Risk factors

Strategic risks and risks related to the business activities and industries of Eni and its consolidated subsidiaries (together, the "Group")

The Company's performance is affected by volatile prices of crude oil and produced natural gas and by fluctuating margins on the marketing of natural gas and on the integrated production and marketing of refined products and chemical products

The price of crude oil is the single, largest variable that affects the Company's operating performance and cash flow. The price of crude oil has a history of volatility because, like other commodities, it is cyclical and is influenced by several macro-factors that are beyond management's control. Crude oil prices are mainly driven by the balance between global oil supplies and demand and hence the global levels of inventories and spare capacity. In the short-term, worldwide demand for crude oil is highly correlated to the macroeconomic cycle. A downturn in economic activity normally triggers lower global demand for crude oil and possibly a supply build-up. Whenever global supplies of crude oil outstrip demand, crude oil prices weaken. Factors that can influence the global economic activity in the short-term and demand for crude oil include several, unpredictable events, like trends in the economic growth in China, India, the United States and other large oil-consuming countries, financial crisis, geo-political crisis, local conflicts and wars, social instability, pandemic diseases, the flows of international commerce, trade disputes and governments' fiscal policies, among others. All these events could influence demands for crude oil. In the long-term, factors which can influence demands for crude oil include on the positive side demographic growth, improving living standards and GDP expansion. Negative factors that may affect demand in the long-term comprise availability of alternative sources of energy (e.g., nuclear and renewables), technological advances affecting energy efficiency, measures which have been adopted or planned by governments all around the world to tackle climate change and to curb carbon-dioxide emissions (CO_2 emissions), including stricter regulations and control on production and consumption of crude oil, or a shift in consumer preferences. The civil society and several governments all over the world, with the EU leading the way, have announced plans to transition towards a low-carbon model through various means and strategies, particularly by supporting development of renewable energies and the replacement of internal combustion vehicles with electric vehicles, including the possible adoption of tougher regulations on the use of hydrocarbons such as the taxation of CO_2 emissions as a mitigation action of the climate change risk. The push to reduce worldwide greenhouse gas emissions and an ongoing energy transition towards a low carbon economy, which are widely considered to be irreversible trends, will represent in our view major trends in shaping global demand for crude oil over the long-term and may lead to structural lower crude oil demands and consumption. We also believe that the dramatic events of 2020 in relation to the spread of the COVID-19 pandemic could have possibly accelerated those trends. See the section dedicated to the discussion of climate-related risks below.

Global production of crude oil is controlled to a large degree by the OPEC cartel, which has recently extended to include other important oil producers like Russia and Kazakhstan (so-called OPEC+). Saudi Arabia plays a crucial role within the cartel, because it is estimated to hold huge amounts of reserves and a vast majority of worldwide spare production capacity. This explains why geopolitical developments in the Middle East and particularly in the Gulf area, like regional conflicts, acts of war, strikes, attacks, sabotages and social and political tensions can have a big influence on crude oil prices. Also, sanctions imposed by the United States and the EU against certain producing countries may influence trends in crude oil prices. However, we believe that the continued rise of crude oil production in the United States due to the technology-driven shale oil revolution has somewhat reduced the ability of the OPEC+ to control the global supply of oil. To a lesser extent, factors like adverse weather conditions such as, hurricanes in sensitive areas like the Gulf of Mexico, and operational issues at key petroleum infrastructure can influence crude oil prices.

The year 2020 was one of the worst on record for the oil&gas industry due to the far-reaching consequences of the COVID-19 pandemic, the long-term impacts of which have yet to be understood and estimated. Almost all of the companies in the sector suffered material economic losses and cash flow shortfalls and saw their business fundamentals along with share prices significantly deteriorate due to a massive hit to global demand for crude oil and other energy products and to collapsing commodity prices as direct consequences of the lockdown measures imposed in the first months of the year by governments throughout the world to contain the spread of the pandemic, leading to the suppression of industrial activity, international commerce and travel as well as souring the moods of consumers. To make things worse, while demand was falling precipitously, in March 2020 the OPEC+ failed to reach a deal for production cuts claimed by some members to counteract the effects of the COVID-19 pandemic and Saudi Arabia decided to increase its output and reduce prices to gain market share. The concurrence of a material reduction in global crude oil demand and rising production on the part of the OPEC+ members triggered a collapse in crude oil prices. At the peak of the COVID-19 crisis and the price war, the value of the Brent crude benchmark had fallen to below 15 $/BBL, marking the lowest point over several decades on an inflation-adjusted basis. The situation of extreme oversupply in the month of April 2020 was signalled by ballooning global inventories, depletion of storage capacity and a strong contango structure in the prices of contracts for future deliveries. Subsequently, with the gradual easing of lockdown measures and the implementation from May 2020 of major output cuts by the members of the OPEC+ as well as major capex curtailments implemented by international oil&gas companies, Brent prices staged a significant comeback, recovering to a level of almost 45 $/BBL in July. However, this recovery weakened at the end of the summer and in the autumn months due to a continuing rise in COVID-19 cases in western countries, particularly in the United States, continental Europe and the UK forcing national or local governments to re-impose new restrictive measures or full lockdowns to curb the spread of the virus, which negatively affected the pace of economic recovery and the consumption of fuels like gasoline and gasoil. On the other hand, an acceleration in the economic recovery in mainland China and other Asian countries where the virus was more effectively contained helped sustain the price of crude oil and a reduction in global inventories. Finally, the recovery of crude oil prices gained strength in the final months of 2020 and in the first months of 2021 due to a favourable combination of market and macro developments, most notably: a break-through in the development and approval of effective vaccines against COVID-19, further acceleration in the pace of economic activity in Asia, the outcome of the presidential election in the United States which fuelled expectations of large stimulus measures in favour of the U.S. economy, the continuing commitments on the part of OPEC+ to support the rebalancing of the oil market by slowing down the planned curtailments of the extra production quotas enacted in May 2020 and finally the surprising announcement by Saudi Arabia that it would implement a voluntary cut of its production quota of 1 million barrels/day in the months of February and March 2021 to compensate for any possible impact on demand due to recrudescence of the pandemic in western countries. Unexpectedly, while oil companies’ executives, traders and fund managers were weighing all these macro and market developments, a massive, unprecedented cold snap hit the Northern-Eastern hemisphere, particularly Japan, South Korea and China, causing a spike in demand for oil-based heating fuels and LNG, which significantly boosted the market prices of all hydrocarbons. Due to such recent developments, Brent crude oil prices strengthened to 50 $/bbl at the end of 2020 and then rallied further in the first quarter of 2021 averaging about 60 $/bbl. Despite this improvement, we expect the trading environment for crude oil price to remain volatile and uncertain in 2021 due to the virus overhang, a weak macroeconomic backdrop in the United States and Europe and high inventory levels in OECD countries, which remain above historical averages.

The COVID-19 pandemic negatively and materially affected a weak global natural gas market. As a result of the gas demand collapse recorded in the first half of 2020 due to the economic crisis resulting from COVID-19, gas prices fell to unprecedented lows in all the main geographies. Likewise, crude oil and natural gas prices recovered in the second half of the year supported by an improving economy and falling production levels due to capex constraints on global oil&gas companies. Overall, natural gas prices fell remarkably in 2020 (the prices at the Italian spot market were 35% lower than in 2019). However, at the end of 2020 and in January 2021 natural gas prices staged a material comeback supported by record seasonal demand in the Northern-Eastern hemisphere driven by record low temperatures.

Lower hydrocarbon prices from one year to another negatively affect the Group’s consolidated results of operations and cash flow. This is because lower prices translate into lower revenues recognised in the Company’s Exploration & Production segment at the time of the price change, whereas expenses in this segment are either fixed or less sensitive to changes in crude oil prices than revenues. In 2020, the Brent price averaged about 42 $/bbl, a decrease of 35% compared to 2019, which significantly and adversely affected Eni’s results of operations and cash flow for the year. We estimated that lower equity crude oil realizations and other scenario effects (lower equity gas prices, lower refining margins and other declines as described below) reduced the Company’s underlying operating profit and the net cash provided by operating activities by about €7 billion.

