



THE CHEMICAL INDUSTRY IN ITALY : SITUATION AND OUTLOOK

JANUARY 2024

WORLD ECONOMY TO DECELERATE FURTHER IN 2024, BUT INDUSTRY HAS ALREADY ANTICIPATED THE SLOWDOWN

After a long period of relative stability, since 2020 the world economy seems to have entered a phase of 'permanent uncertainty'. First of all due to a series of non-economic shocks (pandemic, supply chain disruptions, conflict in Ukraine and more recently between Israel and Hamas). However, policies – aimed at restraining the economic impact of these shocks – also contribute to uncertainty in the light of rapidly rising public debt, inflation and interest rates.

In this context, the most benign scenario is the so-called 'soft landing', characterised by the gradual decrease of inflation and subdued growth (but not a recession).

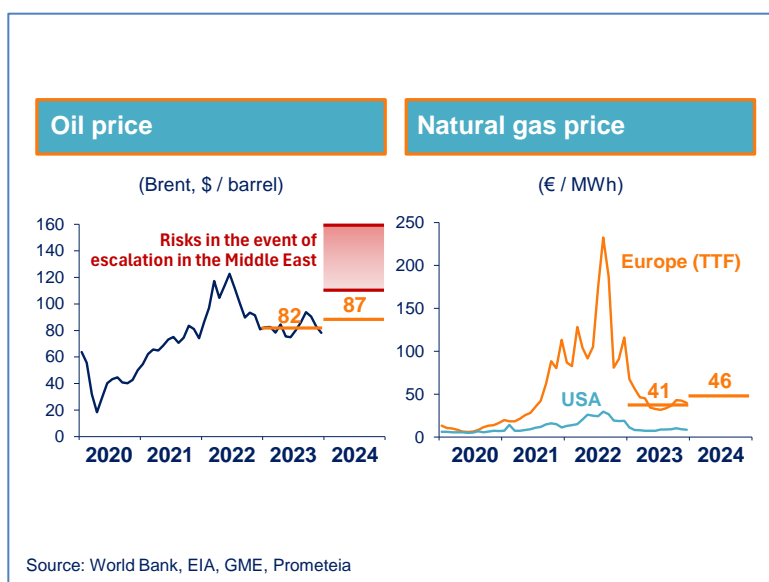
The Euro Area remains particularly vulnerable due to the asymmetric impact of the energy crisis compared to the other major economic areas (United States and China) and a rise in inflation and, consequently, interest rates driven by supply rather than an underlying liveliness of demand. **Modest growth is expected in 2024, but any negative shocks would expose the region to recessionary risks.**

The global industry – particularly affected in 2023 by rising energy costs and a demand mainly concentrated towards services – is expected to see limited improvement in 2024.

ENERGY COSTS EXPECTED AT LEVELS NO LOWER THAN 2023 IN THE PRESENCE OF UPWARD RISKS

In a context of weak global demand, oil price is expected to be close to stable (\$87) in 2024. If, on the one hand, OPEC tends to oppose levels below \$80 (which do not allow Saudi Arabia to finance public spending), on the other hand, US production is touching new all-time highs.

The conflict between Israel and Hamas in itself does not significantly affect oil supplies, however it fuels fears of an escalation of tensions in the Middle East which – should it materialise – would drive prices well above \$100 with widespread repercussions on other energy sources (including gas). Unlike the war in Ukraine, where positions are not fully aligned, the US and China (together with the EU) have a common interest in avoiding an escalation of the conflict, also in light of the fragility of the world economy.



Despite coming back from the peaks of 2022, during 2023 European (and Italian) demand for natural gas remained in contraction by about 10% compared to the pre-crisis period (2019-2021) due to the increased use of alternative sources and energy savings (stimulated by prices that were still high), but also due to favourable weather conditions and the slowdown in the most energy-intensive industrial activities (including the chemical industry). In this context, the EU has reached storage levels close to 100%, and Ukraine has made available deposits of an additional 10 billion cubic metres (about one-tenth of the entire European capacity). Taking into account the expected weakness of the Chinese economy but in the context of a still tight global LNG market, also due to under-investment in fossil fuels as a result of pressure towards alternative sources, the forecast for the price of natural gas in Europe in 2024 is around €45 per MWh. Risks to the upside derive from a possible escalation of tensions in the Middle East and from unfavourable weather conditions (not only a cold winter, but also droughts that affect hydroelectric and nuclear production).

