THE VIEW

Economic Research

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PAINFUL DESTOCKING IN SIGHT FOR EUROPEAN CORPORATES

Allianz

EULER HERMES

EXECUTIVE SUMMARY

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- European companies have witnessed an unusual accumulation of stocks since mid-2018. In March 2019, the Eurozone's inventories to new orders ratio, based on the Manufacturing PMI, hit a new peak, the highest level since the crisis of 2012 and higher than anywhere else in the world.
- For large companies[1] in the Eurozone manufacturing sector, the average Days Inventory Outstanding (DIO), a measure of how long it takes on average for a company to turn its inventory into sales, increased by four days to 52 days in 2018, compared to 2017. The highest increases were seen in Spain (+11 days) and Germany (+6 days). For Eurozone SMEs[2] in the sector, DIOs increased by four days to 58 days, with the largest rises registered in Italy (+9 days) and Germany (+6 days).
- Large manufacturing companies tend to be more integrated in the global supply chain and more exposed to external trade, which has significantly slowed down since the start of the year. We find that global uncertainty has been a positive contributor to inventory building in the Eurozone since Q3 2018, while frontloading activities have also pushed inventories higher as demand proved to be weaker than expected. These two factors explain almost 30% of the increase.
- The unusually high level of inventories calls for a downside adjustment in production and prices. Indeed, European companies in the manufacturing sector surveyed in June 2019 assessed the level of stocks as "being too large". We estimate that the level of inventories is currently between 20% and 30% above what could be considered as being a normal level.
- Based on the amplitude of this "positive shock" of inventories, we estimate a VaR model, which shows that the current deviation of the inventory-to-orders ratio from its average would drive the inflation rate down by -0.2pp in 2019 and by -0.1pp in 2020. In addition, inventories are likely to subtract -0.3pp from Eurozone GDP growth in 2019 (to +1.2%) before a catch-up in 2020 (+0.1pp).

[1] Companies with a turnover above 50 million EUR
[2] Companies with a turnover below 50 million EUR

58 days

Days Inventory Outstanding for SMEs in the Eurozone manufacturing sector in 2018, up +4 days from 2017.

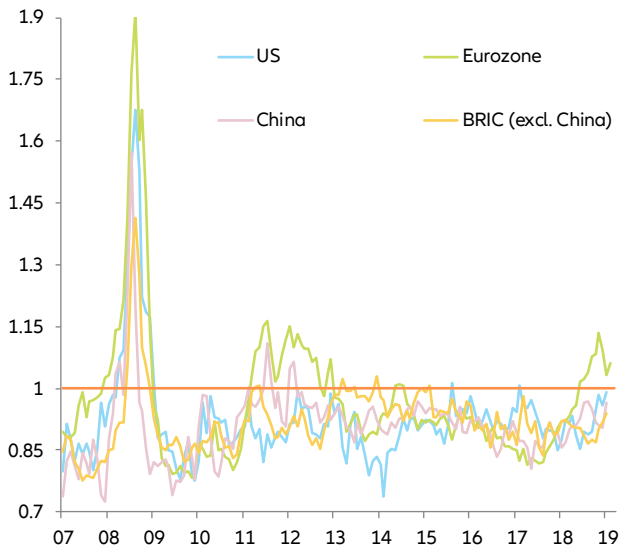
EUROPEAN COMPANIES HAVE WITNESSED AN UNUSUAL ACCUMULATION OF STOCKS SINCE MID-2018

The inventories-to-new-orders ratio (based on the Manufacturing PMI) is rising around the world, but it's the highest in the Eurozone, where it has been steadily increasing since Q3 2017. A ratio above one usually suggests a disruption and calls for an adjustment. The Eurozone's ratio reached a peak of 1.13 in March 2019 (see Figure 1), the highest level since the 2012 crisis and higher than everywhere else in the world.

The stockpiling is also visible in Days Inventory Outstanding (DIO), which indicates how long it takes on average for a company to turn its inventory into sales. For large companies[3] in the Eurozone manufacturing sector, the average DIO increased by four days to 52 days in 2018, compared to 2017. The highest increases were seen in Spain (+11 days) and Germany (+6 days). For Eurozone SMEs[4] in the sector, DIOs increased by four days to 58 days, with the largest rises registered in Italy (+9 days) and Germany (+6 days).

SMEs in general tend to have higher DIOs as the working capital management in large companies is often more efficient. Thus, SMEs are also predisposed to have higher financing needs due to the higher stock levels. This makes SMEs particularly vulnerable to credit constraints in countries that generally have higher DIOs.

