ENERGY OUTLOOK

Year VII n°20 - June 2022

Macroeconomic and Commodities Outlook

GDP projections were revised lower under the hit of the war, as surging prices, trade frictions, increasing uncertainty and financial condition tightening weight on economic activity**. Italian GDP is foreseen to grow 2.2% in 2022 (y/y) and 1.4% (y/y) in 2023,** mainly sustained by carry over effects. **The inflation outlook remains under pressure,** as energy and food prices increases start to spread to other sectors. The acceleration of monetary policy normalization and low wage dynamics are still limiting a spiral effect on expected prices, though.

Years 2022 to 2024 references for Brent were revised higher, since uncertainty on supplies and geopolitical tensions is expected to persist. However, **world supply slow recovery should lead to a market rebalancing starting from year 2023, bringing prices back on a normalization path towards 90 $/bbl by the end of year 2024. Risk is unbalanced to the upside** since any further disruption would keep quotations above the 100 $/bbl threshold till year 2025.

There is a fairly high probability of the Coal market stabilising at the current price levels over the coming years and to progressively normalize just after other energy sources are guaranteed and risk for energy supply disruption is averted. **Years 2022 and 2023 are now expected to average near 280 $/ton and 230 $/ton respectively**.

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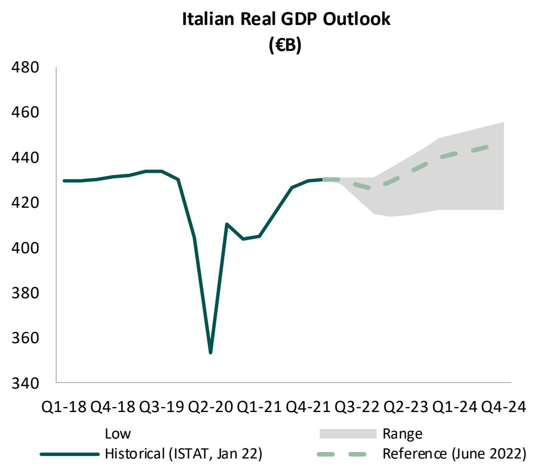
FRAME OF REFERENCE AND METHODOLOGY

REF-E Energy Outlooks are elaborated by MBS Consulting experts on the base of proprietary suites and market knowledge. Econometric and structural models, as well as our expert sensitiveness, detailed knowledge of regulation, and accurate monitoring of market outcomes underlie our elaborations.

Gas and electricity forecasts take into account the diverse geopolitical and economic hypothesis deriving from the potential war duration and outcome. The European Union and each single nation reaction to the disruption generated from the deterioration of both diplomatic and commercial relations with Russia are seen as key determinants of the future equilibrium of the energy markets.

In this perspective, we defined three scenarios. The **Worst Case** is characterized by permanently high prices amid a long lasting conflict which would lead to import-export bans and economic retaliation, trade flows interruption, commodities supply sharp reduction, negative o zero economic growth and the energy transition process failure. In the **Reference scenario**, prices will remain high in the short-term amid diplomatic and commercial tensions, while the energy transition process will continue and dependence on Russian commodities will be reduced. Gas and other fossil fuels supplies from alternative routes will increase initially limiting prices upward potential and successively leading to a normalization path. The economic growth suffers a contraction over the next two years, followed by recovery. The **Best Case** scenario would materialize in the event of favourable weather conditions and a fast energy transition, supported by low inflation and a faster economic recovery, reducing demand over the next few years. This would limit prices upside potential and then fuel a downward acceleration.

ITALIAN MACROECONOMIC OUTLOOK



MBS Consulting elaborations and forecasts (Jun 2022)

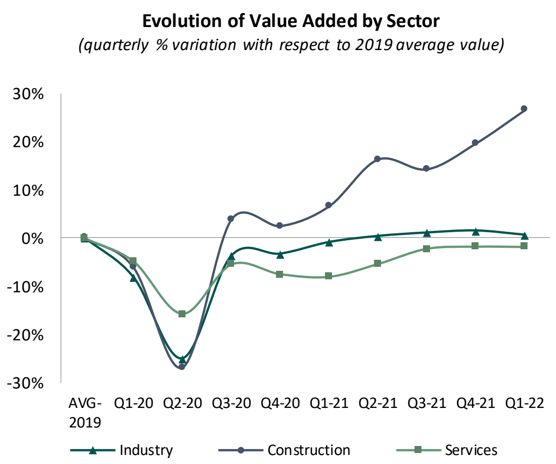
The Italian GDP growth stalls under rising price pressure, raw materials scarcity and geopolitical tensions. Reference projections foresee GDP growing 2.2% in 2022 and 1.4% in 2023, 1-1.5% below pre-war expectations, for both years. The Reference scenario assumes the conflict not to end before 2024, and prices to remain high until the next winter. The major risk factors depend on war-related uncertainties. In the event of the conflict escalating further and of a significant interruption of gas flows from Russia, projections would be driven towards the Worst-case scenario (+1.1% in 2022 and -2.0% in 2023).

Prices remain sustained, pushed by energy and food prices increases. Low wage dynamics and monetary policy decisions limit a spiral effect. In our scenario, yearly inflation should average 6.4% in 2022 and at 3.6% in 2023.