Considering the risks and uncertainties to the outlook for 2021, we are retaining a prudent financial framework and capital discipline in our investment decisions, while we are assuming a Brent price forecast of 50 $/bbl for the full year. Based on the current oil&gas assets portfolio of Eni, management estimates that the Company’s cash flow from operations will vary by approximately €150 million for each one-dollar change in the price of the Brent crude oil benchmark compared to the 50 $/bbl scenario adopted by management for the current year and for proportional changes in gas prices.

In addition to the short-term impacts on the Group's profitability, a market crisis like the one experienced in 2020 may also alter the fundamentals of the oil and natural gas markets. Lower oil and gas prices over prolonged periods of time may have material adverse effects on Eni's performance and business outlook, because such a scenario may limit the Group's ability to finance expansion projects, further reducing the Company's ability to grow future production and revenues, and to meet contractual obligations. The Company may also need to review investment decisions and the viability of development projects and capex plans and, as a result of this review, the Company could reschedule, postpone or curtail development projects. A structural decline in hydrocarbon prices could trigger a review of the carrying amounts of oil and gas properties and this could result in recording material asset impairments and in the de-booking of proved reserves, if they become uneconomic in this type of environment.

In the course of 2020 Eni's management revised its view of the oil market fundamentals to factor in certain emerging trends. Management considered that the lockdown measures in response to COVID-19 could result in a prolonged period of weak oil demand. Furthermore, the massive actions in support of the economic recovery planned by governments in several countries may have a strong environmental footprint and be supportive of the green economy, leading to a potential acceleration in the pace of energy transition and in the replacement of hydrocarbons in the energy mix in the long-term. Based on these considerations, in 2020 the Company revised its long-term forecast for hydrocarbon prices, which are the main driver of capital allocations decisions and of the recoverability assessment of the book values of our non-current assets. The revised scenario adopted by Eni foresees a long-term price of the marker Brent of 60 $/bbl in 2023 real terms compared to the previous assumption of 70 $/bbl. The price of natural gas at the Italian spot market "PSV" is estimated at 5.5 $/mmBTU in real terms in 2023 as compared to the previous assumption of 7.8 $/mmBTU. This changed outlook for hydrocarbons prices drove the recognition of significant impairment losses relating to oil&gas assets (€1.9 billion, pre-tax). For further details, see the notes to the consolidated financial statements. Furthermore, given the decline in crude oil prices used in the estimation of proved reserves according to the SEC rules compared to 2019 (average of the first-of-the-day price of each month at 41 $/bbl in 2020 vs. 63 $/bbl in 2019), we were forced to debook 124 mmBOE of reserves that have become uneconomic in this environment.

Finally, during a downturn like the one experienced in 2020, the Group's access to capital may be reduced and lead to a downgrade or other negative rating action with respect to the Group's credit rating by rating agencies. These downgrades may negatively affect the Group's cost of capital, increase the Group's financial expenses, and may limit the Group's ability to access capital markets and execute aspects of the Group's business plans.

Eni estimates that approximately 50% of its current production is exposed to fluctuations in hydrocarbons prices. Exposure to this strategic risk is not subject to economic hedging, except for some specific market conditions or transactions. The remaining portion of Eni's current production is largely unaffected by crude oil price movements considering that the Company's property portfolio is characterized by a sizeable presence of production sharing contracts, whereby the Company is entitled to a portion of a field's reserves, the sale of which is intended to cover expenditures incurred by the Company to develop and operate the field. The higher the reference prices for Brent crude oil used to estimate Eni's proved reserves, the lower the number of barrels necessary to recover the same amount of expenditure and hence production, and vice versa.

All these risks may adversely and materially impact the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's share.

Margins on the manufacturing and sale of fuels and other refined products, chemical commodities, and other energy commodities are driven by economic growth, global and regional dynamics in supplies and demand and other competitive factors. Generally speaking, the prices of products mirror that of oil-based feedstock, but they can also move independently. Margins for refined and chemical products depend upon the speed at which products' prices adjust to reflect movements in oil prices. Margins at our business of wholesale marketing of natural gas are driven by the spreads between spot prices at continental hubs to which our procurement costs are indexed and the spot prices at the Italian hub where a large part of our gas sales occur. These spreads can be very volatile.

In 2020, demand and margins for fuels and petrochemical products were materially hit by the economic downturn triggered by the COVID-19 pandemic, resulting in lower demand for fuels and petrochemical commodities. The trading environment was particularly unfavourable in the refining business due to an unprecedented combination of negative market trends. During the peak of the pandemic crisis in the second quarter of 2020, the lockdown measures imposed by governments throughout the world to curb the spread of the pandemic resulted in the suppression of air travel and people’s commuting by car leading to a massive decline in worldwide consumption of gasoline, kerosene and other fuels. Furthermore, while those restrictive measures were eased in Asia and other parts of the world, they have continued or have been re-imposed in Italy and other European countries, which are the main reference markets of our refining and marketing business. Although since the implementation of the production cuts by OPEC+ producers, crude oil prices have been moderately recovering throughout 2020, the increases in the cost of the feedstock did not translate into higher prices of fuels due to a depressed demand environment. Finally, the profitability of our business was also negatively affected by the appreciation of sour crude oils towards medium/light qualities such as the Brent, due to market dislocations and the effects of the production cuts implemented by the OPEC+, which reduced availability of sour crudes in the marketplace. This latter trend negatively affected the profitability of conversion plants, which are normally supported by the fact that heavy and sour crudes trade at a discount vs. the light qualities as the Brent. Due to all those market trends, the Company’s own internal performance measure to gauge the profitability of its refineries, the SERM (see glossary), fell to historic lows over the second half of 2020, plunging into negative territory at the end of 2020 and the beginning of 2021 in concomitance with the rally in crude oil prices, which has yet to be supported by a recovery of fuel demand in Europe. This trend will negatively affect the profitability of our refining business in 2021. The sales volumes at our network of service stations were significantly impacted by lower consumption due to the lockdown and anti-pandemic measures. The deteriorated outlook for refining margins and fuels consumption triggered a revision of the book value of the Company’s oil-based refining assets leading to the recognition of €1.2 billion of impairment losses.

The chemical business of Eni was negatively affected by a significant reduction in demand in the segments most exposed to the COVID-19 crisis such as elastomers following the contraction in the automotive sector, while the polyethylene margins were supported both by the reduction in the cost of oil feedstock and by strong demand for single-use plastics and packaging as consequence of higher demand for goods related to “stay-at-home economy”.

There is strong competition worldwide, both within the oil industry and with other industries, to supply energy and petroleum products to the industrial, commercial and residential energy markets

The current competitive environment in which Eni operates is characterised by volatile prices and margins of energy commodities, limited product differentiation and complex relationships with state-owned companies and national agencies of the countries where hydrocarbons reserves are located to obtain mineral rights. As commodity prices are beyond the Company’s control, Eni’s ability to remain competitive and profitable in this environment requires continuous focus on technological innovation, the achievement of efficiencies in operating costs, effective management of capital resources and the ability to provide valuable services to energy buyers. It also depends on Eni’s ability to gain access to new investment opportunities. The economic crisis caused by the suppression of industrial activity and travel in response to the COVID-19 pandemic materially and negatively impacted demand for the Company’s products, driving a strong increase in the level of competition across all sectors where we are operating. We believe that the pandemic will have enduring effects on the competition within the oil&gas sectors, including the refining and marketing of fuels and other energy commodities and the supply of energy products to the retail segment.