To summarise, **energy costs are expected to average about the same high levels in 2024 as in 2023 in a context characterised by significant upside risks that will tend to fuel volatility. Consequently, the competitive disadvantage of European countries will not be reduced unless supported by European and national energy policies.**

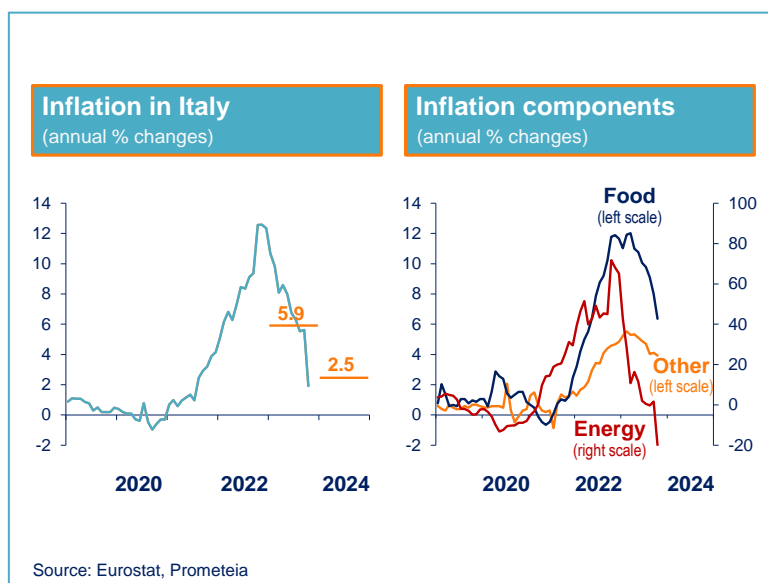
DECREASING INFLATION IN ITALY, ALSO DUE TO WEAK DEMAND

Without any new upward shocks to energy prices, **inflation in Italy is expected to decrease to 2.5 % in 2024 from 5.9 % in 2023.**

The cooling down of inflation will primarily reflect the settling of energy prices, which are still at high levels. Food still show significant upward pressure, but on a declining trend. Overall, the underlying component – which captures the spread of price tensions – will gradually slow down, also as a result of weak demand.

The reduction of inflation will follow a bumpy path. On the one hand, the recent fall mainly reflects the comparison with the gas peak reached last year. On the other hand, possible volatility in commodities and the withdrawal of a considerable part of the fiscal measures against high energy prices will act as obstacles.

The slowdown of globalisation (with increasing barriers to trade), more security-conscious supply policies and the green transition are further factors that lead to the conclusion of the prolonged period of virtually zero inflation. In this context, **the ability (and possibility) for companies to pass on cost increases to sales prices will be even more important.**

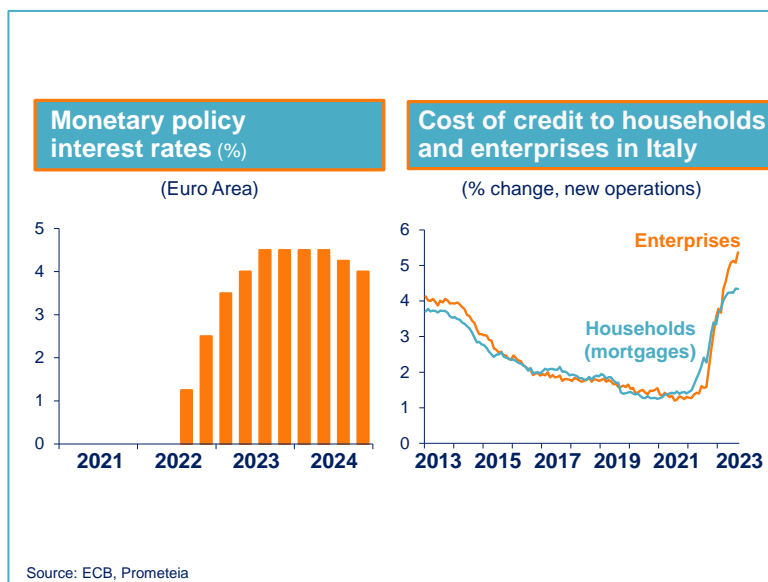


SHARP RISE IN THE COST OF CREDIT, BUT INTEREST RATES WILL NOT INCREASE FURTHER

Faced with the marked increase in inflation, the European Central Bank carried out the fastest interest rate increase in its history with immediate repercussions on the cost of credit for households and businesses in Italy, mitigated, only in part, by the low level of private debt.

In a scenario characterised by a weak European economy and falling inflation, **the ECB is not expected to raise rates any further in 2024. Demand for credit will, however, remain subdued, especially in the first part of the year.** In the event of further price shocks, the picture would become more complex to counter the risks of an inflationary spiral on the one hand and of recession on the other.

