SUPPLY SIDE DISRUPTION, SOME HOPEFUL SIGNS

The current business cycle is atypical and this influences the analytical approach, with a focus on the supply side and whether it will be able to meet the level of demand in the economy, rather than on the demand side. Supply side disruption has been a key issue but recent PMI data suggest that we may have seen the worst. In the euro area and the US, the percentage of companies that are confronted with rising input prices and are contemplating to increase their output prices has started to decline and delivery lags are shortening. The Federal Reserve of New York's global supply chain pressures index seems to have peaked. However, anecdotal evidence suggests visibility remains very low. Given the importance of supply disruption for the growth and inflation outlook, it implies that forecast uncertainty will remain very high.

Business cycle analysis generally focuses on the demand side of the economy and tries to answer the question whether growth will be subdued or strong by looking at household income, the labour market, confidence, corporate profits, interest rates and other variables

This approach makes sense. After all, production in the economy changes because demand changes. It is only in the mature stage of the cycle that the supply side may take centre stage in the cyclical analysis, when bottlenecks appear in labour or product markets and risk triggering a pick-up in wage growth and inflation. The current business cycle is atypical and this influences the analytical approach.

The (expected) sanitary situation – through its influence on spending, mobility, production – is of course key in the assessment of the cyclical outlook, but once this factor has been taken into account, the emphasis is on the supply side and whether it will be able to meet the level of demand in the economy, rather than on the demand side.

Strength of demand in the near term appears to be beyond doubt in most advanced economies[1] whereas for many months already, supply disruption has been and continues to be a constraint on demand and hence a headwind to growth. Such a situation creates many issues.

The outlook for growth depends to a large degree on whether the supply constraints will be eased or not. Assessing the true state of demand becomes difficult. For the US, this is illustrated in the latest FOMC minutes: *"Housing demand remained strong…Shortages of construction materials appeared to have hampered building completions…"*. Corporate investment is also suffering from supply constraints: *"Growth in business fixed investment appeared to be rising at a slow pace again in the fourth quarter, as supply bottlenecks continued to weigh on business equipment spending, and the limited availability of construction materials was still holding back spending on nonresidential structures."*

Evaluating possible inflation developments is also more complex[2] and inflation forecasts are suffering from a higher degree of uncertainty than previously. This was acknowledged by Isabel Schnabel of the ECB in a recent interview. *"We are well aware of the uncertainty around our inflation projections. There is a risk to the upside."*[3] She also emphasized the increased role of survey data. *"Most economists hadn't expected the extent of the increase in inflation. That's why we are increasingly relying on surveys of companies and households to better understand what is happening. Some companies are telling us they expect the supply chain bottlenecks to last into 2023."*

EURO AREA: MANUFACTURING PMI PRICE PRESSURES

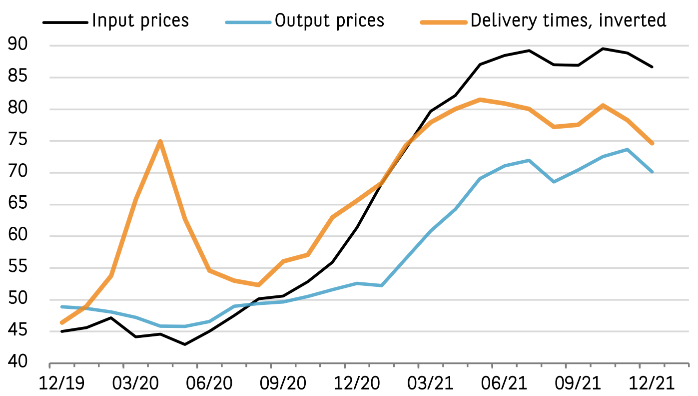

CHART 1

SOURCE: IHS MARKIT, BNP PARIBAS

1. Household spending should be supported by income growth, confidence, a decline in the unemployment rate, low interest rates and accumulated savings during lockdown, with high inflation being a negative factor. Corporate investment should benefit from the increase in company profits, rising capacity utilization, good demand prospects, low interest rates and easy access to finance. Moreover, in the euro area, fiscal policy will also support growth.

2. To illustrate this point: historically, the cyclical amplitude of the PMI surveys of input and output prices had been rather stable, but since the pandemic, these surveys have moved outside the historical bandwidth. These means that the previous statistical relationships between the surveys and producer and consumer prices may no longer prevail, so inflation forecasting has become more difficult.

3. *Le Monde*, interview with Isabel Schnabel, Member of the Executive Board of the ECB, conducted by Eric Albert on 16 December and published on 22 December 2021.