Exploration & Production

- In the Exploration & Production segment, Eni is facing competition from both international and state-owned oil companies for obtaining exploration and development rights and developing and applying new technologies to maximise hydrocarbon recovery. Because of its smaller size relative to other international oil companies, Eni may face a competitive disadvantage when bidding for large scale or capital intensive projects and it may be exposed to the risk of obtaining lower cost savings in a deflationary environment compared to its larger competitors given its potentially smaller market power with respect to suppliers. Due to those competitive pressures, Eni may fail to obtain new exploration and development acreage, to apply and develop new technologies and to control costs. The COVID-19 pandemic has caused exploration&production companies to significantly reduce their capital investment in response to lower cash flows from operations and to focus on the more profitable and scenario-resilient projects. We believe that this development will be long-lasting and likely drive increased competition among players to gain access to relatively cheaper reserves (onshore vs. offshore; proven areas vs. unexplored areas).

Global Gas & LNG Portfolio

- In the Global Gas & LNG Portfolio business, Eni is facing strong competition in the European wholesale markets to sell gas to industrial customers, the thermoelectric sector and retail companies from other gas wholesalers, upstream companies, traders and other players. The results of our wholesale gas business are subject to global and regional dynamics of gas demand and supplies. The results of the LNG business are mainly influenced by the global balance between demand and supplies, considering the higher level of flexibility of LNG with respect to gas delivered via pipeline. In 2020, the economic crisis triggered by the COVID-19 pandemic exacerbated the already weak fundamentals of the gas market. In fact, the lockdown of European economies resulted in sharply lower gas consumption leading to intensified competitive pressures. These developments caused lower sales volumes of gas marketed via pipeline and by our LNG business and significantly lower prices. In 2020 Eni's gas and LNG sales declined by 11% due to the impact of the economic crisis triggered by the pandemic. Sales margins at our LNG business were put under pressure by collapsing demand due to the lockdown of Asian economies, which are the main outlet of global LNG production, as many buyers requested activation of the force majeure clauses for not lifting LNG contracted volumes. These developments led to increased competition in the global LNG market, dragging down sales margins. We expect continued competitive pressure in our wholesale gas and LNG businesses. However, in the first months of 2021 a colder-than normal winter in the Northern Hemisphere has supported the price of gas and LNG.

Refining & Marketing

- In the Refining & Marketing segment, Eni is facing competition both in the refining business and in the retail marketing activity. Our Refining business has been negatively affected for years by structural headwinds due to muted trends in the European demand for fuels, refining overcapacity and continued competitive pressure from players in the Middle East, the United States and Far East Asia. Those competitors can leverage on larger plant scale and cost economies, availability of cheaper feedstock and lower energy expenses. This unfavourable competitive environment has been exacerbated by the effects of the 2020 economic crisis due to the COVID-19 pandemic, the consequent lockdown of entire economies and travel restrictions, which drove a collapse in the consumption of motor gasoline, jet fuels and other refined products. In the initial stages of the global energy downturn, refining margins were supported by a collapse in crude oil prices. Subsequently, as crude oil prices found support in the production curtailments implemented by the OPEC+, refining margins were severely hit by the weakness in global demand for fuels due to low propensity of people for travelling, which squeezed relative prices of fuels vs. the oil feedstock cost. This trend became particularly unfavourable starting from the summer months when refining margins were much less profitable, until the last months of the year when they even recorded negative value. On average, in 2020, the refining margin (SERM) dropped materially, down by 60% as compared to the prior year. Furthermore, Eni's refining profitability was exposed to the volatility in the spreads between crudes with high sulphur content or sour crudes and the Brent crude benchmark, which is a low-content sulphur crude. Eni's complex refineries are able to process sour crudes, which typically trade at a discount over Brent crude. Historically, this discount has supported the profitability of complex refineries, like our plant at Sannazzaro in Italy. However, in the course of 2020, a shortfall in supplies of sour crudes due to the production cuts implemented by OPEC+ in response to the COVID-19 pandemic, drove an appreciation of the relative prices of sour crudes as compared to Brent, which negatively affected the results of Eni's refining business by reducing the advantage of processing sour crudes. Eni believes that the competitive environment of the refining sector will remain challenging in the foreseeable future, considering ongoing uncertainties and risks relating to the strength of the economic recovery in Europe and worldwide, and risks of another round of lockdown measures in case of failure by governments to effectively contain the spread of the pandemic, which would weigh heavily on demand for fuels. Other risks factors include refining overcapacity in the European area and expectations of a new investment cycle driven by capacity expansion plans announced in Asia and the Middle East, potentially leading to global oversupplies of refinery products. Due to a reduced profitability outlook in the refining business, management recognized impairment charges of €1.2 billion to align the book value of refineries to their realizable values.

  The business of marketing refined products to drivers at our network of service stations and to large account customers (airlines, public administrations, transport and industrial customers, bulk buyers and resellers) is facing competition from other oil companies and newcomers such as low-scale and local operators, and un-branded networks with light cost structure. All of these operators compete with each other primarily in terms of pricing and, to a lesser extent, service quality. Against this backdrop, in 2020 the lockdown measures adopted to contain the spread of the pandemic resulted in the suppression of travel and road transportation which weighed heavily on throughput volumes at our network of service stations in Italy and other European markets which were down by 19.9% as compared to the prior year.

Chemicals

- Eni's Chemical business is in a highly-cyclical, very competitive sector. We have been facing for years strong competition from well-established international players and state-owned petrochemical companies, particularly in the most commoditised market segments such as the production of basic petrochemical products (like ethylene and polyethylene), where demand is a function of macroeconomic growth. Many of these competitors based in the Far East and the Middle East have been able to benefit from cost economies due to larger plant scale, wide geographic moat, availability of cheap feedstock and proximity to end-markets. Excess worldwide capacity of petrochemical commodities has also fuelled competition in this business. Furthermore, petrochemical producers based in the United States have regained market share, as their cost structure has become competitive due to the availability of cheap feedstock deriving from the production of domestic shale gas from which ethane is derived, which is a cheaper raw material for the production of ethylene than the oil-based feedstock utilised by Eni's petrochemical subsidiaries. Finally, rising public concern about climate change and the preservation of the environment has begun to negatively affect the consumption of single-use plastics. In 2020, these competitive dynamics were greatly amplified by the economic crisis triggered by the lockdown measures in response to the COVID-19 pandemic, which negatively affected plant utilization rates and sales volumes, particularly in those segments more exposed to the recession of their customer segments, like in the case of sales volumes of elastomers to the automotive industry. However, other chemicals segments performed relatively well, because the "stay-at-home economy" boosted demands for certain products like polyethylene, that is utilized in the packaging of food and other consumer goods as well as in materials for the sanitary emergency. These trends supported polyethylene margins. Looking forward, management believes that the competitive environment in the Chemicals businesses will remain challenging due to uncertainties and risks relating to the strength of the economic recovery or another round of lockdown measures in case of by governments to effectively contain the spread of the pandemic.

Retail gas and power

- Eni's retail gas and power business engages in the supply of gas and electricity to customers in the retail markets mainly in Italy, France and other countries in Europe. Customers include households, large residential accounts (hospitals, schools, public administration buildings, offices) and small and medium-sized businesses. The retail market is characterised by strong competition among selling companies which mainly compete in terms of pricing and the ability to bundle valuable services with the supply of the energy commodity. In this segment, competition has intensified in recent years due to the progressive liberalisation of the market and the ability of residential customers to switch smoothly from one supplier to another. In 2020, the performance of this business was negatively affected by the economic crisis caused by the lockdown measures imposed to contain the spread of COVID-19, which reduced energy demand particularly in the segments of medium and small businesses, increased credit risk and triggered increased credit losses. In 2020, sales volumes of natural gas to the retail market fell by 11%; however, this trend was partly offset by greater power requirements due to the "stay-at-home economy" with sales volumes up by 13% for the year. We anticipate that competition will remain strong in this business due to the likelihood of a slow economic recovery and weak trends in energy consumption, as well as the potential risk of yet another downturn in case of new lockdown measures to contain the pandemic and rising sensitivity among households and businesses to reduce the cost of the energy bill.