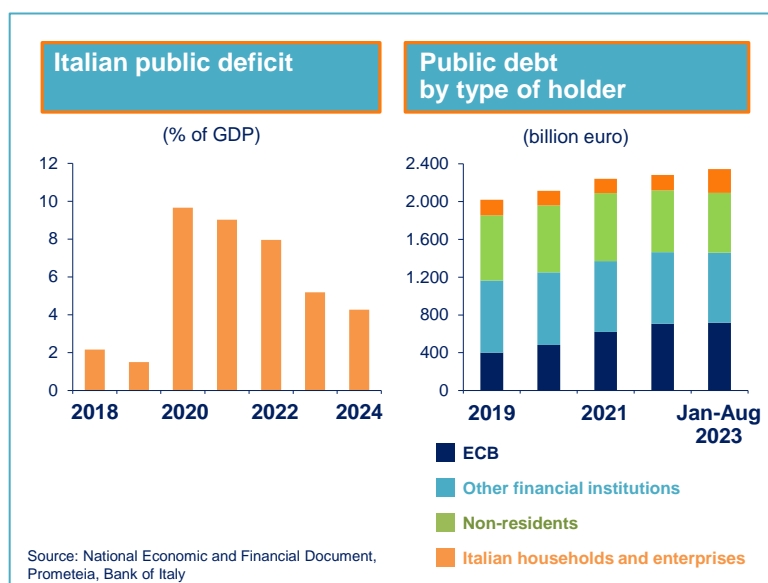
The US Fed also stopped raising rates, but – in light of the economy holding up beyond expectations – the risk of further hikes cannot be ruled out. Against the background of a stronger US economy, the euro exchange rate is expected to remain stable or weaken slightly in 2024 (\$1.07).



LESS SUPPORT FROM FISCAL POLICY AND POSITIVE BUT LOWER-THAN-EXPECTED PNRR MOMENTUM

Italy has limited budgetary space: not only because of the need to reduce the deficit (also in view of the re-introduction of fiscal rules at European level), but also because of the gradual increase in interest expenditure and the huge charges related to the superbond (100 billion euro, more than double the initial estimates).

In the perspective of a very gradual reduction of public debt (in % of GDP), **the increase in financing by Italian households and companies that is accompanying the gradual reduction of ECB purchases is a less vulnerable factor.**



The expansionary measures are mainly geared to supporting lower and middle incomes and to a large extent constitute an extension of already existing instruments. On the contrary, building bonuses and aid against the high energy costs for companies have been reduced.

The overall impact can only be contained if energy costs do not escalate again.

In this context, the implementation of the National Recovery and Resilience Plan is crucial both to counteract immediate recession risks and to increase the country's growth capacity (with benefits also for public debt sustainability).

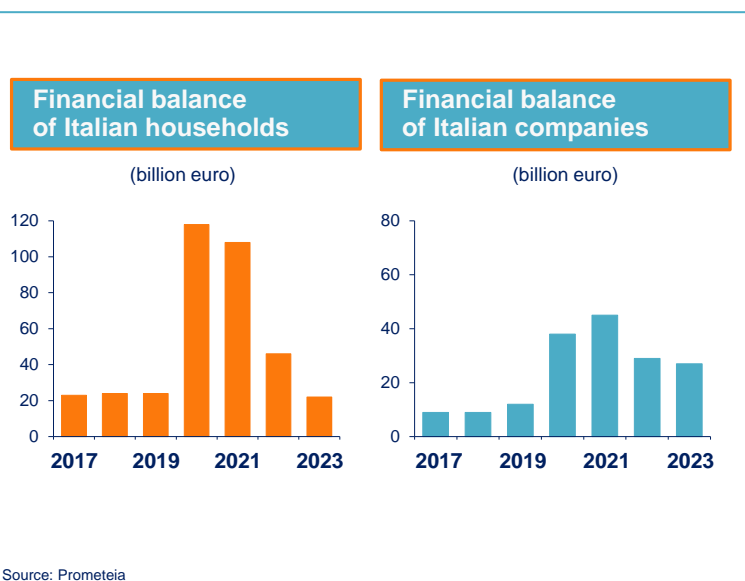
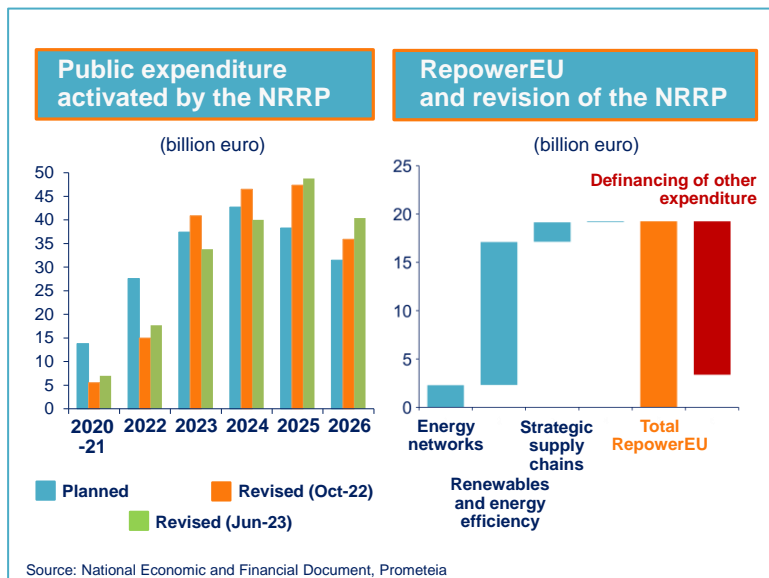
Italy is the main recipient of European funding flowing into the National Recovery and Resilience Plan. However, the difficulties in spending all the available resources and the recent revision of the NRRP, together with the integration with the RepowerEU chapter (more than EUR 19 billion, largely financed through the exclusion of other interventions), will lead to a partial postponement of expenditure and a downsizing of direct public investments compensated by incentives to private investments, especially with a view to energy transition.