Figure 1: PMI inventories to new orders, manufacturing sector



Sources: Bloomberg, Allianz Research

Figure 2: DIOs* (average days) level vs. change for SMEs** and large companies

Variation (2018 vs. 2017) \ Level	Below 38 days	38-48 days	49 to 59 days	Above 59 days
Strongly increasing (+ 5 days or more)	ES, Large, Total ES, Large, Man.	DE, Large, Total	DE, Large, Man.	DE, SME, Man. IT, SME, Man.
Increasing (+2 to +4 days)	IT, Large, Total	FR, Large, IT, Large, Man. IT, Large, Services **Eurozone, Large, Total**	FR, SME, Man. DE, SME, Total **Eurozone, Large, Man.**	**Eurozone, SME, Man.**
Stable (+1 to -1 day)	FR, Large, Cons. DE, Large. Cons. DE, Large, Services IT, Large, Services ES,Large, Cons.	FR, Large, Total	IT, SME, Total	
Decreasing (-2 days or more)	ES, Large, Services	FR, SME, Total ES, SME, Total **Eurozone, SME, Total**	FR, Large, Man. ES, SME, Man.	

** weighted by turnover*

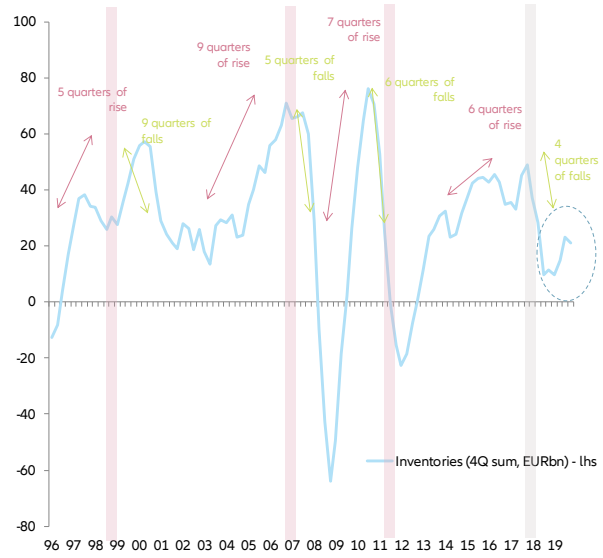
** *2-50 million EUR of turnover*

Sources: TRIBRating, Bloomberg, Allianz Research

[3] Companies with a turnover above 50 million EUR
[4] Companies with a turnover between 2 and 50 million EUR

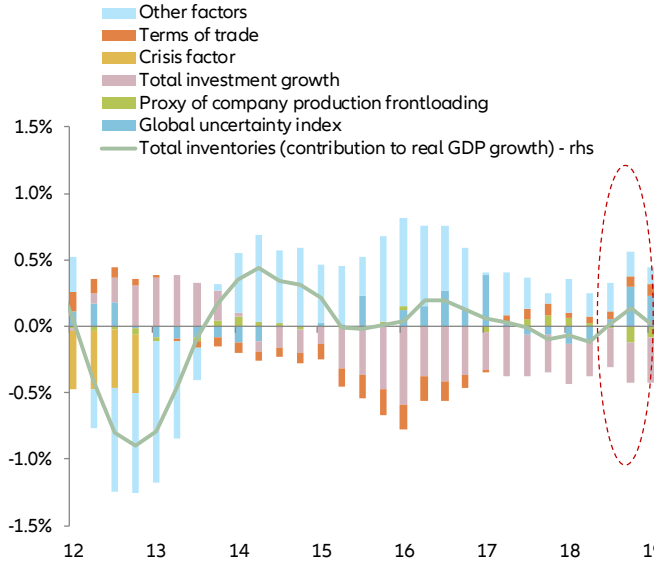
HIGHER GLOBAL UNCERTAINTY AND LOWER DEMAND EXPLAIN THE INVENTORY ACCUMULATION

Figure 3: Eurozone inventories[6] (in volume, EURbn, 4Q sum)



Sources: Eurostat, Euler Hermes

Figure 4: Inventories (contribution to real GDP growth) explained by global uncertainty, proxy of company production frontloading, total investment and terms of trade



Source: Allianz Research

Inventories usually follow the economic cycle. Like consumption and investment, and contrary to net exports, inventories are deemed to be pro-cyclical, meaning they rise during expansions and fall during recessions. Although they count for a trivial fraction of GDP, inventory fluctuations during a downturn account for close to half of the shortfall in growth relative to normal in recessions[5]. This was the case in the Eurozone during the 2008-09 recession when inventories, accounting for 0.5% of GDP, took out -1.3pp from real GDP growth (see Figure 3).

