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THE CHEMICAL INDUSTRY IN ITALY : SITUATION AND OUTLOOK

JANUARY 2023

GENERAL WEAKENING OF THE WORLD ECONOMY AND MANUFACTURING ALREADY IN A RECESSION

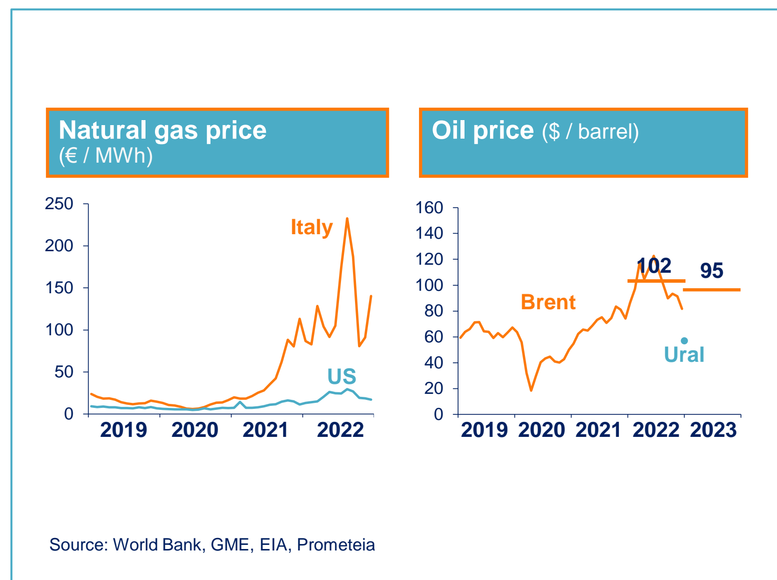
During 2022 the international economy has suffered a marked deterioration: the Euro Area is affected the most by the negative impact of the conflict in Ukraine, first of all by the energy crisis, nevertheless **all three motors of the world growth have been having a hard time** due to the management of the pandemic, inflation impulses and monetary policies tightening.

The deterioration is evident mainly in manufacturing that is already in a recession: the energy shock hits manufacturing more than services and worsens a slowdown which started well before the war in Ukraine as an effect of tensions on costs and an expected re-balancing of demand towards services. **This contributes to mitigating prices of non-energy raw materials, though with partial benefits for European manufacturing in the light of the Euro weakening and of still very high energy prices**. **Weak Euro and reduction of costs for international transport favour EU exports** while demand is slowing down **but intensify pressure on imports.**

HIGH AND ASYMMETRIC ENERGY COSTS, BUT COMING BACK FROM SUMMER PEAKS

The major peculiarity of the current energy crisis is that it is asymmetric and centred in Europe where natural gas has reached unprecedented price levels. This entails a loss of competitiveness for Europe. Considering the use to produce electrical power, the EU depends 24% on gas.

The gas price has gone through a marked downtrend reduction compared with the all-time high levels of last summer. This is to ascribe to the "demand destruction" brought about by such high prices and centred mainly in manufacturing, and to the end of panic-buying to fill storages, that had pushed European countries to compete with one another. If these factors will most likely last till early summer at least, it is much more difficult to forecast how the weather, that has reduced heating needs up to now, and the Chinese demand, slowed down by lockdown measures, will evolve.