  Eni also engages in the business of producing gas-fired electricity that is largely sold at wholesale energy market and balancing market (so called MSD) in Italy. Margins on the sale of electricity have declined in recent years due to oversupplies, weak economic growth and inter-fuel competition. The pandemic-driven economic crisis has exacerbated those trends, causing a material reduction in power consumption due to the lockdowns of entire industrial sectors and producing activities. In 2020, power sales in the wholesale market in Italy fell by 10% due to lower consumption by Italian businesses. Management believes that these factors will continue to negatively affect clean spark spread margins on electricity in the Italian wholesale markets.

In case the Company is unable to effectively manage the above described competitive risks, which may increase in case of a weaker-than-anticipated recovery in the post-pandemic economy or in a worst case scenario of the imposition by governments of new lockdown measures and other restrictions in response to the pandemic, the Group's future results of operations, cash flow, liquidity, business prospects, financial condition, shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares may be adversely and significantly affected.

Safety, security, environmental and other operational risks

The Group engages in the exploration and production of oil and natural gas, processing, transportation and refining of crude oil, transport of natural gas, storage and distribution of petroleum products and the production of base chemicals, plastics and elastomers. By their nature, the Group's operations expose Eni to a wide range of significant health, safety, security and environmental risks. Technical faults, malfunctioning of plants, equipment and facilities, control systems failure, human errors, acts of sabotage, attacks, loss of containment and adverse weather events can trigger damaging consequences such as explosions, blow-outs, fires, oil and gas spills from wells, pipeline and tankers, release of contaminants and pollutants in the air, the ground and in the water, toxic emissions and other negative events. The magnitude of these risks is influenced by the geographic range, operational diversity and technical complexity of Eni's activities. Eni's future results of operations and liquidity depend on its ability to identify and address the risks and hazards inherent to operating in those industries.

In the Exploration & Production segment, Eni faces natural hazards and other operational risks including those relating to the physical and geological characteristics of oil and natural gas fields. These include the risks of eruptions of crude oil or of natural gas, discovery of hydrocarbon pockets with abnormal pressure, crumbling of well openings, leaks that can harm the environment and the security of Eni's personnel and risks of blowout, fire or explosion.

Eni's activities in the Refining & Marketing and Chemical segment entail health, safety and environmental risks related to the handling, transformation and distribution of oil, oil products and certain petrochemical products. These risks can arise from the intrinsic characteristics and the overall lifecycle of the products manufactured and the raw materials used in the manufacturing process, such as oil-based feedstock, catalysts, additives and monomer feedstock. These risks comprise flammability, toxicity, long-term environmental impact such as greenhouse gas emissions and risks of various forms of pollution and contamination of the soil and the groundwater, emissions and discharges resulting from their use and from recycling or disposing of materials and wastes at the end of their useful life.

All of Eni's segments of operations involve, to varying degrees, the transportation of hydrocarbons. Risks in transportation activities depend on several factors and variables , including the hazardous nature of the products transported due to their flammability and toxicity, the transportation methods utilized (pipelines, shipping, river freight, rail, road and gas distribution networks), the volumes involved and the sensitivity of the regions through which the transport passes (quality of infrastructure, population density, environmental considerations). All modes of transportation of hydrocarbons are particularly susceptible to risks of blowout, fire and loss of containment and, given that normally high volumes are involved, could present significant risks to people, the environment and the property.

Eni has material offshore operations relating to the exploration and production of hydrocarbons. In 2020, approximately 65% of Eni's total oil and gas production for the year derived from offshore fields, mainly in Egypt, Libya, Angola, Norway, Congo, Indonesia, the United Arab Emirates, Italy, Ghana, Venezuela, the United Kingdom, Nigeria and the United States. Offshore operations in the oil and gas industry are inherently riskier than onshore activities. Offshore accidents and spills could cause damage of catastrophic proportions to the ecosystem and to communities' health and security due to the apparent difficulties in handling hydrocarbons containment, pollution, poisoning of water and organisms, length and complexity of cleaning operations and other factors. Furthermore, offshore operations are subject to marine risks, including storms and other adverse weather conditions and perils of vessel collisions, which may cause material adverse effects on the Group's operations and the ecosystem.

The Company has invested and will continue to invest significant financial resources to continuously upgrade the methods and systems for safeguarding the reliability of its plants, production facilities, transport and storage infrastructures, the safety and the health of its employees, contractors, local communities and the environment, to prevent risks, to comply with applicable laws and policies and to respond to and learn from unforeseen incidents. Eni seeks to manage these operational risks by carefully designing and building facilities, including wells, industrial complexes, plants and equipment, pipelines, storage sites and other facilities, and managing its operations in a safe and reliable manner and in compliance with all applicable rules and regulations, as well as by applying the best available techniques in the marketplace. However, these measures may ultimately not be completely successful in preventing and/or altogether eliminating risks of adverse events. Failure to properly manage these risks as well as accidental events like human errors, unexpected system failure, sabotages or other unexpected drivers could cause oil spills, blowouts, fire, release of toxic gas and pollutants into the atmosphere or the environment or in underground water and other incidents, all of which could lead to loss of life, damage to properties, environmental pollution, legal liabilities and/or damage claims and consequently a disruption in operations and potential economic losses that could have a material and adverse effect on the Group’s results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni’s shares.

Eni’s operations are often conducted in difficult and/or environmentally sensitive locations such as the Gulf of Mexico, the Caspian Sea and the Arctic. In such locations, the consequences of any incident could be greater than in other locations. Eni also faces risks once production is discontinued because Eni’s activities require the decommissioning of productive infrastructures and environmental sites remediation and clean-up. Furthermore, in certain situations where Eni is not the operator, the Company may have limited influence and control over third parties, which may limit its ability to manage and control such risks. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group’s assets related to unfavourable events and in connection with environmental clean-up and remediation. As of the date of this filing, maximum compensation allowed under such insurance coverage is equal to $1.2 billion in case of offshore incident and $1.4 billion in case of incident at onshore facilities (refineries). Additionally, the Company may also activate further insurance coverage in case of specific capital projects and other industrial initiatives. Management believes that its insurance coverage is in line with industry practice and is enough to cover normal risks in its operations. However, the Company is not insured against all potential risks. In the event of a major environmental disaster, such as the incident which occurred at the Macondo well in the Gulf of Mexico several years ago, for example, Eni’s third-party liability insurance would not provide any material coverage and thus the Company’s liability would far exceed the maximum coverage provided by its insurance. The loss Eni could suffer in case of a disaster of material proportions would depend on all the facts and circumstances of the event and would be subject to a whole range of uncertainties, including legal uncertainty as to the scope of liability for consequential damages, which may include economic damage not directly connected to the disaster. The Company cannot guarantee that it will not suffer any uninsured loss and there can be no guarantee, particularly in the case of a major environmental disaster or industrial accident, that such a loss would not have a material adverse effect on the Company.

The occurrence of any of the above mentioned risks could have a material and adverse impact on the Group’s results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni’s shares and could also damage the Group’s reputation.

Risks deriving from Eni’s exposure to weather conditions

Significant changes in weather conditions in Italy and in the rest of Europe from year to year may affect demand for natural gas and some refined products. In colder years, demand for such products is higher. Accordingly, the results of operations of our businesses engaged in the marketing of natural gas and, to a lesser extent, the Refining & Marketing business, as well as the comparability of results over different periods may be affected by such changes in weather conditions. Over recent years, this pattern could have been possibly affected by the rising frequency of weather trends like milder winter or extreme weather events like heatwaves or unusually cold snaps, which are possible consequences of climate change. In 2020, our sales volumes of gas both at wholesale markets and at the retail sector particularly in Italy were negatively affected by lower seasonal sales in the first quarter.