Other European countries are also intervening with significant public subsidies with distorting effects on competition in relation to the different fiscal space available (almost half belongs to Germany compared to 5% for Italy). Sharing European solutions to support the green transition would allow public resources to be used more efficiently.

IN 2024 WEAK GROWTH OF THE ITALIAN ECONOMY

The scenario outlined highlights several elements of uncertainty for the Italian economy.

The year 2023 benefited from the support derived from the **savings** accumulated during the pandemic, which will, however, tend to dry up also in light of the growing propensity to defend the real value of wealth through increased financial investments.



On the other hand, jobs continued to increase in 2023 (+1.8%). Although a marked slowdown is expected in 2024 (+0.7%), **employment** is expected to remain at high levels.

For companies, labour recruitment, especially for certain professional figures, will remain conditioned by a context of reduced labour supply, due to demographic reasons, and by skill mismatch.

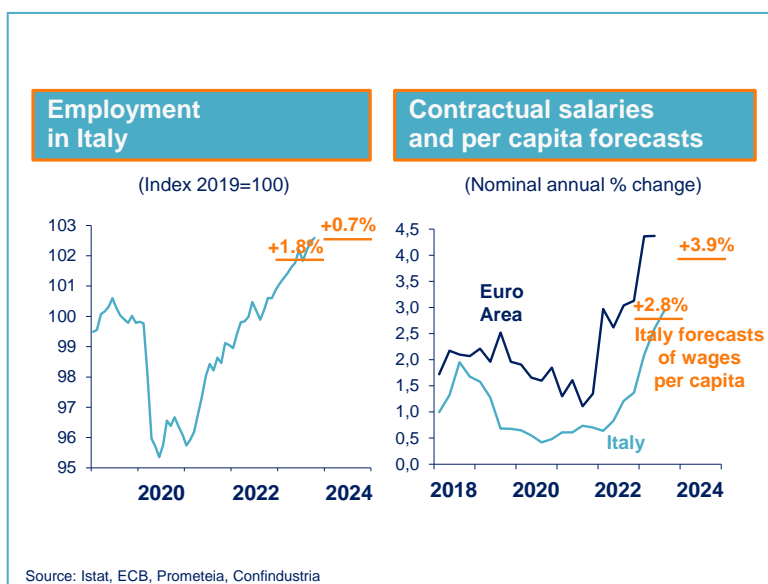
The reduction of inflation – coupled with rising **wages** – will allow for a partial recovery of disposable income in real terms after the setbacks suffered in 2022-2023.

In this context, **private consumption** is expected to slow down significantly but not to contract (+0.8% after +1.5% in the previous year).

In 2024, the expected increase in public investment will not be sufficient to compensate for the decline in private investment, particularly in the **construction** sector (-4.6%) as a result of the correction in the residential sector due to the non-extension of the so-called superbonus and tighter credit conditions.

Other investments (capital goods and intangible assets) are also expected to slow down considerably (+2.6% in 2024 after +3.9% in the previous year), although they will continue to expand moderately in relation to the backlog of orders and the companies' drive towards digital and green transformation (also with a view to efficiency and savings).

Italy – after a strong recovery in 2022 – will experience weak growth in 2024 (+0.4%) and a slowdown compared to the previous year (+0.7%). Assuming no further negative shocks occur, it will be able to avoid recession.



Macroeconomic forecast for Italy (real % change, unless otherwise stated)				
	2022	2023	2024	2024 on 2019
GDP	3.9	0.7	0.4	2.2
Private consumption	5.0	1.5	0.8	0.6
Public consumption	0.7	-0.4	0.0	2.4
Investments in constructions	12.1	-2.8	-4.6	23.5
Other investments	8.0	3.9	2.6	13.8
Exports of goods	7.0	-1.2	1.8	10.2
Imports of goods	10.0	-2.6	2.4	14.4
Inflation	8.7	5.9	2.5	20.2
Employment	2.5	1.8	0.7	2.6
Disposable income of households	-1.1	-0.1	1.4	-0.7