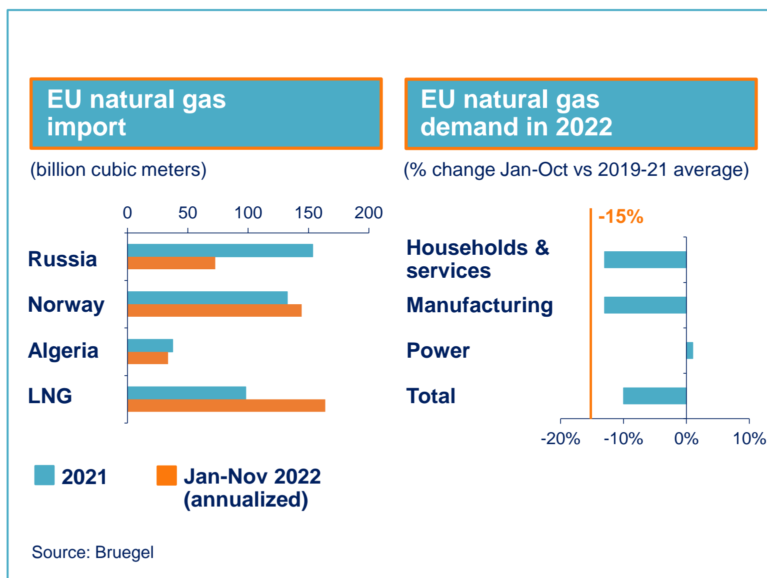
Source: World Bank, GME, EIA, Prometeia

In a context of strong uncertainty, peaks reached last August can be considered as overcome but the gas market price is expected to stay well above 100 euro also in 2023. The competitiveness gap will likely be reduced but not closed. EU gas price will not be equal to the US (production costs amount to around 20$ but they reach 60$ if considering liquefaction, transportation and regasification). Furthermore, the European ban on Russian oil threatens to foster other countries (such as China, India and Turkey) that will benefit from lower prices.

The evolution of the energy crisis will depend on the availability of alternative supplies to Russia. **Up to now Italy and the EU have managed to significantly replace Russian gas, but it will be more**

complex to proceed further in the light of the necessary new infrastructure investments and of the competition with Asia as to LNG supplies. Italy is acting to increase its national production, plunged in recent years, allocating it to most energy-intensive users at controlled prices, but in Europe resistance to go that way persists.

To avoid rationing in winter, it is estimated necessary to reduce demand by 15%. That target does not seem to be far in the light of the significant reduction of household consumption, that could signal changes in daily behaviours in addition to the effects of weather. **Gas rationing risks are reckoned to be limited for this winter, whereas the following one will be more critical given the lower starting levels of storages and the need to fill them without Russian gas.** An effective and, as far as possible, painless containment of consumption – reducing risks of gas shortage – mitigates prices too.



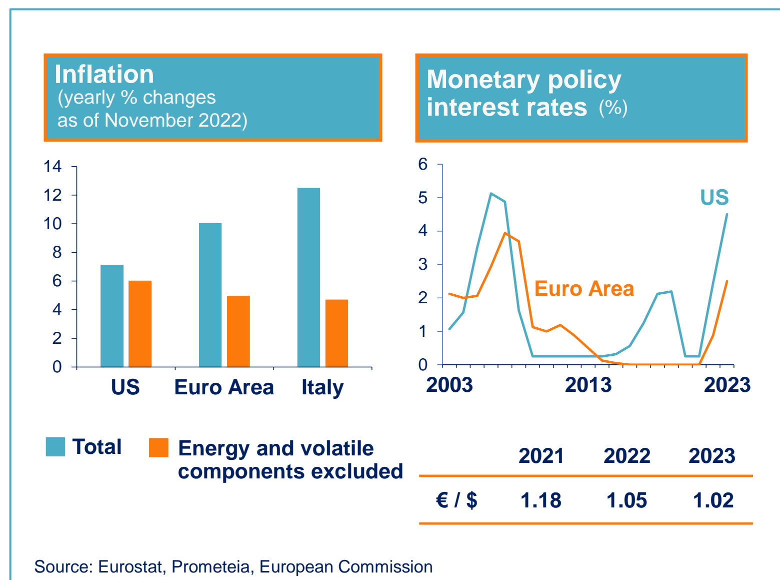
EU initiatives can significantly contribute to easing the energy crisis. The already agreed measures (mandatory storages and demand containment) aim mainly at reducing risks of rationing. The EU is struggling, instead, to find agreed solutions to moderate prices even if small steps forward have been made as to **decoupling of electricity price from gas price and joint purchases to counter competition among European countries.** Very uncertain is, on the contrary, the outcome of the EU proposal for gas price intervention to avoid extreme peaks.