Q1-2022: The construction sector sustains GDP

In Q1-22, the Italian GDP increased by 0.1% compared to the previous quarter, driven by the construction sector (+6% quarterly, sustained by fiscal support), while the industrial and the services sectors reported a minor contraction (-0.9% and -0.1%, respectively), mainly due to inputs shortages, the pandemic resumption and the disruptions brought by the war.

Incentives made available by the Italian government continued to support investments in housing, buildings and other works, despite the economic slowdown and the increased uncertainty. Overall Q1-22 Gross fixed investments recorded a +3.9% quarterly increase, driven by spending on plants, machinery and armaments. Meanwhile, household spending decreased by 0.8 percent under the hit of the pandemic and surging prices, weighting on services demand.



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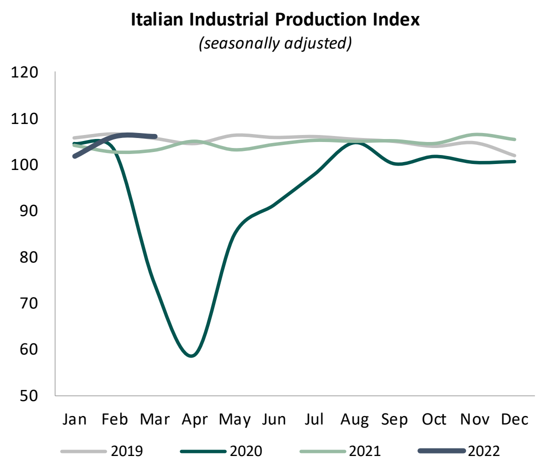
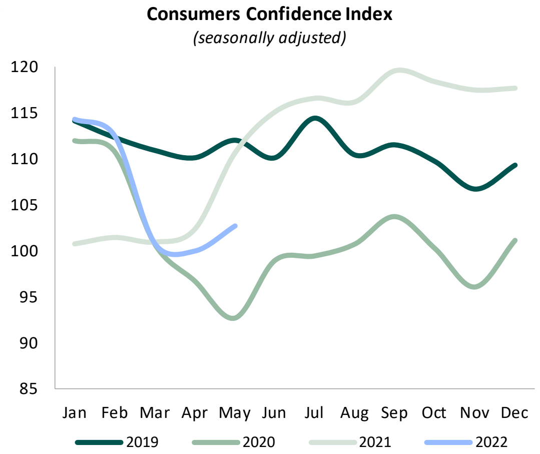


MBS Consulting elaborations

Q2-2022: High frequency indicators confirm Q1 trends

High frequency indicators point to a nearly zero GDP growth in the second quarter of the year. The latest data on gas and electricity (measured with Terna's IMCEI index) consumption in the **industrial sector** anticipate a contraction of the industry activity for Q2-2022, with supply bottlenecks, limits in transferring higher input costs to final prices and uncertainty brought by the war being the major obstacles to the industrial production growth. The slight recovery of the consumer confidence index observed in May points to a potential strengthening of **services** in the second quarter of the year, with extra savings returning to the economy after the almost complete removal of the pandemic restrictive measures. High prices curtailing consumers' purchasing power may continue limiting services demand, though. The contribution of the **construction** sector should remain positive, but the performance of the sector may be hardly hit by the progressive fading of the tax deductions scheme, as public resources dedicated to the scheme were fully booked by the end of May, leaving no space for additional requests over the next months based on currently allocated resources.



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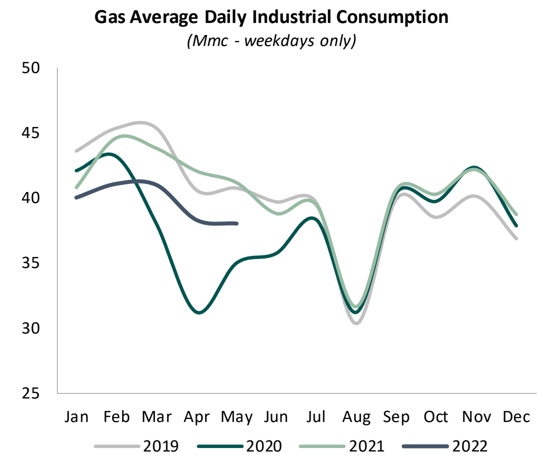

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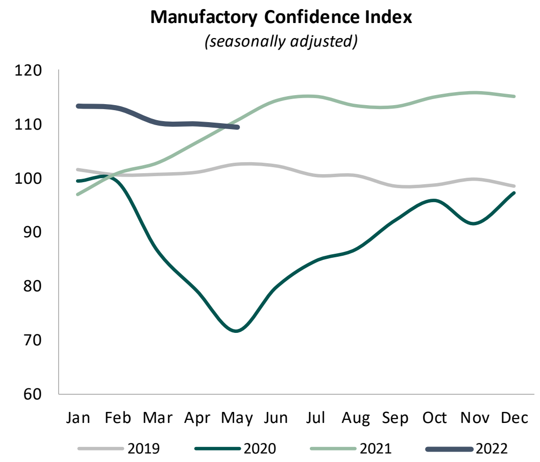