Source: Prometeia, ECB

ITALIAN MANUFACTURING PRODUCTION SUBSTANTIALLY STAGNATING IN 2024

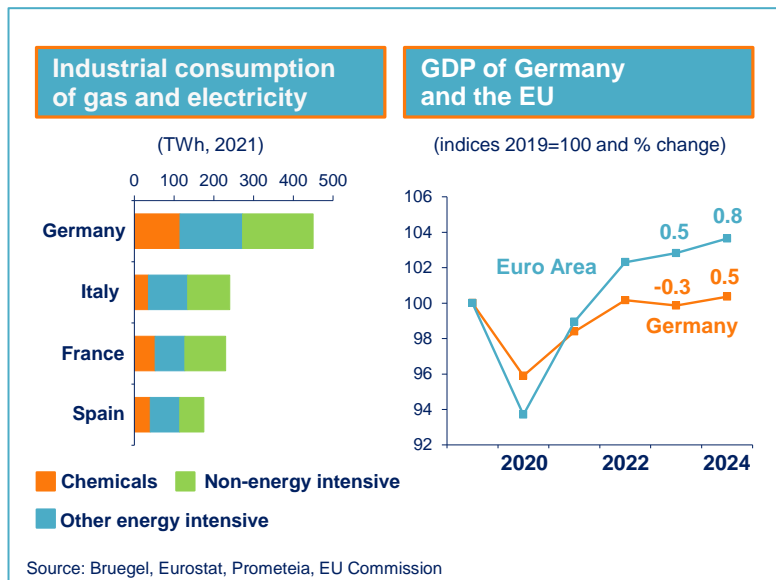
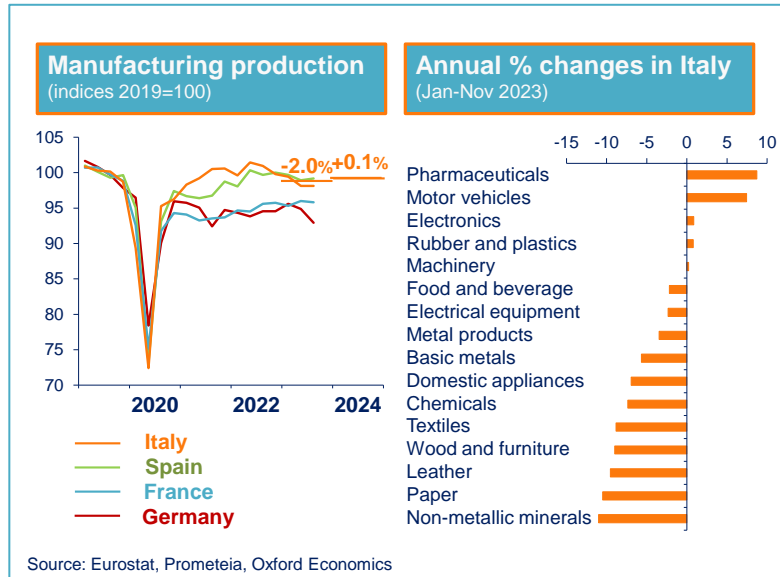
In 2023, Italy's manufacturing production slowed down more intensively than the other major European economies (-2%), however – in comparison with pre-pandemic – it remained at better levels than France and Germany.

The recessionary trend extended to most industrial sectors, with strong increases only for pharmaceuticals and automotive. The most pronounced contractions involved, instead, the energy intensive sectors and those related to the construction cycle (from all time peaks).

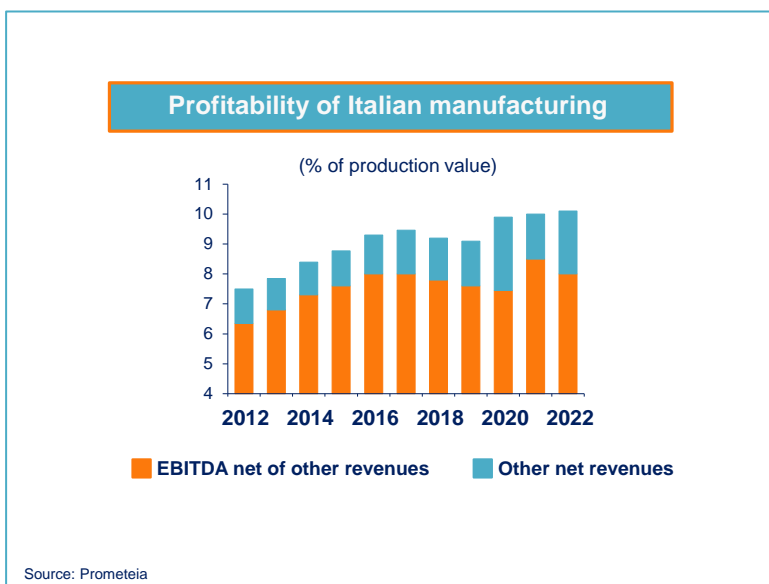
The German economy – which is Europe's largest industry and Italy's most important trading partner – is experiencing a particularly weak phase, not only due to its most pronounced orientation towards the Chinese market (which is increasingly self-sufficient), but also due to the strong relevance of energy-intensive sectors. At the same time, it has ample fiscal space to support the economy with beneficial effects on European demand but also with distortive repercussions on competition.

The Italian industrial structure is, on the whole, less energy intensive, but suffers from higher energy costs compared to European competitors.