PERSISTENT INFLATION COUNTERED BY RISING INTEREST RATES

In Europe, inflation - fed by the energy crisis - has now exceeded the American one. Assuming that energy costs do not go back to previous peaks, **inflation is expected to start slowing down, but it will still be quite high also in 2023 (5% expected in Italy) due to the long wave triggered by the transfer of higher costs to consumer prices.**

For different reasons **the prolonged period of low inflation can be considered as ended**. On the one hand, the green transition needs huge investments and costs that somehow will have to be taken over by prices. On the other hand, the globalization momentum - that has largely contributed to restraining costs - is weakening and is affected by geopolitical tensions leading to more and more frequent trade barriers and global value chains disruptions. Supply policies paying more attention

to security needs and risk diversification will not necessarily entail production reshoring, but may, in some cases, open up new opportunities to Italian and European companies.

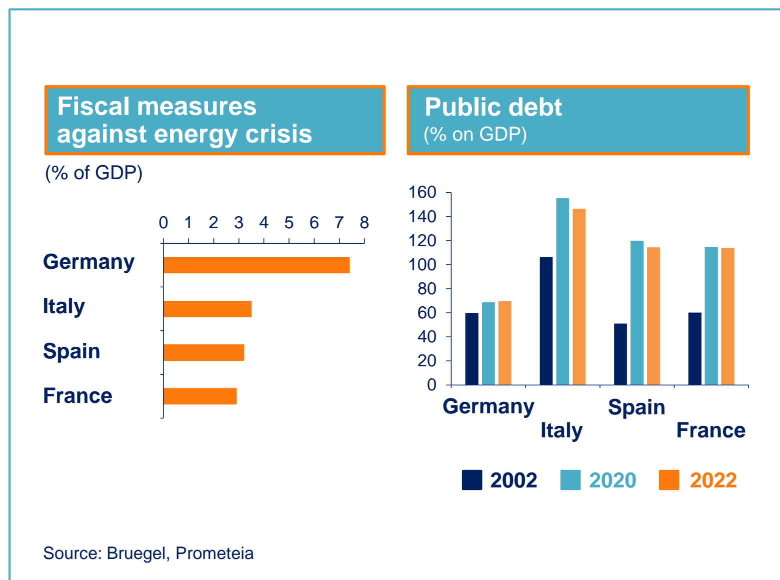


To avoid the risk of a spiralling inflation, the European Central Bank has also started a monetary restriction; **in the Euro Area a less aggressive increase of interest rates compared to the US is,** nevertheless, **expected.** The American inflation is of a different and more persistent nature as it is fed by demand overheating together with significant wages increases, unlike Europe.

In the light of interest rates differentials between the two sides of the Atlantic and of weaker growth perspectives in the Euro Area, together with the deterioration of the trade balance, the **euro/$ exchange is expected to stay quite weak (forecast around parity also in 2023)**.

SUPPORT OF FISCAL POLICIES, BUT BUDGET CONSTRAINTS RESURFACE

In Italy significant fiscal measures have been introduced to appease the impact from the energy shock (3.5% of GDP): in the first part of 2022 households did not suffer any loss of purchasing power, overall, whereas energy bills of companies doubled (instead of tripling). **The fiscal policy will keep on countering the effects of the energy crisis, but is bound to be more selective** in the light of a smaller support from the monetary policy (with the expected reduction of bond purchases) and of the re-introduction of European fiscal rules, although revised, in 2024.
Consequently, interventions will have to focus on the economic players (households and companies) more sensitive to the energy shock.



Other European countries are also employing significant public aids: if, on the one hand, this helps support aggregate demand, on the other hand it can cause distortions in the Single Market as to the different available fiscal space (much wider in Germany than in other main countries). Joint European solutions (e.g. an energy crisis fund) would allow to use public sources more efficiently.

FOR THE ITALIAN ECONOMY A RECESSION IS EXPECTED

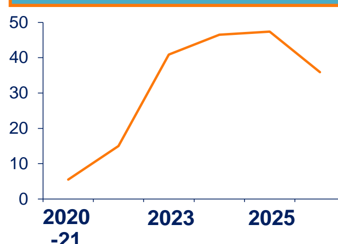
Italy – after growing lively and beyond expectations in 2022 (GDP +3.8%) – is expected to enter a recession in the winter months (forecast for 2023 +0.1% provided the energy crisis does not get worse). The crisis duration and harshness will depend on the development of energy costs and on national and European policy measures.