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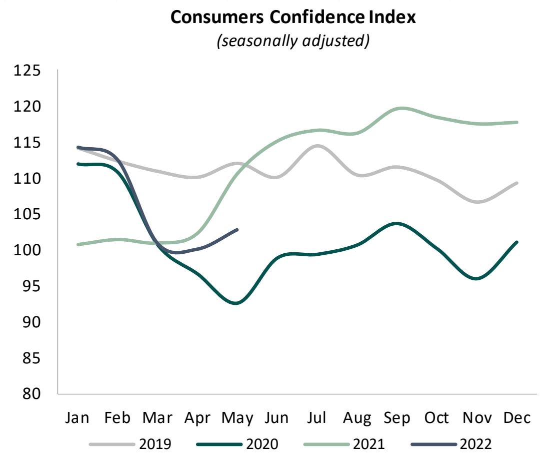

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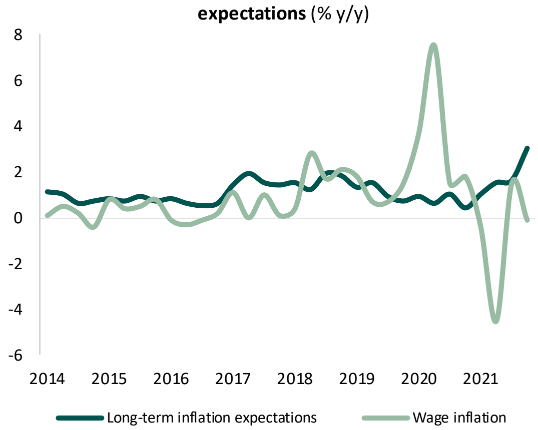
The number of workers returns to pre-pandemic levels

In March, the number of workers reached pre-pandemic levels, despite the lag of self-employed workers, still down by 5% compared to January 2019. The labor market recovery was indeed driven by temporary contracts (+8% compared to January 2019), pointing to a still high instability of work places. The overall number of workers and job seekers in the market remains below pre-pandemic levels, though, pushing the unemployment rate 1% below pre-pandemic levels.

In Q1-22, the employment rate increased 1%, supported by both employed and independent workers (+0.8% and + 0.6%, respectively). Meanwhile, payroll growth remained subdued, with a 0.6% increase in hourly pay (between Q1-22 and Q4-21), despite the ongoing inflation pressure. Many employment contracts conditions were negotiated at a national level in the first half of 2021, when the price surge was still weak, contributing to the currently observed limited increase of wages. A strengthening of the services activity should support job creation, adding competition on employment demand and potentially leading to improved conditions for new contracts signing. A significant increase in wages is not seen as likelihood for this year, though.

Wage inflation and long-term inflation expectations (% y/y)



MBS Consulting elaborations

GDP Projections: the war weighs on the economic growth perspectives

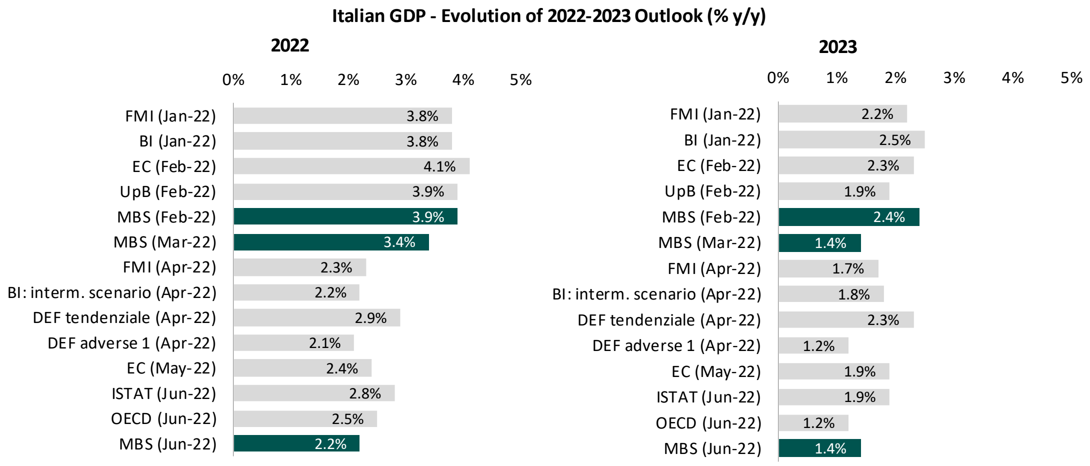
GDP forecasts have been revised downward following the war hit. Industrial activity suffers from prices pressure increase, since higher costs cannot be easily transferred to final output, from trade frictions worsening supply shortages and export demand, and from potential investments slow-down due to increasing uncertainty and financial conditions tightening. Services resumption potential is mitigated by inflation lowering consumers purchasing power and uncertainty delaying spending decisions.

We now foresee GDP to increase by 2.2% in 2022 (y/y) and 1.4% (y/y) in 2023 consequently, with the output quarterly growth turning slightly negative over the last two quarters of year 2022 and gradually resuming through 2023. The reference scenario is based on the following assumptions:

- The war is not foreseen to end over the forecasting horizon and sanctions remain in place
- Geopolitical tensions between Europe and Russia do not escalate further, limiting the risk of gas shortages over the next winter
- High prices and supply bottlenecks continue to hit the European economy until the beginning of 2023, and gradually weaken throughout next year
- The EU keeps the pandemic under control, with no need of further restrictions
- The ECB gradually normalizes the monetary policy, keeping inflation expectations under control
- Investments growth suffers from high uncertainty and the monetary policy tightening, but remains positive, supported by private sector incentive schemes and the Recovery and Resilience plan resources
- Consumer expenditure positively contributes to domestic demand but remains subdued due to increasing prices and weak wage dynamics
- Exports of goods weakens due to trade frictions, while the resumption of tourism flows support foreign demand of services.

