change in inventories would imply a negative impact on growth in 2023. At the national level, Germany, and France, and to a lesser extent Spain, are the economies most exposed to the scenario of a normalisation of stock dynamics. This is the logical consequence of the increase in stockpiling observed in these economies in 2022. In Italy, most normalisation hypothetical scenarios would break the de-stocking dynamics observed since 2020 and thus have a positive impact on growth.

The backlash from the acceleration of stockpiling in 2022 would therefore be significant for real growth in the euro area economies in 2023, with Italy being the exception. Our scenario assumes a normalisation of changes in inventories towards the 2021 level within two years. However, the risks surrounding this forecast are high and a surprise on the path of inventories cannot be ruled out, either upwards or downwards. Given the importance of the change in inventories in the growth carry-overs for 2023 in 4Q22 (see the table below), their evolution will therefore be closely monitored.

Share of the growth carry-over related to the change in inventories

	ZE	DE	FR	IT	ES
Growth carry-over for 2023 as of 4Q22	0.4	-0.1	0.3	0.4	0.8
- *w/o change in inventories*	0.2	-0.5	-0.1	1.3	0.5
- *contribution of the change in inventories*	0.2	0.4	0.4	-0.9	0.3

Source: Eurostat, SG Economic and Sector Studies

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