Risks associated with the exploration and production of oil and natural gas

The exploration and production of oil and natural gas require high levels of capital expenditures and are subject to natural hazards and other uncertainties, including those relating to the physical characteristics of oil and gas fields. The exploration and production activities are subject to mining risk and the risks of cost overruns and delayed start-up at the projects to develop and produce hydrocarbons reserves. Those risks could have an adverse, significant impact on Eni’s future growth prospects, results of operations, cash flows, liquidity and shareholders’ returns.

The production of oil and natural gas is highly regulated and is subject to conditions imposed by governments throughout the world in matters such as the award of exploration and production leases, the imposition of specific drilling and other work obligations, higher-than-average rates of income taxes, additional royalties and taxes on production, environmental protection measures, control over the development and decommissioning of fields and installations, and restrictions on production. A description of the main risks facing the Company's business in the exploration and production of oil and gas is provided below.

Exploratory drilling efforts may be unsuccessful

Exploration activities are mainly subject to mining risk, i.e. the risk of dry holes or failure to find commercial quantities of hydrocarbons. The costs of drilling and completing wells have margins of uncertainty, and drilling operations may be unsuccessful because of a large variety of factors, including geological failure, unexpected drilling conditions, pressure or heterogeneities in formations, equipment failures, well control (blowouts) and other forms of accidents. A large part of the Company exploratory drilling operations is located offshore, including in deep and ultra-deep waters, in remote areas and in environmentally-sensitive locations (such as the Barents Sea, the Gulf of Mexico, deep water prospect off West Africa, Indonesia, the Mediterranean Sea and the Caspian Sea). In these locations, the Company generally experiences higher operational risks and more challenging conditions and incurs higher exploration costs than onshore. Furthermore, deep and ultra-deep water operations require significant time before commercial production of discovered reserves can commence, increasing both the operational and the financial risks associated with these activities. Because Eni plans to make significant investments in executing exploration projects, it is likely that the Company will incur significant amounts of dry hole expenses in future years. Unsuccessful exploration activities and failure to discover additional commercial reserves could reduce future production of oil and natural gas, which is highly dependent on the rate of success of exploration projects and could have an adverse impact on Eni's future performance and returns.

Development projects bear significant operational risks which may adversely affect actual returns

Eni is executing or is planning to execute several development projects to produce and market hydrocarbon reserves. Certain projects target the development of reserves in high-risk areas, particularly deep offshore and in remote and hostile environments or in environmentally sensitive locations. Eni's future results of operations and business prospects depend heavily on its ability to implement, develop and operate major projects as planned. Key factors that may affect the economics of these projects include:

- the outcome of negotiations with joint venture partners, governments and state-owned companies, suppliers and potential customers to define project terms and conditions, including, for example, Eni's ability to negotiate favourable long-term contracts to market gas reserves;
- commercial arrangements and granting of all necessary administrative authorizations to build pipelines and related equipment to transport and market hydrocarbons;
- timely issuance of permits and licenses by government agencies;
- the ability to carry out the front-end engineering design in order to prevent the occurrence of technical inconvenience during the execution phase; timely manufacturing and delivery of critical equipment by contractors, shortages in the availability of such equipment or lack of shipping yards where complex offshore units such as FPSO and platforms are built; delays in achievement of critical phases and project milestones;
- risks associated with the use of new technologies and the inability to develop advanced technologies to maximise the recoverability rate of hydrocarbons or gain access to previously inaccessible reservoirs;
- performance in project execution on the part of contractors who are awarded project construction activities generally based on the EPC (Engineering, Procurement and Construction) contractual scheme;
- changes in operating conditions and cost overruns;
- the actual performance of the reservoir and natural field decline; and
- the ability and time necessary to build suitable transport infrastructures to export production to final markets.

The occurrence of any of such risks may negatively affect the time-to-market of the reserves and cause cost overruns and a delayed pay-back period, therefore adversely affecting the economic returns of Eni's development projects and the achievement of production growth targets.

Development projects normally have long lead times due to the complexity of the activities and tasks that need to be performed before a project final investment decision is made and commercial production can be achieved. Those activities include the appraisal of a discovery to evaluate the technical and economic feasibility of the development project, obtaining the necessary authorizations from governments, state agencies or national oil companies, signing agreements with the first party regulating a project's contractual terms such as the production sharing, obtaining partners' approval, environmental permits and other conditions, signing long-term gas contracts, carrying out the concept design and the front-end engineering and building and commissioning the related plants and facilities. All these activities normally can take years to perform. As a consequence, rates of return for such projects are exposed to the volatility of oil and gas prices and costs which may be substantially different from those estimated when the investment decision was made, thereby leading to lower return rates. Moreover, projects executed with partners and joint venture partners reduce the ability of the Company to manage risks and costs, and Eni could have limited influence over and control of the operations and performance of its partners. Furthermore, Eni may not have full operational control of the joint ventures in which it participates and may have exposure to counterparty credit risk and disruption of operations and strategic objectives due to the nature of its relationships.

Finally, if the Company is unable to develop and operate major projects as planned, particularly if the Company fails to accomplish budgeted costs and time schedules, it could incur significant impairment losses of capitalised costs associated with reduced future cash flows of those projects.

Inability to replace oil and natural gas reserves could adversely impact results of operations and financial condition

In case the Company's exploration efforts are unsuccessful at replacing produced oil and natural gas, its reserves will decline. In addition to being a function of production, revisions and new discoveries, the Company's reserve replacement is also affected by the entitlement mechanism in its production sharing agreements ("PSAs"), whereby the Company is entitled to a portion of a field's reserves, the sale of which is intended to cover expenditures incurred by the Company to develop and operate the field. The higher the reference prices for Brent crude oil used to estimate Eni's proved reserves, the lower the number of barrels necessary to recover the same amount of expenditure, and vice versa. Based on the current portfolio of oil and gas assets, Eni's management estimates that production entitlements vary on average by approximately 330 barrels/d for each $1 change in oil prices based on current Eni's assumptions for oil prices. In 2020, production and year-end proved reserves benefitted from lower oil prices which translated into higher entitlements (approximately 12 kBOE/d of incremental production and 118 MBOE of reserves volumes). In case oil prices differ significantly from Eni's own forecasts, the result of the above-mentioned sensitivity of production to oil price changes may be significantly different.

Future oil and gas production is a function of the Company's ability to access new reserves through new discoveries, application of improved techniques, success in development activity, negotiations with national oil companies and other owners of known reserves and acquisitions.

An inability to replace produced reserves by discovering, acquiring and developing additional reserves could adversely impact future production levels and growth prospects. If Eni is unsuccessful in meeting its long-term targets of production growth and reserve replacement, Eni's future total proved reserves and production will decline.

Uncertainties in estimates of oil and natural gas reserves

The accuracy of proved reserve estimates and of projections of future rates of production and timing of development expenditures depends on a number of factors, assumptions and variables, including:

- the quality of available geological, technical and economic data and their interpretation and judgement;
- management's assumptions regarding future rates of production and costs and timing of operating and development expenditures. The projections of higher operating and development costs may impair the ability of the Company to economically produce reserves leading to downward reserve revisions;

- changes in the prevailing tax rules, other government regulations and contractual conditions;
- results of drilling, testing and the actual production performance of Eni's reservoirs after the date of the estimates which may drive substantial upward or downward revisions; and
- changes in oil and natural gas prices which could affect the quantities of Eni's proved reserves since the estimates of reserves are based on prices and costs existing as of the date when these estimates are made. Lower oil prices may impair the ability of the Company to economically produce reserves leading to downward reserve revisions.

Many of the factors, assumptions and variables underlying the estimation of proved reserves involve management's judgement or are outside management's control (prices, governmental regulations) and may change over time, therefore affecting the estimates of oil and natural gas reserves from year-to-year.