Downward risks remain high. Italy is not expected to replace more than one third of Russian Gas supply over the next year. The worsening of geopolitical tensions driving Russia to cut or limit gas export to Europe, together with unfavorable weather conditions and unplanned maintenance of gas supply infrastructure may lead to a shortage of gas supply forcing the introduction of measure limiting energy consumption with direct negative effects on Italian output. Supply shortages would also push prices higher, forcing a faster monetary policy normalization with additional negative effect on the economy.

Under this Worst-case scenario, the GDP grows 1.1% in 2022, only supported by carry over effects, and then fall by 2% in 2023. Under a more optimistic evolution of geopolitical tensions and commodity prices, foreseen by the Best scenario, GDP is instead projected to move slightly above the Reference outlook, with a 2.8% growth in 2022 followed by a 2.5% yearly increase in 2023.



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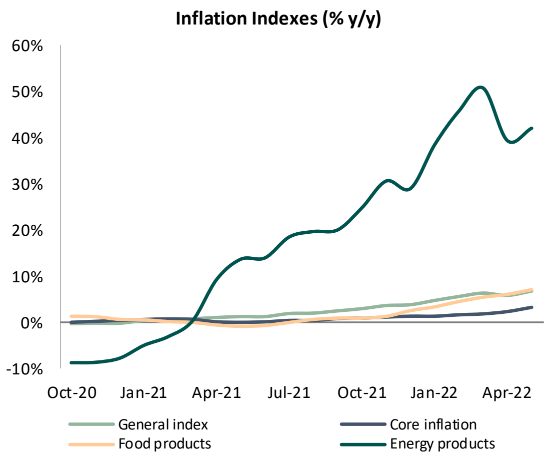
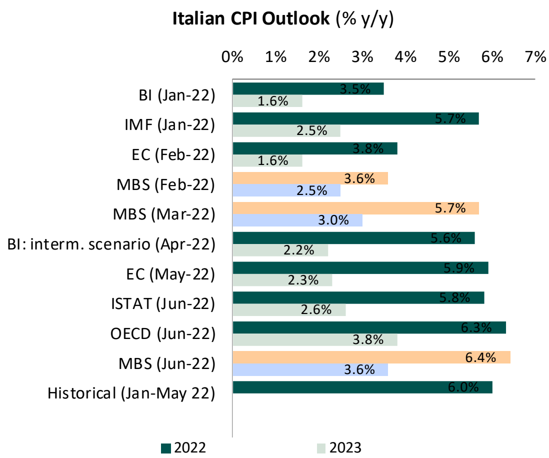
Inflation: the war adds pressure on prices

The Italian energy prices index increased between 40% and 50% over the first five months of 2022, driving the yearly average inflation level, up to May 2022, at 6.0%. Energy prices slowed down just slightly in April and May, amid the seasonal drop in energy demand, and the Italian government tax cut on gasoline and diesel. Meanwhile, Russia's invasion of Ukraine fueled food prices, pushing the Italian food prices index to an yearly increase above 7% in May, and adding further pressure on the general price index. The core inflation index, which does not consider food, tobacco and energy products, moved above 3% in May 2022, signaling the spread of energy and food prices increases to other economic sectors as well.



MBS Consulting elaborations



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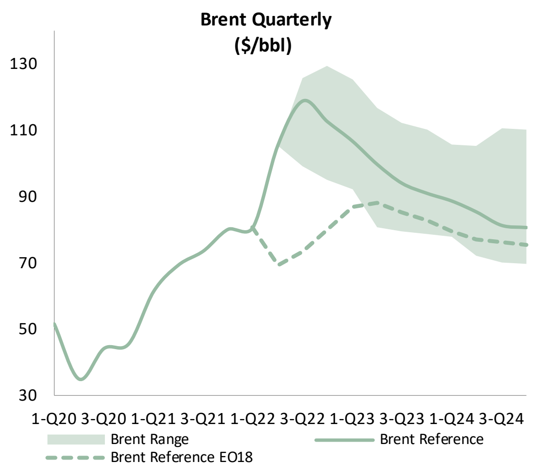
Energy prices are expected to remain high until the end of the next winter, sustaining inflation for the current year and combining with pressure from food prices. Weak wages dynamics limit the risk of a spiral effects on prices in year 2023. Based on these assumptions, inflation should average at 6.4% in 2022 and at 3.6% 2023, under the Reference scenario. Despite the expected stabilization of energy prices and the ongoing normalization of monetary policy decisions, 2023's yearly inflation is projected to settle above

2%, mainly due lasting effects on core inflation of the current energy price surge and supply disruptions. A worsening of geopolitical tensions and Russian interruptions of gas supply would add further support on energy and food prices, leading to a 7.3% yearly price increase in 2022, followed by an additional 4% yearly increase in 2023.