To explain the current Eurozone inventory accumulation, we built a model looking at total investment growth (y/y), terms of trade (export prices/import prices y/y), a proxy of company production frontloading (the spread between y/y change in manufacturing production and retail sales) and the variation of the global uncertainty index (see Figure 4). We find that global uncertainty has been a positive contributor to inventory building in the Eurozone since Q3 2018, while frontloading activities have also pushed inventories higher as demand proved to be weaker than expected. These two factors explain almost 30% of the increase.

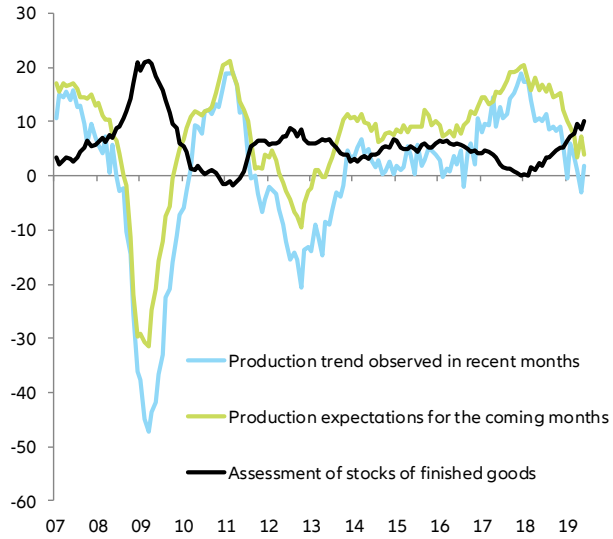
[5] David Romer, Advanced macroeconomics, 3rd edition, Chapter 4 Real business cycle theory
[6] As per the GDP account

A CORRECTION AHEAD

As of June 2019 European companies consider the level of stocks as "too large". On a monthly basis, manufacturers assess the levels of stocks, describing them as either "too small" (below normal), "adequate" (normal for the season) or "too large" (above normal). Currently, there are as many companies saying stocks are "too large" as there were in 2011 just before the Eurozone crisis (see Figure 5).

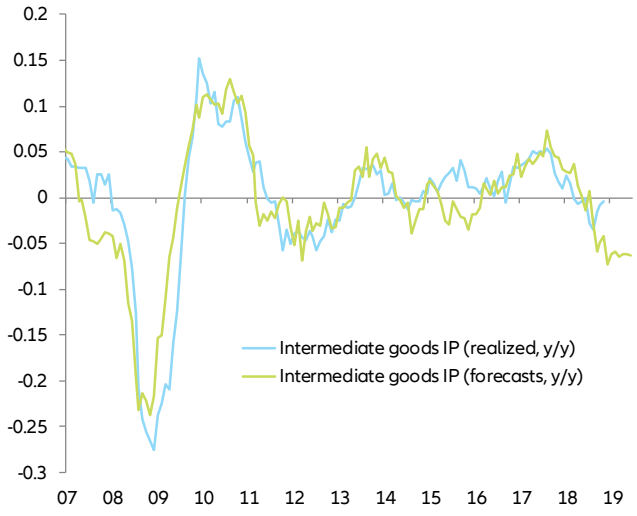
The European Commission report has shown that there is a negative relationship between production and level of inventories. A quarterly increase in the relative share of companies reporting "too large" stocks (+1.0%) is associated with a quarterly decrease in the relative share of companies with increased production (-1.7%)[7]. And this relationship has turned more negative since the 2008-09 crisis. In the U.S., almost half of the fall in production experienced during a recession may be explained by a reduction in inventories[8]. Using a lag of one quarter, we look into forecasting the adjustment in industrial production based on Eurozone companies' assessment of their level of stocks in the sector. The trend is clearly on the downside. Production of intermediate goods is expected to suffer most as the inventory accumulation has been the strongest in this segment (-3% y/y expected by Q3 2019) – see Figure 6.

Figure 5: Stock assessment by companies in the manufacturing sector vs production past trend and expectations (balance of opinion)



Sources: European Commission, Allianz Research

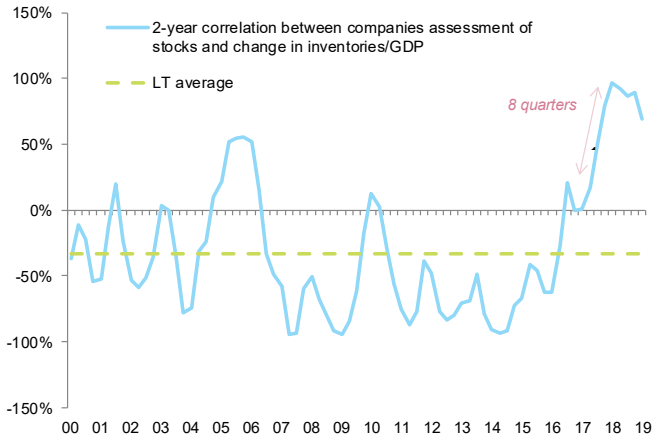
Figure 6: Intermediate goods production, y/y – realized vs estimated using companies' assessment of their level of stocks in the sector