The prices used in calculating Eni's estimated proved reserves are, in accordance with the SEC requirements, calculated by determining the unweighted arithmetic average of the first day-of-the-month commodity prices for the preceding twelve months. For the 12-months ending at December 31, 2020, average prices were based on 41 $/BBL for the Brent crude oil, which was materially lower than the reference price of 63 $/BBL utilized in 2019 due to the effects of the pandemic-induced economic crisis on demand and prices of hydrocarbons. Also, the reference price of natural gas was markedly lower than in 2019. Those reductions resulted in Eni having to remove 124 MBOE of proved reserves because they have become uneconomical in this price environment.

Accordingly, the estimated reserves reported as of the end of 2020 could be significantly different from the quantities of oil and natural gas that will be ultimately recovered. Any downward revision in Eni's estimated quantities of proved reserves would indicate lower future production volumes, which could adversely impact Eni's business prospects, results of operations, cash flows and liquidity.

At the end of 2020 due to a combination of a slowdown in development expenditures because of the need to preserve the Group liquidity during the downturn and the removal of a significant amount of reserves that have become uneconomical in this environment, the Group reserves additions for the year of 271 MBOE fell significantly short of the volume produced of 634 MBOE, negatively affecting the replacement ratio of produced volumes and the total quantity of proved reserves at year-end compared to 2019 (down by 5%) which could negatively affect the Group's growth prospects going forward.

The development of the Group's proved undeveloped reserves may take longer and may require higher levels of capital expenditures than it currently anticipates or the Group's proved undeveloped reserves may not ultimately be developed or produced

At December 31, 2020, approximately 30% of the Group's total estimated proved reserves (by volume) were undeveloped and may not be ultimately developed or produced. Recovery of undeveloped reserves requires significant capital expenditures and successful drilling operations. The Group's reserve estimates assume it can and will make these expenditures and conduct these operations successfully. These assumptions may not prove to be accurate and are subject to the risk of a structural decline in the prices of hydrocarbons due to possible long-lasting effects associated with the COVID-19 pandemic, including acceleration towards a low-carbon economy and a shift in consumers' behaviour and preferences. In case of a continued decline in the prices of hydrocarbon the Group may not have enough financial resources to make the necessary expenditures to recover undeveloped reserves. The Group's reserve report at December 31, 2020 includes estimates of total future development and decommissioning costs associated with the Group's proved total reserves of approximately €27.7 billion (undiscounted, including consolidated subsidiaries and equity-accounted entities). It cannot be certain that estimated costs of the development of these reserves will prove correct, development will occur as scheduled, or the results of such development will be as estimated. In case of change in the Company's plans to develop those reserves, or if it is not otherwise able to successfully develop these reserves as a result of the Group's inability to fund necessary capital expenditures or otherwise, it will be required to remove the associated volumes from the Group's reported proved reserves.

Oil and gas activity may be subject to increasingly high levels of income taxes and royalties

Oil and gas operations are subject to the payment of royalties and income taxes, which tend to be higher than those payable in many other commercial activities. Furthermore, in recent years, Eni has experienced adverse changes in the tax regimes applicable to oil and gas operations in a number of countries where the Company conducts its upstream operations. As a result of these trends, management estimates that the tax rate applicable to the Company's oil and gas operations is materially higher than the

Italian statutory tax rate for corporate profit, which currently stands at 24%. Management believes that the marginal tax rate in the oil and gas industry tends to increase in correlation with higher oil prices, which could make it more difficult for Eni to translate higher oil prices into increased net profit. However, the Company does not expect that the marginal tax rate will decrease in response to falling oil prices. Adverse changes in the tax rate applicable to the Group’s profit before income taxes in its oil and gas operations would have a negative impact on Eni’s future results of operations and cash flows.

In the current uncertain financial and economic environment, governments are facing greater pressure on public finances, which may induce them to intervene in the fiscal framework for the oil and gas industry, including the risk of increased taxation, windfall taxes, and even nationalisations and expropriations.

The present value of future net revenues from Eni’s proved reserves will not necessarily be the same as the current market value of Eni’s estimated crude oil and natural gas reserves

The present value of future net revenues from Eni’s proved reserves may differ from the current market value of Eni’s estimated crude oil and natural gas reserves. In accordance with the SEC rules, Eni bases the estimated discounted future net revenues from proved reserves on the 12-month un-weighted arithmetic average of the first-day-of-the-month commodity prices for the preceding twelve months. Actual future prices may be materially higher or lower than the SEC pricing used in the calculations. Actual future net revenues from crude oil and natural gas properties will be affected by factors such as:

- the actual prices Eni receives for sales of crude oil and natural gas;
- the actual cost and timing of development and production expenditures;
- the timing and amount of actual production; and
- changes in governmental regulations or taxation.

The timing of both Eni’s production and its incurrence of expenses in connection with the development and production of crude oil and natural gas properties will affect the timing and amount of actual future net revenues from proved reserves, and thus their actual present value. Additionally, the 10% discount factor Eni uses when calculating discounted future net revenues may not be the most appropriate discount factor based on interest rates in effect from time to time and risks associated with Eni’s reserves or the crude oil and natural gas industry in general. At December 31, 2020 the net present value of Eni’s proved reserves totalled approximately €27.7 billion and was materially lower than at the end of 2019 because the average prices used to estimate Eni’s proved reserves and the net present value at December 31, 2020, as calculated in accordance with the SEC rules, were 41 $/barrel for the Brent crude oil compared to 63 $/barrel utilized in 2019 due to the big fall recorded in hydrocarbons prices during the course of 2020 as a result of the demand contraction caused by the COVID-19 pandemic. Actual future prices may materially differ from those used in our year-end estimates.

Oil and gas activity may be subject to increasingly high levels of regulations throughout the world, which may impact our extraction activities and the recoverability of reserves

The production of oil and natural gas is highly regulated and is subject to conditions imposed by governments throughout the world in matters such as the award of exploration and production leases, the imposition of specific drilling and other work obligations, environmental protection measures, control over the development and abandonment of fields and installations, and restrictions on production. These risks can limit the Group’s access to hydrocarbons reserves or may cause the Group to redesign, curtail or cease its oil&gas operations with significant effects on the Group’s business prospects, results of operations and cash flow.

In Italy, the activities of hydrocarbon development and production are performed by oil companies in accordance to concessions granted by the Ministry of Economic Development in agreement with the relevant Region territorially involved in the case of onshore concessions. Concessions are granted for an initial twenty-year term; the concessionaire is entitled to a ten-year extension and then to one or more five-year extensions to fully recover a field’s reserves and investments on the condition that the concessionaire has fulfilled all obligations related to the work program agreed in the initial concession award. In case of delay in the award of an extension, the original concession remains fully effective until the administrative procedure to grant an extension is finalized. These general rules are to be coordinated with a new law that was enacted in February 2019. This law requires certain Italian administrative bodies to adopt by the end of 2021 a plan intended to identify areas that are suitable for carrying out exploration, development and production of hydrocarbons in the national territory, including the territorial seawaters. Until approval of such a plan, a moratorium on exploration activities, including the award of new exploration leases, is in effect. Following the plan approval, exploration permits will resume in areas that have been identified as suitable and new exploration permits can be awarded. However, in unsuitable areas, exploration permits will be repealed, applications for obtaining new exploration permits ongoing at the time of the law enactment will be rejected and no new permit applications can be filed. As far as development and production concessions are concerned, pending the national plan approval, ongoing concessions remain in effect and administrative procedures underway to grant extensions to expired concessions remain unaffected; however, no applications to obtain new concessions can be filed. Once the above mentioned national plan is adopted, development and production concessions that fall in suitable areas can be granted further extensions and applications for new concessions can be filed; however, development and production concessions in place as at the approval of the national plan that fall in unsuitable areas will be repealed at their expiration, no further extensions will be granted, and no new concession applications can be filed or awarded. According to the statute, areas that are suitable to the activities of exploring and developing hydrocarbons must conform to a number of criteria including morphological characteristics and social, urbanistic and industrial constraints, with particular bias for the hydrogeological balance, current territorial planning and with regard to marine areas for externalities on the ecosystem, reviews of marine routes, fishing and any possible impacts on the coastline.