The implementation of the National Recovery and Resilience Plan will be an important stimulus, particularly for public investments, expected to accelerate also in the light of the increase of published tenders. The allocation of additional resources and the introduction of price revision mechanisms in public contracts will counter, at least partially, an increase of costs. Private investments, on the contrary, will significantly slow down because of cost increases alongside with credit tightening in a context of uncertainty.

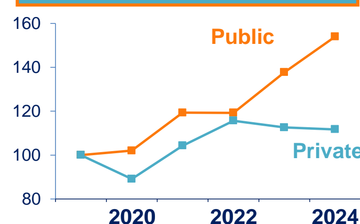
With such a background, **construction** – after booming in 2021-2022 – will not be able to go beyond a moderate expansion (+1.4% expected in 2023) also in the light of fiscal incentives being attenuated. **Other investments** (capital and intangible goods) will record a setback (-0.8%).

The loss of purchasing power of households will unavoidably cause a slowdown of **consumption** driven by the postponement of purchases of durable and luxury goods in a context of general expenditure restraint. Drivers that supported consumption in 2022 will likely limit their downfall in 2023 (0.1% expected). Actually, not only has employment fully regained pre-Covid levels, but it has also driven the unemployment rate closer to its lowest level in the last twenty years. Furthermore, savings – gathered during the pandemic – will

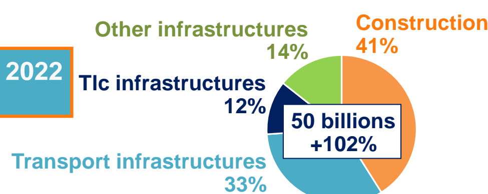
NRRP expenses
(billion euros)



Investments in Italy
(indices 2019=100)

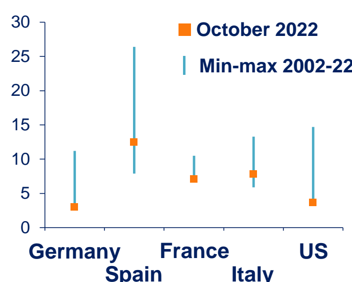


Tenders published in 2022
(Jan-Sep)

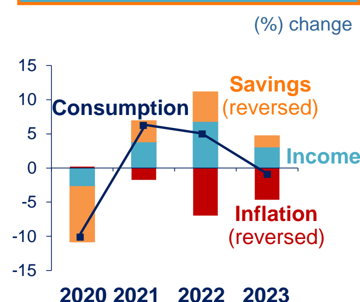


Source: NADEF (update to the Economic and Financial Document), Prometeia, Cresme

Unemployment rate
(%)



Consumption and determinants in Italy



Source: Eurostat, Prometeia

Macroeconomic forecast for Italy
(real % change, unless otherwise indicated)

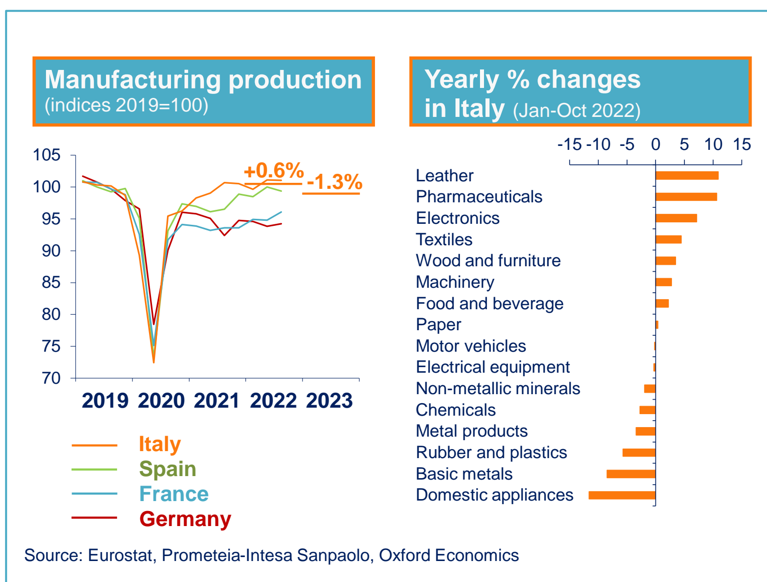
	2021	2022	2023	2023 vs 2019
GDP	**6.7**	**3.8**	**0.1**	**0.8**
Private consumption	5.1	4.2	-0.1	-2.2
Public consumption	1.5	0.6	0.6	3.3
Investments in construction	21.8	11.4	1.4	28.0
Other investments	12.0	7.2	-0.8	6.1
Export of goods	12.9	6.0	1.6	10.8
Import of goods	15.6	8.3	1.6	17.3
Inflation	1.9	8.2	5.1	15.8
Employment	0.8	2.2	0.0	-0.2
Households disposable income	1.9	-0.2	-1.5	-2.4