> Although supply side tensions remain very high, there are some hopeful signs that they have started to ease.

The recent PMI data suggest that we may have seen the worst of the supply disruption (charts 1 and 2). In the euro area and the US, the percentage of companies that are confronted with rising input prices and are contemplating to increase their output prices has started to decline. Besides, delivery lags are shortening. This suggests that price pressures seem to be abating, whilst staying at very elevated levels. The Federal Reserve of New York's global supply chain pressures index allows for a more comprehensive assessment. It is based on indicators on cross-border transportation costs and on the manufacturing purchasing managers' indices (PMI)[4]. The former are captured by the Baltic Dry Index – which tracks the cost of shipping raw materials –, the Harpex index – which tracks container shipping rates – and outbound and inbound airfreight price indices for air transport between the US on the one hand and Asia and Europe on the other hand. From the PMI surveys, three series are used: delivery time, order backlog and purchased stocks, which measures the extent of inventory accumulation[5]. Moreover, the PMI data are corrected for the influence of changes in demand[6]. According to the researchers at the Fed of New York, the index "*seems to suggest that global supply chain pressures, while still historically high, have peaked and might start to moderate somewhat going forward*." However, visibility is very low. A recent FT article[7] quotes industry sources saying that congestion at ports may continue for quite some time. In addition, the Omicron variant may cause further disruption with high infection rates causing a shortage of staff. Given the importance of supply disruption for the growth and inflation outlook, it implies that forecast uncertainty will remain very high.

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UNITED STATES: MANUFACTURING PMI PRICE PRESSURES

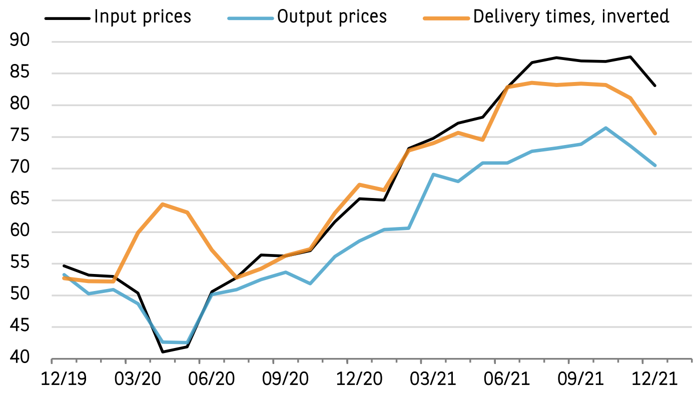

CHART 2

SOURCE: IHS MARKIT, BNP PARIBAS

GLOBAL SUPPLY CHAIN PRESSURES INDEX

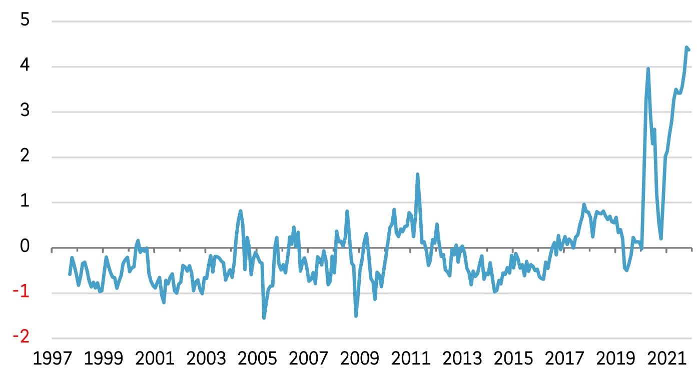

CHART 3

SOURCE: FEDERAL RESERVE OF NEW YORK, BNP PARIBAS

4. Source: Gianluca Benigno, Julian di Giovanni, Jan J. J. Groen, and Adam I. Noble, *A New Barometer of Global Supply Chain Pressures,* Federal Reserve Bank of New York Liberty Street Economics, January 4, 2022, https://libertystreeteconomics.newyorkfed.org/2022/01/a-new-barometer-of-global-supply-chain-pressures/.
5. The geographical coverage is: the euro area, China, Japan, South Korea, Taiwan, the UK and the US.
6. This is done by running a regression between the supply chain PMI measures (delivery time, backlogs, and purchased stocks) and the 'new orders' PMI as explanatory variable. The residuals from these regressions, which reflect the pure supply side effect, are then used as inputs in the global supply chain pressure index.
7. *Is there an end in sight to supply chain disruption?*, Financial Times, 9 January 2022.