Generally speaking, the drops in production in 2023 have been amplified by a widespread and intense process of inventory reduction, also in light of the slowdown in demand accompanied by rising costs and interest rates. In this context, **Italian manufacturing production is expected to substantially stagnate in 2024 (+0.1%)** in the presence of a still weak first half and limited signs of recovery expected mainly in the second half of the year.



Italian industrial companies are facing the current phase from an overall sound economic-financial condition. Increased capitalisation and liquidity reserves are making it possible to limit recourse to credit and will help to avoid a more pronounced slowdown in investment. Margins – expected to decline not only in 2023 but also in 2024 – started from all-time highs reached in 2022 (EBITDA of 10% of which 2% of other revenues, which includes tax credits). In view of the significant heterogeneity among sectors and companies, cases of economic-financial imbalance cannot be ruled out.



AFTER THE 2022-2023 DECLINE, CHEMICAL PRODUCTION IN ITALY IS EXPECTED TO RECOVER ONLY marginally IN 2024

Italy is the second largest manufacturing economy in Europe and the chemical industry – with a value of production generated in the country of **more than 66 billion euro** in 2022 and more than 112 thousand employees – represents **the country's fifth largest industry**. Qualifying as a supplier to virtually all production chains, the sector is a thermometer of the general health of the economy and of industry in particular.

After a drop in chemical production in Italy estimated at 7% for the whole of 2023, which follows the 4% drop in 2022, **2024 also promises to be a complex year with a forecast of a marginal recovery (+0.5%) subject to downside risks** connected, first

and foremost, to uncertainties over energy costs. Expectations for improvement rely mainly on the second half of the year.

Industrial demand, which was also generally weak in the latter part of 2023, is not yet showing significant signs of a turnaround after an unprecedented cycle of chemical stockpiling.

Among the main customer sectors, construction is clearly slowing down after the boom of previous years, while the rebound in the automotive sector is set to fade as it reflects the fulfilment of backlog

The chemical industry in Italy

(2022)

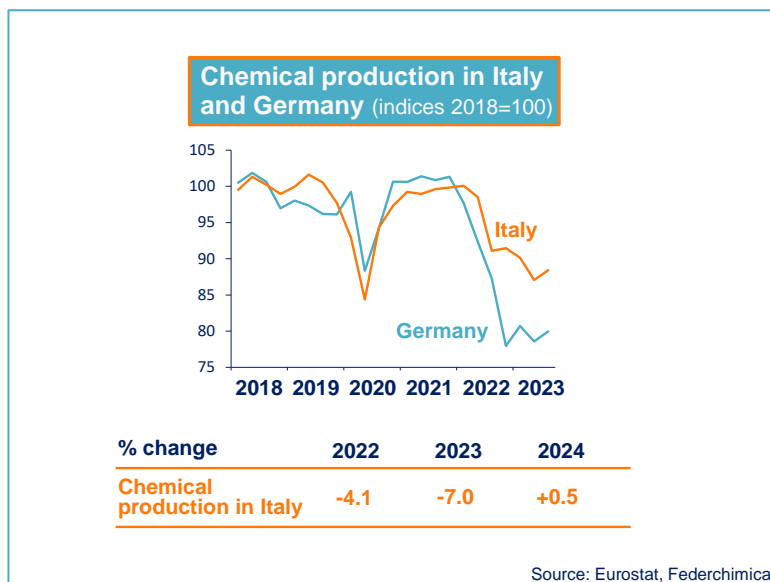
Value of production (billion euro)	66.7
- of which export (billion euro)	43.3
Entreprises (number)	2,798
Employees (thousands)	112.2
Investments in R&D (billion euro)	677
Personnel R&D / employees	8%

Source: Istat and Federchimica

orders. At the level of chemical sub-sectors, the contraction is more marked in basic productions while cosmetics remains positive.

The difficult picture affects all European chemical industries, with particularly marked contractions in Germany (-11% in the first 11 months of 2023 after -12% in 2022). Uncompetitive energy costs and weak demand hinder the restart of activities, and uncertainty – even in the medium term – has already led to the rationalisation of some production. **For Italy, a factor of**

relative resilience, also in light of the partial reduction of gas prices, is **the specialisation in speciality and consumer chemicals (sectoral production share of 61% compared to 45% at EU level)**. The supply chain is, however, closely interconnected, at European level and between upstream and downstream activities.