Source: Prometeia, ECB

likely contribute to defending the consumption standards, particularly for middle-high social classes. Cuts and sacrifices will hit, on the contrary, lower-income households especially.

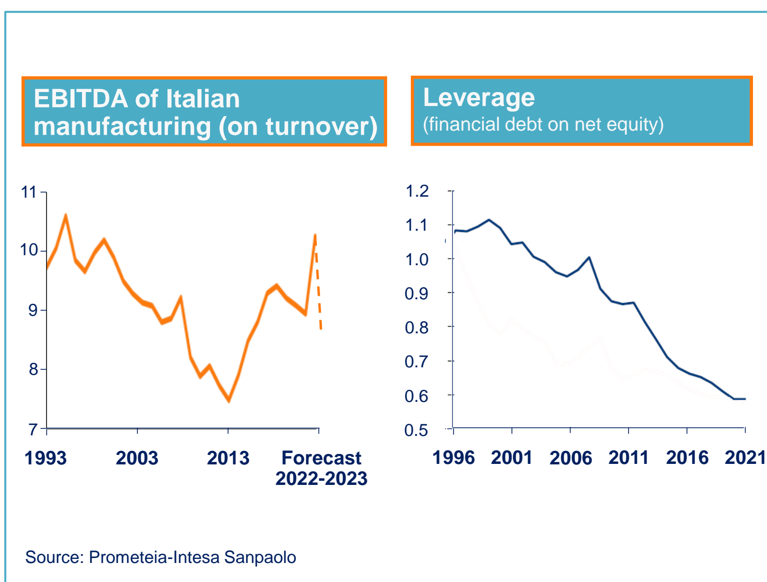
SOLID STARTING CONDITIONS FOR ITALIAN MANUFACTURING, BUT SHRINKING VOLUMES AND MARGINS

Italian manufacturing has so far given proof of a larger post-pandemic recovery ability than other main European partners and considerable resilience also in the face of the energy shock thanks to a diversified production structure and a good performance of export especially in consumer and investment goods. **Recessionary impulses will show up fully,** though, **in the next months**. Rebound effects in sectors most affected by the pandemic (the fashion system first and foremost) will tend to run out and a general demand weakening will take place. **Assuming that the energy crisis does not worsen any further, in 2023 Italian manufacturing is expected to decrease by 1.3% after closing 2022 with a 0.6% growth.**



Source: Eurostat, Prometeia-Intesa Sanpaolo, Oxford Economics

The energy shock will impact differently among sectors and companies **depending on energy intensity, availability of alternative suppliers with lower inflation pressures, and demand sensitivity to higher sales prices.** Some sectors (automotive, machinery, electrical equipment) will likely partially benefit by their order books in the face of an easing in sourcing components. On the contrary, energy-intensive and upstream productions will be hindered more (basic metals, non-metallic minerals, chemicals).