Monetary policy tightens

The recent acceleration of prices growth led Central Banks to speed up the monetary policy normalization process. In the early June meeting, the ECB (European Central Bank) announced its decision to anticipate an end to net purchases under the *Asset Purchase Programme* (APP) by July 1st, and then proceed with the first ECB interest rate increase of 25 basis points in July. The ECB has also anticipated that a new interest rate increase is planned for September 2022, but the increases will be evaluated over the next months based on inflation evolution. The Fed (Federal Reserve), facing an even higher inflation threat compared to Europe, started to increase rates in early March, after the war new hit on prices. In the last meeting, the Fed has then decided to further raise the fed fund rates to a range between 1.5 and 1.75 basis points, as May inflation almost reached a 9% yearly increase. Both the ECB and the Fed are confirming their commitment to reach an average 2% inflation in the medium term, adapting their forward guidance accordingly and limiting a surge of inflation expectations. The recent rates increase risks a worsening of financial conditions and negatively affects the economic activity though. Conscious of this, Central Banks are strictly monitoring the potential economic slowdown of their guidance, carefully balancing the trade-off between economic impact and prices' expectations stabilization.

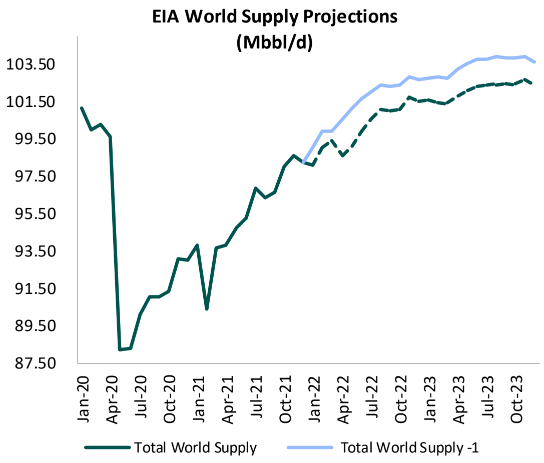
BRENT: GEOPOLITICAL TENSIONS KEEP PRICES SUPPORTED IN THE SHORT-TERM



MBS Consulting elaborations

Brent averaged close to 80 $/bbl in Q1-22, while Q2-22 reached above 105 $/bbl, with logistic and credit difficulties having combined to the US and Europe bans on Russian oil in leading to significant shifting of crude and products flows. Years 2022 to 2024 references have been revised higher, since uncertainty on supplies and geopolitical tensions is expected to persist. World supply slow recovery should lead to a market rebalancing starting from year 2023 bringing prices back on a normalization path towards 90 $/bbl by the end of year 2024. Risk is unbalanced to the upside: should persisting geopolitical tensions lead to further supplies disruption, this may push prices towards 130 $/bbl by year end. On the downside, it would take a new pandemic spread and/or a significant slowdown in demand growth to push prices back towards 70 $/bbl by year 2024 end.

Russian supplies disruption only partially compensated by OPEC and US production growth

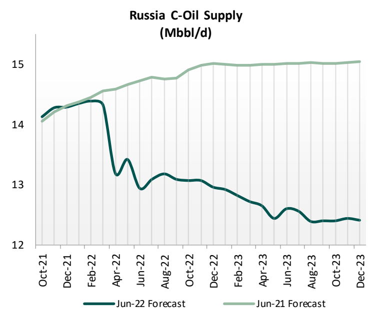


MBS Consulting elaborations

Canada, the UK and the US have imposed import bans on Russian oil. The European Union followed suite, with a ban on oil imports from Russia that will be effective by this year end. This adds to self imposed bans amid credit, insurance and logistics inefficiencies discouraging trading Russian oil, with many other countries and companies willing to reduce their dependence on Russian crude and products by the end of year 2022.

World supplies were revised lower consequently to 100 million barrels per day in average in year 2022 from above 101 (-1.3%) and to just above 102 in year 2023 from almost 103.5 (-1.4%).

Russian supplies were revised 9% and 16% lower in year 2022 and 2023 respectively, with US and OPEC production growth respectively 3% and 1% higher than previously forecasted for year 2023 only partially compensating.



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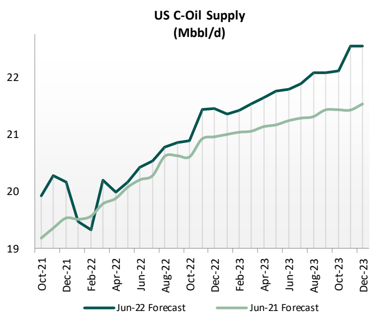

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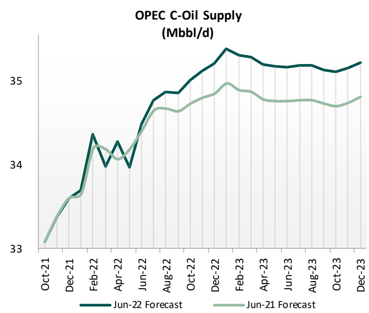

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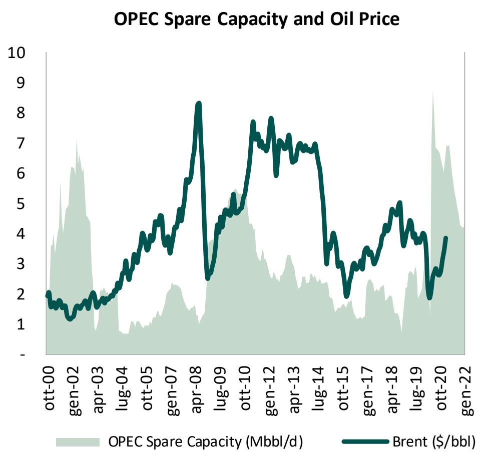
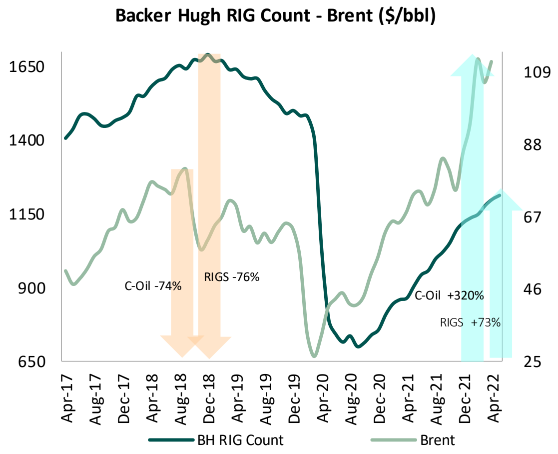