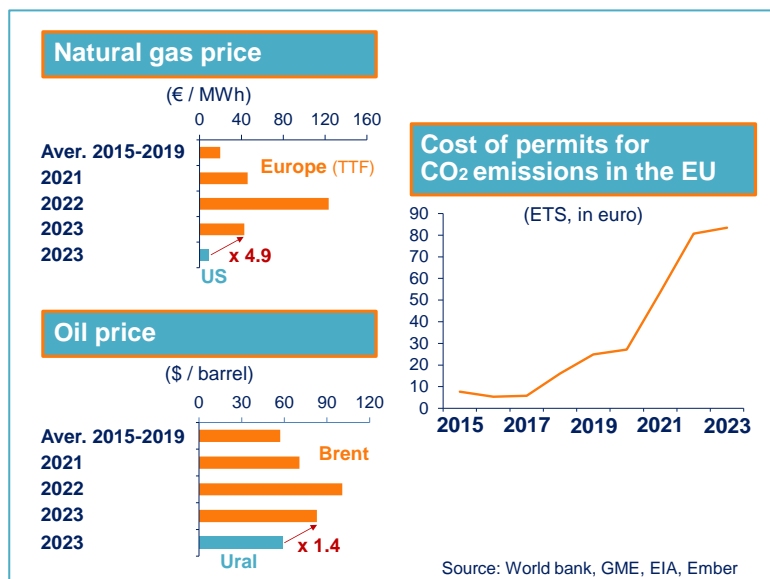


THE ENERGY CRISIS CANNOT BE SAID TO BE OVER AND THE CHEMICAL INDUSTRY IS AMONG THE HARDEST HIT SECTORS

The energy crisis started before the conflict in Ukraine, is also due to short-sighted political choices – at the European and Italian level – and certainly cannot be said to be over. On average in 2023, gas prices, although coming back from the unprecedented peaks of 2022 and returning to levels similar to 2021, have still been more than double the pre-crisis level (2015-2019 average) and almost 4/5 times those of the US. The outlook for 2024 is one of substantial stability, but new gas and oil flare-ups cannot be ruled out, especially in case of an escalation of tensions in the Middle East.

As a result of Europe's acceleration of emission reduction targets, the cost of CO₂ emission permits – within the European ETS – also rose from 25 euro in 2019 to 84 euro in 2023 in the presence of partial compensation of indirect costs related to electricity in Italy (about 48% for the sectors allowed).

To cope with cost increases, chemical companies are using every available lever – including, where possible, the substitution of natural



gas with alternative fuels and product reformulation – as well as investing strongly in energy efficiency, cogeneration, renewables and the circular economy.

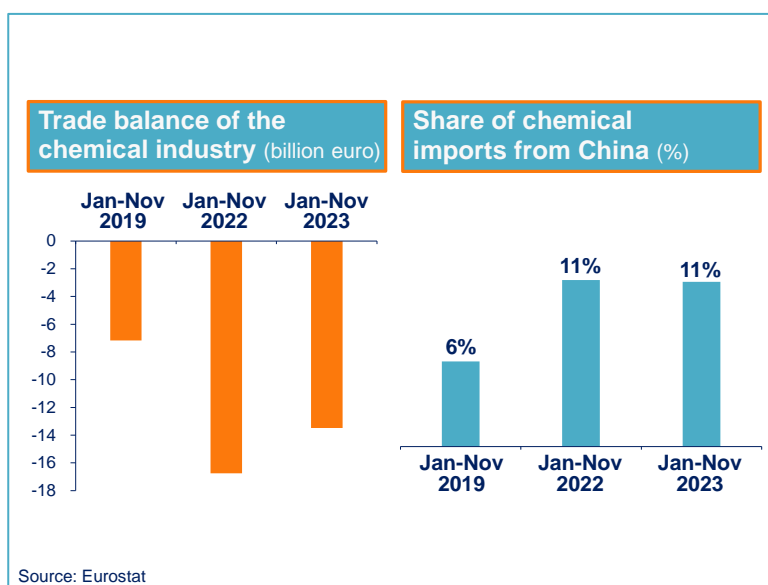
The chemical industry is among the sectors hardest hit by the energy crisis as it absorbs more than 30% of Italy's consumption of fossil fuels (oil and natural gas) both for energy purposes and as raw materials whose complete substitution is, to date, impracticable. Adequate policies aimed at containing - in the short term - the costs of gas and electricity are essential first and foremost for the most sensitive activities (including its use as a raw material), because further price rises could lead Italy to find itself in a penalising condition with respect to other main European producers. Moreover, as a result of the embargo on Russian oil, Italy (as well as other European countries) pays prices 40% higher than countries (such as India, Turkey and China) that continue to purchase it.

In addition to achieving adequate diversification of supply and developing renewables, the use of national gas resources should be enhanced and a truly integrated system developed at European level. In light of the limits of renewables in continuously meeting industrial demand, support for cogeneration through the use of decarbonised or renewable fuels in the short term should be re-launched, and a path should also be taken towards the use of fourth-generation nuclear power (in particular Smr, i.e. small and modular reactors). Equally important is to better reflect technologies and production costs in electricity pricing.

ASYMMETRICAL COMPETITIVE CONDITIONS LEAD TO A RETREAT EVEN FROM ENVIRONMENTAL PROTECTION

The cost gap with international competitors led to a worsening of the trade balance, which was only partially reabsorbed in 2023 compared to 2022, maintaining an increase compared to 2019 of 6 billion euro (considering the first 11 months of the year).