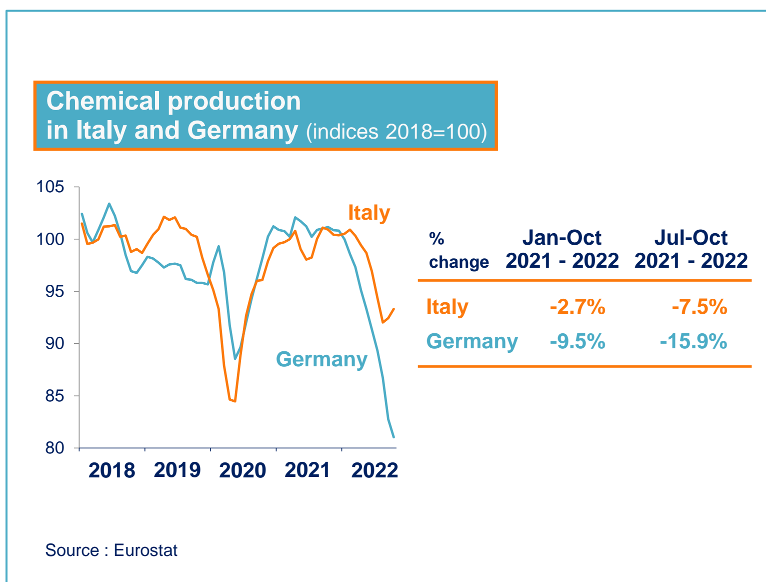


Source: Prometeia-Intesa Sanpaolo

Italian manufacturing companies count on generally solid economic and financial conditions, nevertheless the energy crisis – also given its impact on competitiveness – will entail a significant margin decrease. A more marked deterioration of profitability will be countered by support measures being kept in place and modest labour cost dynamics. Price increases and investment needs will entail increased financial requirements in a context of rising interest rates (from minimum levels). The overall industrial resilience will be fostered by a general reduction of financial debt incidence on net equity (leverage).

DUE TO THE ENERGY CRISIS, CHEMICAL PRODUCTION DECREASE IN 2022 AND 2023

With over 2,800 companies, 112 thousand employees and production value in 2021 back to over 56 billion euros, the chemical industry in Italy is the **third European producer** (after Germany and France) and the **sixth largest industry in the country**. **Since last summer the chemical production in Italy has been suffering an abrupt setback (-7.5% vs same period in 2021)** that, despite the good performance of the first half year, drags the result of the first ten months into negative territory (-2.7%). **For the whole 2022, a 4% decrease is expected.**



Being upstream of several value chains, the chemical industry tends to anticipate the trend of manufacturing as a whole. In a context of deep uncertainty, **demand highlights a general weakening** that involves also less cyclical sectors (such as food and beverage) and in those that had benefited from a robust post-pandemic recovery (such as con-struction and furniture). **The downturn is amplified by destocking** – typical of cycle-inversion phases – **together with cases of production stops** due to unbearable energy costs levels. To cope with the crisis, the chemical companies are using all possible levers including rescheduling work shifts and re-formulating products in addition to convincingly investing in cogeneration, renewables and circular economy. Just recently authorization restraints to replace natural gas with alternative fuels have been removed (till March 2024), which could lead the chemical industry to spare up to 250 million cubic meters on a yearly basis. That proves, once more, **the importance of the law system to ease transformation: in general, a widespread administrative simplification and a time acceleration are necessary** to facilitate transformation.

The chemical industry records a contraction throughout Europe with a particularly hindering trend in Germany (-9.5% in January-October) which represents Italy's first destination market (4.7 billion of exports in 2021) and the first supplier (9.4 billion of imports). The energy crisis affects more heavily base and energy-intensive productions. **Italy is specialized in special-ties and consumption chemicals (sector production share of 61% vs 45% of the EU) and this helps explain the relative resilience, but it does not clear the field of concern.** The industry is tightly interlinked also in terms of innovation, consequently weaker upstream phases harm downstream activities too.

The gas price easing back from August peaks is a relief, but that is not enough to guarantee a trend reversal. Prices have quickly gone back to well beyond 100 euro (i.e. more than four times compared to pre-crisis) and new surges are not off the table. Moreover, spill-over effects tend to show up with passing months. Costs increases materialise as supply contracts are renewed and stocks are depleted. Increasing inflation and interest rates contribute to weakening final demand.