MBS Consulting elaborations

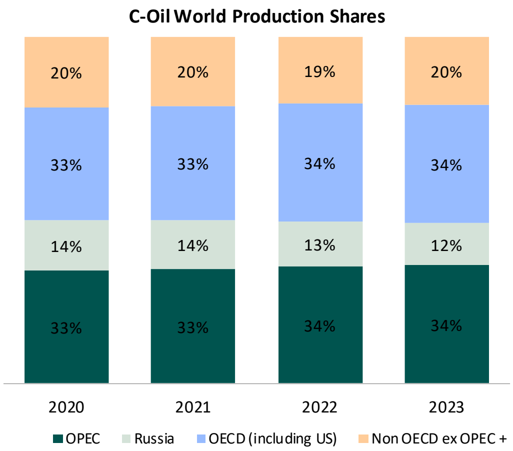
The **OPEC** oil cartel and allied producing countries (including Russia) agreed to raise production by 648 K barrels per day in July and August at its 2-Jun meeting, which does not offer significant relief to global supplies. Moreover, following the expected increase in OPEC production, a decline in the cartel spare capacity (the volume of production that can be brought on within 30 days and sustained for at least 90 days), which provides an indication of the supply margin and the potential market tightness, is also foreseen. Being the OPEC spare capacity historically inversely correlated to the C-Oil price, its decline potentially adds upward pressure on the market.



MBS Consulting elaborations

The **US** production forecast was revised 1% and 3% higher for year 2022 and 2023 respectively compared to our QI-EO. Despite a strong price signal (C-Oil recovered 320% from Mar-20 lows), which should theoretically have supported drilling activity, exploration activity, historically strictly related to price dynamics, still lags behind (new RIGS recovered just 73% from Sep-20 lows). A combination of regulatory and market uncertainty factors weight on investment decisions. The Biden administration froze in fact new federal oil and gas leases and permits after a judge blocked the government from weighing the cost of climate damage just in February, while risk for fuels demand being hit by persistently high prices looms.

As a consequence, the world production mix is not seen as shifting significantly, with both the OPEC and the OECD weights expected to increase 1% in year 2022 and remain stable in year 2023, while Russian production weight should decrease 1% in year 2002 and 2023.



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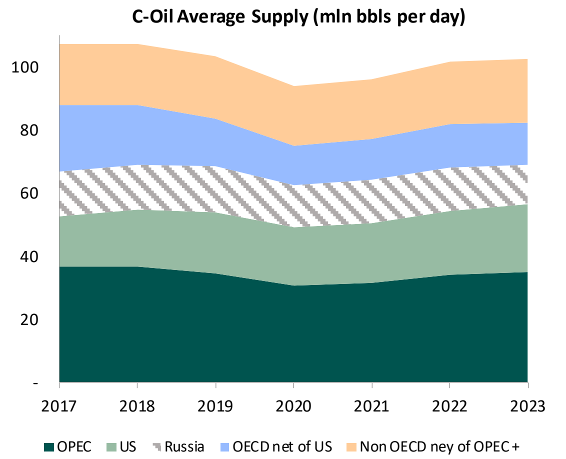
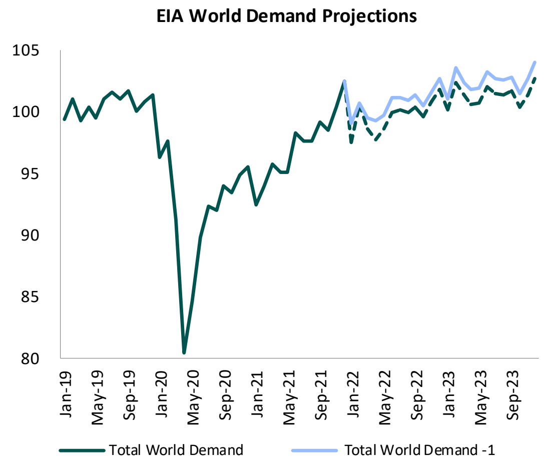


MBS Consulting elaborations

From a supply side perspective, there is a high risk for C-oil prices remaining under upward pressure, with the risk for any further disruption keeping quotations above the 100 $/bbl threshold till year 2025. There is also risk for rising inflation impacting negatively on demand growth though, which we assume being a key element in limiting Brent upside potential in the longer run.