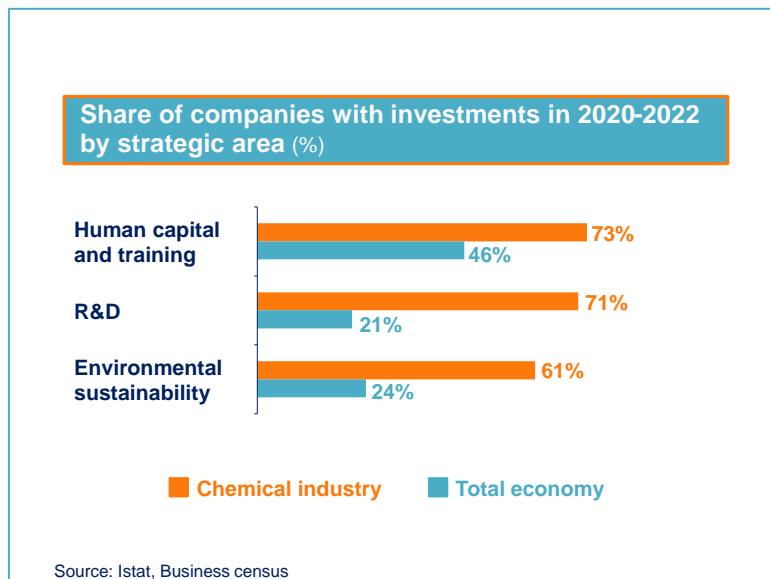
At the same time, **between 2019 and 2023, the share of chemical imports from China has almost doubled to 11%.** This shows how **penalising competitive conditions for chemicals, both Italian and European, entail not only a serious loss from an economic and social point of view, but also a setback in terms of environmental protection** as they inevitably translate into more imports from low-cost countries with lower standards and fewer guarantees.



IN A FRAMEWORK OF GREAT UNCERTAINTY, THE CHEMICAL INDUSTRY HAS CONTINUED TO INVEST IN THE FUTURE

In a complex period, marked by the pandemic and the deflagration of the energy crisis, the chemical industry has continued to invest in Italy, recognising three fundamental and synergetic areas as strategic for sustainable and environmentally friendly growth: human capital (73% of companies), R&D (71%) and environmental sustainability (61%). **Investments were close to 4 billion euro** with an increase, adjusted for the effects of inflation, of 16% between 2017 and 2021 (last available year).

Chemistry, along with pharmaceuticals, is the sector that invests the most in the skills of its workers: every year almost 30% of employees attend at least one training course (not counting compulsory training). **Thanks to a high propensity towards investment and qualification of human resources, labour productivity is more than double the Italian average.**



Investment and productivity, also understood as the efficient management of natural resources, are the only way to achieve the green transition, avoiding negative economic and social consequences. In this area too, the chemical industry is a reference model: **with production being equal, it has reduced its energy consumption by 33% since 2000 and its consumption of fossil raw materials by 40% since 1990. Thanks to its expertise and its location upstream in numerous supply chains, chemistry is pushing forward the limits of development by optimising processes and making ever better use of resources, with widespread benefits for the entire economic system.** The areas for further development are numerous: from chemical recycling to biotechnology, from the production of low-carbon or renewable hydrogen to the circular design of products, from chemistry from waste to the development of innovative technologies for the energy efficiency of buildings, for environmentally sustainable mobility, and for the capture, storage and reuse of CO₂.

THE GREEN TRANSITION REQUIRES LARGE INVESTMENTS AND A FOCUS ON COMPETITIVENESS

Investment and productivity are at the heart of the chemical industry's ability to generate and distribute wealth, more than ever in this decisive phase in which the foundations for competitiveness in the coming decades are being laid.

The environmental challenge is first and foremost a technological and competitive challenge that will require massive investment and appropriate facilities. All the major players on the

international scene, starting with the US, are promoting massive industrial policies to attract investment in the knowledge that otherwise there is a real risk of degradation and social impoverishment.

Chemistry makes countless products available, each of which has multiple applications, and consequently underpins all economic activity, helping to meet the needs of today and tomorrow (e.g. for batteries, wind turbines or solar panels). **Uncertainty, not only related to the current economic phase but especially with respect to medium-term prospects, is the most serious obstacle to investment in Italian and European chemicals.** For the sector, **access to energy sources (renewables and fossil fuels) at competitive costs** as well as **certain timeframes for authorisation processes** are essential preconditions. The regulatory framework, European and Italian, must promote the green transition but without favouring one solution or material to the detriment of others. Cases of the failure to respect **technology neutrality** are, for example, the proposed EU regulation on packaging, which penalises the Italian recycling system, and the national plastic tax, postponed for another six months but not yet abolished. Even possible restrictions on the **use of substances**, or even families of substances, should not only be based on evaluations of potential danger but should take into account the capability for effective risk management as well as the difficulties (sometimes even impossibilities) in identifying valid alternatives.

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