Assuming that the energy crisis does not get further worse, **in 2023 the chemical production in Italy is expected to decrease by about 2%.** The sector deserves particular attention as to both support interventions and in the event that production restrictions are necessary, which should in any case be planned properly in advance, adequately rewarded and time-limited **in order not to compromise the supply of essential chemical products for areas such as health, agrifood, construction and made-in-Italy excellences.** A realistic gas consumption reduction plan, also aimed at empowering citizens, is an important contribution to calm price escalation.

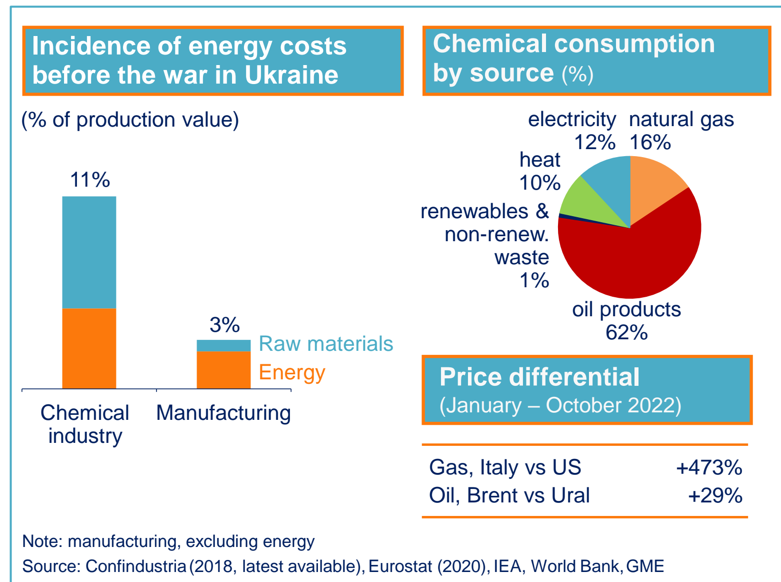
Forecast for the chemical industry in Italy

	2021 billion €	% change in volume 2022	2023
Domestic demand	67.8	+0.5	-1.0
Import	47.5	+4.8	+0.5
Export	36.1	-1.4	-0.5
Production	56.4	-4.0	-2.0

Source: Istat, Federchimica

AMONG THE SECTORS MOST AFFECTED BY THE ENERGY CRISIS

The chemical industry is particularly hit by the energy crisis as fossil fuels (oil and natural gas) are not only sources of energy, but also raw materials. Before the price escalation, the **incidence** of such energy costs **on production value was 11% vs a manufacturing average of 3%**. For different productions (base chemicals such as ammonia, sulphuric acid and chloro-alkali, technical gases, fertilizers, fibres, abrasives, numerous pharmaceutical active ingredients) that share is even higher. The chemical industry has already started the first bio-refineries to produce biodiesel and bioethanol and it is the only sector, together with oil refineries, to contribute to hydrogen production. **Renewables are an important development area, nevertheless – based on currently available technologies – the entire replacement of fossil fuels is not achievable.**

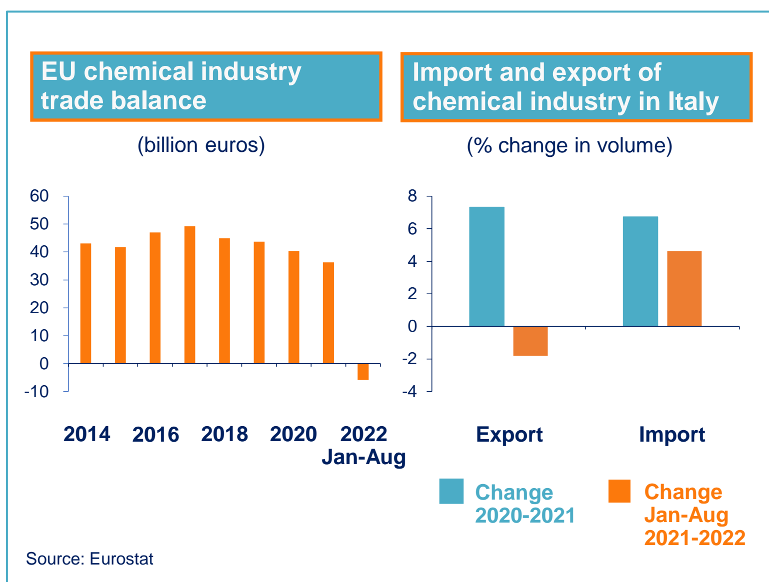


Note: manufacturing, excluding energy
Source: Confindustria (2018, latest available), Eurostat (2020), IEA, World Bank, GME