The Group’s largest operated development concession in Italy is Val d’Agri, which term expired on October 26, 2019. Development activities at the concession have continued since then in accordance with the “prorogation regime” described above, within the limits of the work plan approved when the concession was first granted. The Company filed an application to obtain a ten-year extension of the concession in accordance to the terms set by the law and before the enactment of the new law on the national plan for hydrocarbons activity. In this application the Company confirmed the same work program as in the original concession award. Similarly, Company operations are underway in accordance to the ongoing prorogation regime at another 41 expired Italian concessions for hydrocarbons development and production. The Company has also filed requests for extensions within the terms of the law for those concessions.

As far as proven reserves estimates are concerned, management believes the criteria laid out in the new law to be high-level principles, which make it difficult to identify in a reliable and objective manner areas that might be suitable or unsuitable to hydrocarbons activities before the plan is adopted by Italian authorities. However, based on the review of all facts and circumstances and on the current knowledge of the matter, management does not expect any material impact on the Group’s future performance.

Eni’s future performance depends on its ability to identify and mitigate the above-mentioned risks and hazards which are inherent to its oil&gas business. Failure to properly manage those risks, the Company’s underperformance at exploration, development and reserve replacement activities or the occurrence of unforeseen regulatory risks may adversely and materially impact the Group’s results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni’s shares.

Risks related to political considerations

As of December 31, 2020, approximately 83% of Eni’s proved hydrocarbon reserves were located in non-OECD countries, mainly in Africa and central-south East Asia, where the socio-political framework, the financial system and the macroeconomic outlook are less stable than in the OECD countries. In those non-OECD countries, Eni is exposed to a wide range of political risks and uncertainties, which may impair Eni’s ability to continue operating economically on a temporary or permanent basis, and Eni’s ability to access oil and gas reserves. Particularly, Eni faces risks in connection with the following potential issues and risks:

- socio-political instability leading to internal conflicts, revolutions, establishment of non-democratic regimes, protests, attacks, strikes and other forms of civil disorder and unrest, such as strikes, riots, sabotage, acts of violence and similar events. These risks could result in disruptions to economic activity, loss of output, plant closures and shutdowns, project delays, loss of assets and threats to the security of personnel. They may disrupt financial and commercial markets, including the supply of and pricing for oil and natural gas, and generate greater political and economic instability in some of the geographical areas in which Eni operates. Additionally, any possible reprisals because of military or other action, such as acts of terrorism in Europe, the United States or elsewhere, could have a material adverse effect on the world economy and hence on the global demand for hydrocarbons;
- lack of well-established and reliable legal systems and uncertainties surrounding the enforcement of contractual rights;

- unfavourable enforcement of laws, regulations and contractual arrangements leading, for example, to expropriation, nationalisation or forced divestiture of assets and unilateral cancellation or modification of contractual terms;
- sovereign default or financial instability due to the fact that those countries rely heavily on petroleum revenues to sustain public finance and petroleum revenues have dramatically contracted in 2020 due plunging hydrocarbons prices as a consequence of the global economic crisis caused by the COVID-19 pandemic. Financial difficulties at country level often translate into failure by state-owned companies and agencies to fulfil their financial obligations towards Eni relating to funding capital commitments in projects operated by Eni or to timely paying for supplies of equity oil and gas volumes;
- restrictions on exploration, production, imports and exports;
- tax or royalty increases (including retroactive claims);
- difficulties in finding qualified international or local suppliers in critical operating environments; and
- complex processes of granting authorisations or licences affecting time-to-market of certain development projects.

The financial outlook of several, non-OECD countries where Eni is operating was significantly affected by the material contraction recorded in hydrocarbons revenues following the COVID-19 pandemic, which also increased the counterparty risk of a few state-owned or privately-held local companies that are Eni’s partners in certain projects to develop oil&gas reserves.

Areas where Eni operates and where the Company is particularly exposed to political risk include, but are not limited to Libya, Venezuela and Nigeria.

Eni’s operations in Libya are currently exposed to significant geopolitical risks. The current situation of social and political instability dates back to the revolution of 2011 that brought a change of regime and a civil war, triggering an uninterrupted period of lack of well-established institutions and recurrent episodes of internal conflict, clashes, disorders and other forms of civil turmoil. In the year of the revolution, Eni’s operations in Libya were materially affected by a full-scale war, which forced the Company to shut down its development and extractive activities for almost all of 2011, with a significant negative impact on the Group’s results of operation and cash flow. In subsequent years Eni has experienced frequent disruptions to its operations, albeit on a smaller scale than in 2011, due to security threats to its installations and personnel. In April 2019, a resurgence of the socio-political instability and a failure by the opposed factions to establish a national government triggered the resumption of the civil war with armed clashes in the area of Tripoli and elsewhere in the country. The situation continued to escalate also because international negotiations aimed at restoring a state of peace and stability proved elusive. At the beginning of 2020 oil export terminals in the eastern and southern parts of Libya were blocked, halting most of the country’s oil export terminals, and force majeure was declared at several Libyan production facilities. Production shutdowns also involved certain of the Company’s profit centres (the El Feel oilfield and the Bu Attifel offshore platform). The Company repatriated its personnel and strengthened security measures at its plants and facilities still in operation. However, despite this difficult framework, the Company’s largest assets in Libya–the Bahr Essalam offshore platform and the onshore Mellitah oil and gas production centre–have continued to produce regularly. Due to those developments, we estimated a loss of output in the range of 9 KBBL/d on average for the year 2020. In late September, the situation began to improve thanks to a temporary agreement between the conflicting factions, the blockade was lifted at the main ports for exporting crude oil and production resumed at the main fields, revoking force majeure. Despite this, management believes that Libya’s geopolitical situation will continue to represent a source of risk and uncertainty to Eni’s operations in the country and to the Group’s results of operations and cash flow.

As of December 31, 2020, Libya represented approximately 10% of the Group’s total production; this percentage is forecasted to decrease in the medium term in line with the expected implementation of the Group’s strategy intended to diversify the Group’s geographical presence to better balance the geopolitical risk of the portfolio. In the event of major adverse events, such as the escalation of the internal conflict into a full-blown civil war, attacks, sabotage, social unrest, clashes and other forms of civil disorder, Eni could be forced to reduce or to shut down completely its production activities at its Libyan fields, which would significantly hit results of operations and cash flow.

Venezuela is currently experiencing a situation of financial stress, which has been exacerbated by the economic recession caused by the effects of the COVID-19 pandemic. Lack of financial resources to support the development of the country’s hydrocarbons reserves has negatively affected the country’s production levels and hence fiscal revenues. The situation has been made worse by certain international sanctions targeting the country’s financial system and its ability to export crude oil to U.S. markets, which is the main outlet of Venezuelan production (see also “Sanctions targets” below).

Presently, the Company retains only one valuable asset in Venezuela: the 50%-participated Cardón IV joint venture, which is operating a natural gas offshore project and is supplying its production to the national oil company, PDVSA, under a long-term supply agreement. We also hold an equity interest in other two oil projects: the PetroJunin oilfield and the Corocoro field, with respect to which in past years we have registered significant impairment losses and reserves de-bookings, with currently little value left to recover. The main risk to Eni’s ability to recover its investment is the continued difficulty on the part of PDVSA to pay the receivables for the gas supplies of Cardón IV, resulting in a significant amount of overdue receivables. The joint-venture is systematically booking a loss provision on the revenues accrued. The expected credit loss was based on management’s appreciation of the counterparty risk driven by the findings of a review of the past experience of sovereign defaults on which basis a deferral in the collection of the gas revenues was estimated. As of December 31, 2020, Eni’s invested capital in Venezuela was approximately $1 billion. Despite the negative financial outlook of the country and of PDVSA, during the course of 2020 the Company was able to collect a certain percentage of accrued revenues, in line with management’s estimates of the expected credit losses. Eni expects the financial and political outlook of the country to remain a risk factor to Eni’s operations there for the foreseeable future.