Demand recovery revised lower amid high inflationary pressure and pandemic risks still looming



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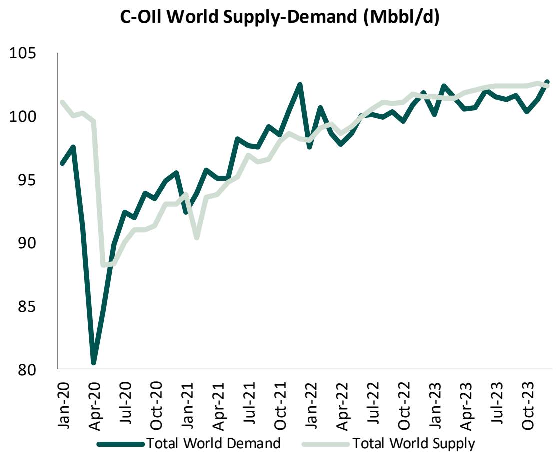
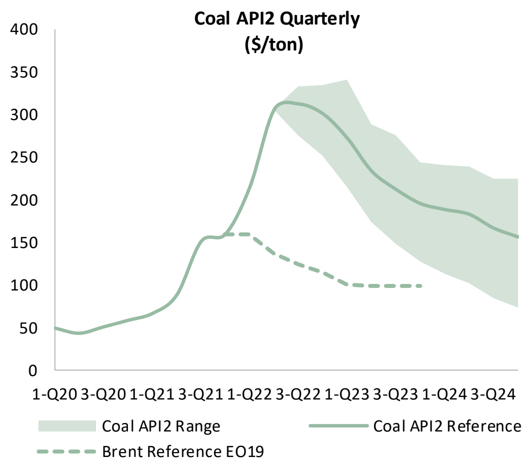


MBS Consulting elaborations

World demand growth expectations were recently revised lower too, with year 2022 affected by both high prices and a new pandemic spread in China and uncertainty still looming on year 2023 economic recovery perspectives. World demand is in fact seen as struggling to move back above pre-pandemic levels before year 2023, which would leave the market balanced overall.

Overall, demand-wise, risk is seen as biased towards the downside, with further closures over the next winter and the first half of 2023 not being ruled out yet and the impact of persistently high prices on the economy and demand still be clearly assessed. This is more than compensated by a high risk for a lacklustre supply growth in year 2023, which would keep tight market conditions in place and prices under pressure.

COAL MARKET STRONGLY IMPACTED BY SANCTIONS ON RUSSIA



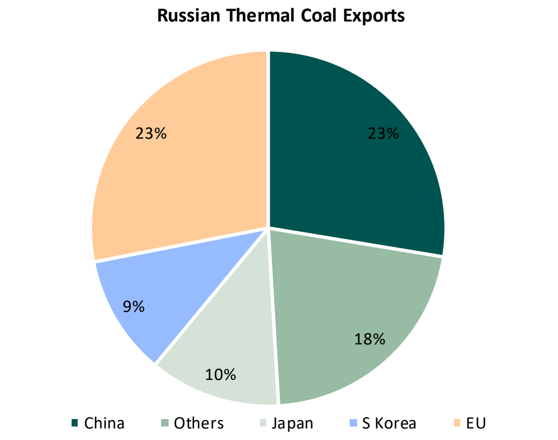
MBS Consulting elaborations

The coal price surged following the Ukraine war escalation, with the API2 benchmark quotation for coal delivered in Europe averaging above 260 $/ton in the first semester. Our reference scenario was revised sharply higher, coherently with the recent market price action and fundamentals dynamic. Years 2022 and 2023 are now expected to average near 280 $/ton and 230 $/ton respectively. Key importers banned coal from Russia and Asian countries are in fact switching back from gas to coal, which is expected to keep demand sustained in the medium term. A relatively fast move back below 100 $/ton may only be seen in the event of geopolitical tensions fading by this year end, while further escalation and gas pullies curtailments would risk a stabilization of prices above 300 $/ton till Q1-23.

Russian coal bans combine with Asian demand growth in keeping price supported

The European Union banned coal imports from Russia on 18-Apr, from which day no new contract can be signed. The ban will be fully effective from the second week of August when exististing contracts will have to be terminated and payments from the EU on coal exports will be forbidden. The measures also prevent many Russian vessels and trucks from accessing the EU, further crippling trade. In year 2021 Russia exported more than 190 mmt of coal, of which 23% to Chine and 23% to Europe, which will have to be replaced by global imports of non-Russian coal. Despite non-EU importers possibly benefitting from lower prices for Russian coal, the ban is seen as having a net bullish impact on prices. Not all the European imports of Russian coal can in fact be easily diverted to Asia. Moreover, Japan, the world's third-biggest coal importer, moved to ban imports from Russia and will have to seek for alternatives.

Meanwhile, Chinese production is seen as still growing, with the Country seeking energy independence, following last year diplomatic crisis with Australia having led to the relative import ban and the beginning of the upward acceleration of prices still in force.