The highly asymmetric nature of the energy crisis risks compromising the Italian and European competitiveness: in 2022 gas price in Europe has been five-fold compared to the US and the European embargo on Russian oil will favour other countries (such as China, India and Turkey) that will be able to benefit by 20-30% lower prices. With the Inflation Reduction Act, moreover, the US

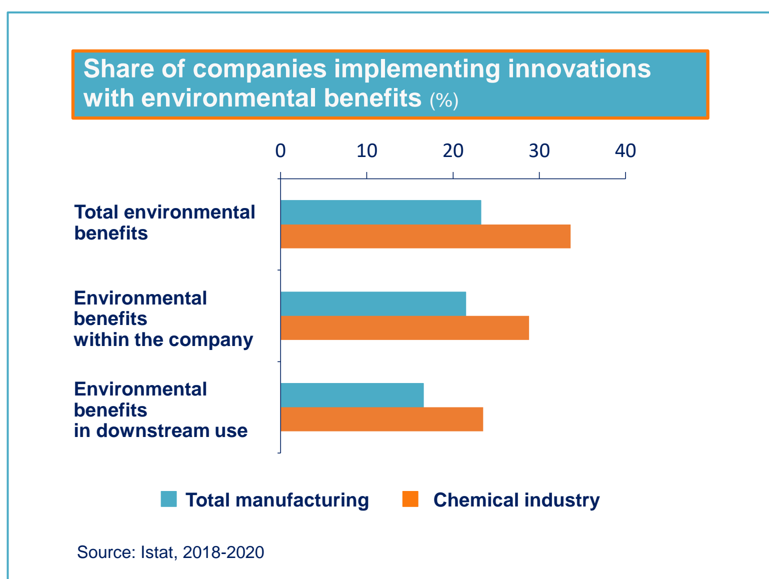
envisages significant subsidies (about $370 billion over the decade) to foster the green transition by providing for local production constraints according to “Buy American” principles.
The European chemical industry, that has always produced a wide trade surplus, records a deficit close to 6 billion euros in the first eight months of 2022, also due to some production stops.

Erosion of market shares is visible also in Italy: **in January-August export in volume suffers a marked braking (-2% from +7% of the previous year) whereas import expands by 5%.**



CHEMICAL INDUSTRY ESSENTIAL TO IMPLEMENT THE GREEN TRANSITION

Should the Italian and European chemical industry weaken – along with increasing import penetration – a severe loss would occur not only at the industrial level, but also for environmental protection given the excellence standards of local productions and their strategic role in the development of technological solutions for the green transition.
Only in the last three years, **34% of the chemical companies in Italy have implemented innovations with environmental benefits, a share 10 percentage points higher than the manufacturing average.** The effort is directed first of all to improve sustainability within the company: the sector has already exceeded the EU objectives for 2030, by improving energy efficiency by 44% since 2000 and reducing direct greenhouse gas emissions by 64% since 1990. Chemical innovation promotes environment-friendliness also in downstream uses with benefits for the whole economic system (24% of companies).



A rethink of the European energy and climate policy is necessary not to abandon environmental objectives, but to make the green transition feasible. The pressure towards an abrupt reduction of investments in fossil fuels, against a still unsuitable alternative supply, amplifies tensions. **It is essential to guarantee proper energy supplies at affordable prices, also thanks to regulation revisions at European level. More generally, the regulatory environment must foster all technological solutions on behalf of sustainability.** Developments in the chemical industry are plenty, for example chemical recycling, biotechnologies, eco-design, alternative fuels and innovative technologies for an eco-friendly mobility, energy efficiency of buildings, CO_2 capture, storage and reuse, clean hydrogen.

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