Sources: European Commission, Allianz Research

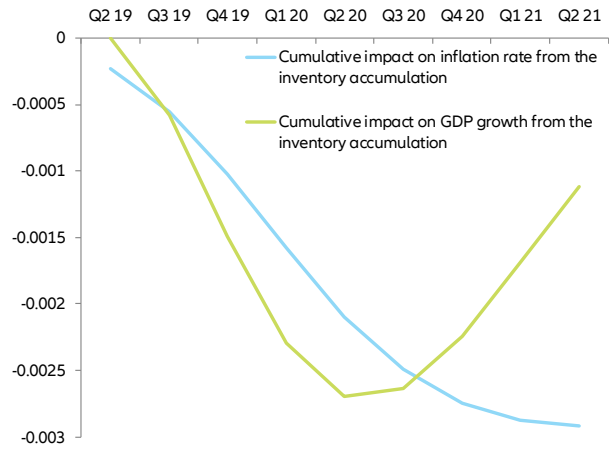
[7] European Business Cycle Indicators, European Commission, 2015
[8] The Role of Inventories in the business cycle, Aubhik Khan, Philadelphia Fed, 2003

Figure 7: Correlation between companies' assessment of inventories and change in inventories/GDP



Sources: National sources, Allianz Research

Figure 8: VaR model of inventories to orders ratio – impulse response of GDP and inflation rate, pp



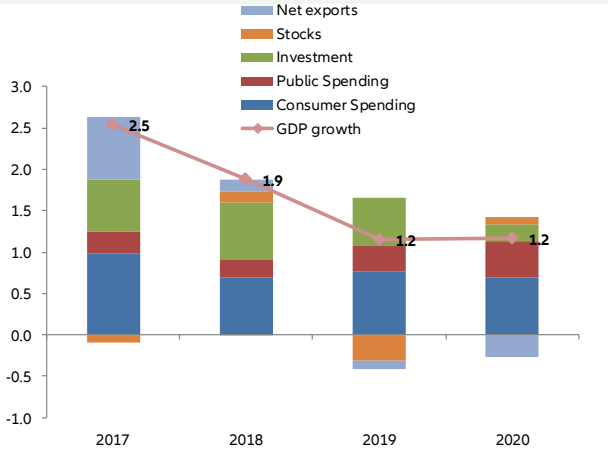
Sources: ECB, Eurostat, Allianz Research

What is the size of the "positive shock" on European inventories? The correlation between the ratio of inventory changes to GDP and the balance of opinions on manufacturing stocks is usually negative. However, the correlation seems to be positive ahead of a downturn/global slowdown when uncertainty is higher and demand lower. This was the case in 2007, 2011 and 2016. Since 2017, the correlation started to rise and reached very high levels. The correction started in Q4 2018 and is expected to last into 2019 (see Figure 7), which could suggest that there is a "rigidity" in adjusting inventories or a sort of complacency among companies (which might still expect a pick-up in demand). Given the current strong correlation between contribution to growth of inventories and the balance of opinions on inventories, we can be sure that any normalization of this balance will trigger a significant adjustment of stocks and growth. Looking at the deviation of this balance compared with its trend therefore provides a crucial insight on the amplitude of the "positive shock of inventories" (an over-accumulation of inventories triggering a negative adjustment of growth thereafter). We have estimated that this balance of opinion represents a positive 1.2 standard deviation from its normal average level. This figure is consistent with the inventories to new order ratio, which was at 1.3 standard deviation from its long-term average over the four last quarters.

What will be the adjustment of growth and inflation to this positive shock of inventories? To answer this question, we use a VaR model studying the reaction of growth and inflation to a typical (one standard deviation) positive shock of inventories. Again, stockpiling is usually expensive as it binds financial resources and warehouse space. Hence, companies seek to reduce inventory levels through production cuts and usually get rid of the excess inventories through a discount in prices. Overall, our VaR model shows that we can expect an impact on inflation of -0.2pp in 2019 and -0.1pp in 2020 (see Figure 8).

This reaction function allows us to estimate the expected impact on growth as a result of an adjustment to come in inventories. Overall, we expect the inventory accumulation to subtract -0.3pp from real Eurozone GDP growth in 2019 (see Figure 9) to 1.2%.

Figure 9: Eurozone GDP by component, %



Sources: Eurostat, Allianz Research

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