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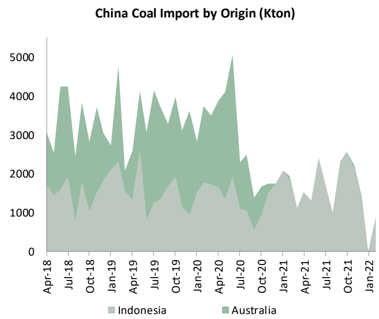

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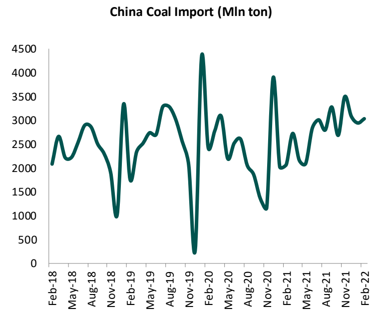

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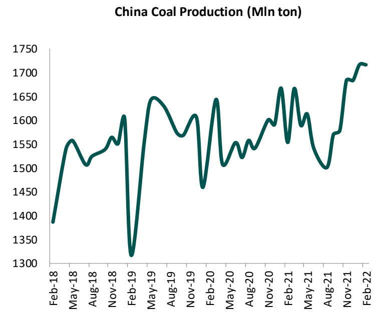
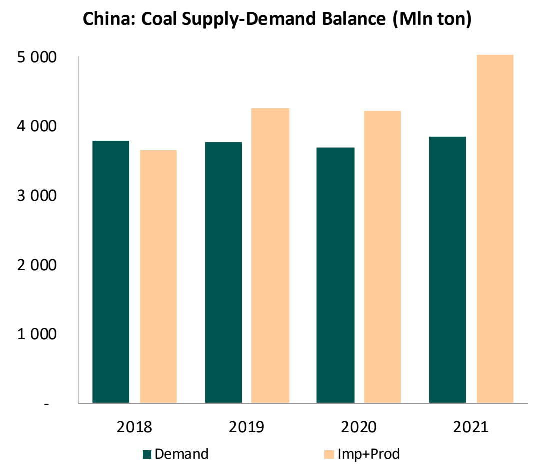


MBS Consulting elaborations

Production just compensates demand growth though, since imports are reducing and should then remain stable. Of the almost 40% yearly supply recovery in 2021 only 1% were in fact imports, while 36% was domestic production.



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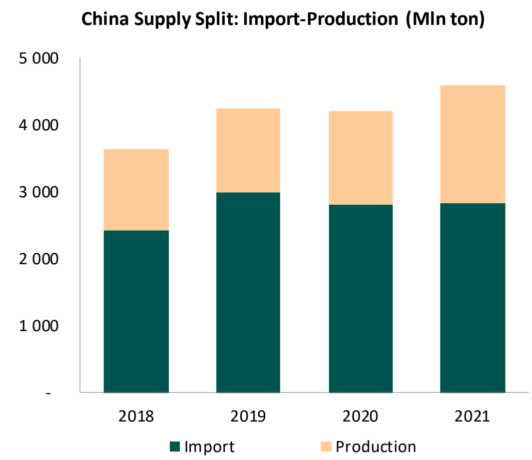
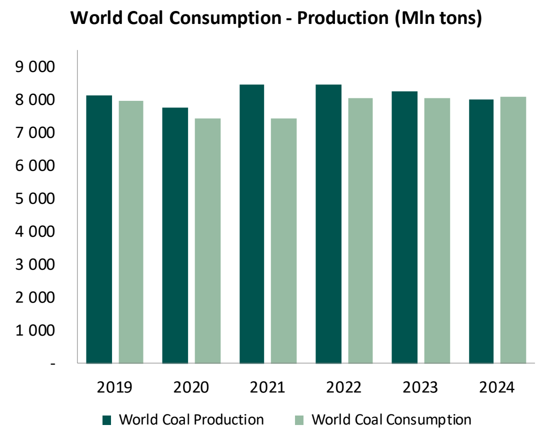


MBS Consulting elaborations

Despite China production growth and reduced imports, the world supply-demand balance is tightening. Japan, South Corea and India demand are seen as growing, while Australia exports may contract, following this year energy crisis and with the Government willing to limit exports to replenish stocks and cover for the internal consumption.

Moreover, despite the EU Parliament having approved the 2030 emissions reduction target at 55%, coal demand in Europe and possibly favourable coal to gas switching conditions, tight and highly uncertain gas market conditions are seen as delaying the aimed coal phase-out, with some already closed coal thermal plants possibly being reactivated to guarantee electricity supplies.

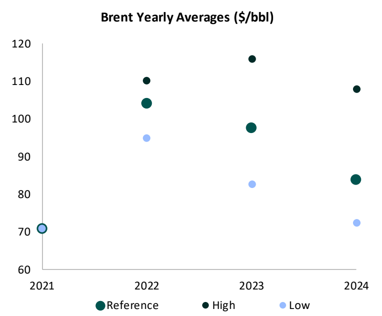


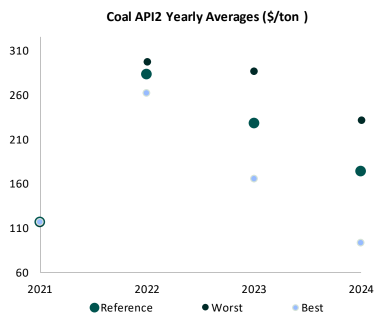
MBS Consulting elaborations

In this context, the overall market demand-supply balance is projected to remain tight and the possibility for prices moving significantly lower in the short-term is limited. There is in fact a fairly high probability of the market stabilising at the current price levels over the coming years and to progressively normalize just after other energy sources are guaranteed and risk for energy supply disruption is averted.

COMMODITIES PRICE TARGETS RECAP

Scenario		Brent ($/bbl)	Coal ($/ton)
Reference	2022	104	283
	2023	98	228
	2024	84	173
Worst	2022	110	297
	2023	116	287
	2024	108	232
Best	2022	95	262
	2023	83	166
	2024	72	93





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