We have significant credit exposure in Nigeria to state-owned and privately-held local companies, where the overall financial and economic outlook of the country has been made worse by the contraction of petroleum revenues due to the crisis of the oil sector in 2020 caused by the COVID-19 pandemic. Our credit exposure is due to the fact that we are funding the share of capital expenditures pertaining to Nigerian joint operators at Eni-operated oil projects. We have incurred in the past and it is possible to continue incurring in the future significant credit losses because of the ongoing difficulties of our Nigerian counterparts to reimburse amounts past due.

Eni is closely monitoring political, social and economic risks of the countries in which it has invested or intends to invest, in order to evaluate the economic and financial return of capital projects and to selectively evaluate projects. While the occurrence of these events is unpredictable, the occurrence of any such risks may adversely and materially impact the Group’s results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni’s shares.

Finally, the United Kingdom left the European Union at the end of January 2020. Due to this decision, it is possible that in the future we may experience delays in moving our products and employees between the UK and EU. Also, additional tariffs and taxes could impact the demand for some of our products and this, combined with the weak macroeconomic conditions in both the EU and UK due to the COVID-19 pandemic, could have a material adverse effect on energy demand.

Sanction targets

The most relevant sanction programs for Eni are those issued by the European Union and the United States of America and in particular, as of today, the restrictive measures adopted by such authorities in respect of Russia and Venezuela.

In response to the Russia-Ukraine crisis, the European Union and the United States have enacted sanctions targeting, inter alia, the financial and energy sectors in Russia by restricting the supply of certain oil and gas items and services to Russia and certain forms of financing. Eni has adapted its activities to the applicable sanctions and will further adapt its business to any subsequent restrictive measures that shall be adopted by the relevant authorities. In response to these restrictions, the Company has put on hold its projects in the upstream sectors in Russia and currently is not engaged in any oil & gas project in the country. It is not possible to rule out the possibility that wider sanctions targeting the Russian energy, banking and/or finance industries may be implemented. Further sanctions imposed on Russia, Russian citizens or Russian companies by the international community, such as restrictions on purchases of Russian gas by European companies or measures restricting dealings with Russian counterparties, could adversely impact Eni's business, results of operations and cash flow. Furthermore, an escalation of the international crisis, resulting in a tightening of sanctions, could entail a significant disruption of energy supply and trade flows globally, which could have a material adverse effect on the Group's business, financial conditions, results of operations and prospects.

Starting from 2017, the United States enacted a regime of economic and financial sanctions against Venezuela. The scope of the restrictions, initially targeting certain financial instruments issued or sold by the Government of Venezuela, was gradually expanded over 2017 and 2018 and then significantly broadened during the course of 2019 when Petroleos de Venezuela SA ("PDVSA"), the main national state-owned enterprise, has been added to the "Specially Designated Nationals and Blocked Persons List" and the Venezuelan governments and its controlled entities became subject to assets freeze in the United States. Even if such U.S. sanctions are substantially "primary" and therefore dedicated in principle to U.S. persons only, retaliatory measures and other adverse consequences may also interest foreign entities which operate with Venezuelan listed entities and/or in the oil sector of the country. The U.S. sanction regime against Venezuela has been further tightened in the final part of 2020 by restricting any Venezuelan oil exports, including swap schemes utilized by foreign entities to recover trade and financing receivables from PDVSA and other Venezuelan counterparties. This latter tightening of the sanction regime could jeopardize our ability to collect the trade receivable owed to us for our activity in the country.

Eni is carefully evaluating on a case by case basis the adoption of measures adequate to minimize its exposure to any sanctions risk which may affect its business operation. In any case, the U.S. sanctions add stress to the already complex financial, political and operating outlook of the country, which could further limit the ability of Eni to recover its investments in Venezuela.

Risks specific to the Company's gas business in Italy

Current, negative trends in gas demands and supplies in Europe may impair the Company's ability to fulfil its minimum off-take obligations in connection with its take-or-pay, long-term gas supply contracts

Eni is currently party to a few long-term gas supply contracts with state-owned companies of key producing countries, from where most of the gas supplies directed to Europe are sourced via pipeline (Russia, Algeria, Libya and Norway). These contracts which were intended to support Eni's sales plan in Italy and in other European markets, provide take-or-pay clauses whereby the Company has an obligation to lift minimum, pre-set volumes of gas in each year of the contractual term or, in case of failure, to pay the whole price, or a fraction of that price, up to a minimum contractual quantity. Similar considerations apply to ship-or-pay contractual obligations which arise from contracts with pipeline owners, which the Company has entered into to secure long-term transport capacity. Long-term gas supply contracts with take-or pay clauses expose the Company to a volume risk, as the Company is obligated to purchase an annual minimum volume of gas, or in case of failure, to pay the underlying price. The structure of the Company's portfolio of gas supply contracts is a risk to the profitability outlook of Eni's wholesale gas business due to the current competitive dynamics in the European gas markets. In past downturns of the gas sector, the Company incurred significant cash outflows in response to its take-or-pay obligations. Furthermore, the Company's wholesale business is exposed to volatile spreads between the procurement costs of gas, which are linked to spot prices at European hubs or to the price of crude oil, and the selling prices of gas which are mainly indexed to spot prices at the Italian hub. A reduction of the spreads between Italian and European spot prices for gas could negatively affect the profitability of our business by reducing the total addressable market and by reducing the margin to cover the business's logistics costs and other fixed expenses.

Eni's management is planning to continue its strategy of renegotiating the Company's long-term gas supply contracts in order to constantly align pricing terms to current market conditions as they evolve and to obtain greater operational flexibility to better manage the take-or-pay obligations (volumes and delivery points among others), considering the risk factors described above. The revision clauses included in these contracts state the right of each counterparty to renegotiate the economic terms and other contractual conditions periodically, in relation to ongoing changes in the gas scenario. Management believes that the outcome of those renegotiations is uncertain in respect of both the amount of the economic benefits that will be ultimately obtained and the timing of recognition of profit. Furthermore, in case Eni and the gas suppliers fail to agree on revised contractual terms, both parties can start an arbitration procedure to obtain revised contractual conditions. All these possible developments within the renegotiation process could increase the level of risks and uncertainties relating the outcome of those renegotiations.

Risks associated with the regulatory powers entrusted to the Italian Regulatory Authority for Energy, Networks and Environment in the matter of pricing to residential customers

Eni's wholesale gas and retail gas&power businesses are subject to regulatory risks mainly in our domestic market in Italy. The Italian Regulatory Authority for Energy, Networks and Environment (the "**Authority**") is entrusted with certain powers in the matter of natural gas and power pricing. Specifically, the Authority retains a surveillance power on pricing in the natural gas market in Italy and the power to establish selling tariffs for the supply of natural gas to residential and commercial users until the market is fully opened. Developments in the regulatory framework intended to increase the level of market liquidity or of de-regulation or intended to reduce operators' ability to transfer to customers cost increases in raw materials may negatively affect future sales margins of gas and electricity, operating results and cash flow.

Risks related to environmental, health and safety regulations and legal risks

Eni has incurred in the past, and will continue incurring, material operating expenses and expenditures, and is exposed to business risk in relation to compliance with applicable environmental, health and safety regulations in future years, including compliance with any national or international regulation on GHG emissions

Eni is subject to numerous European Union, international, national, regional and local laws and regulations regarding the impact of its operations on the environment and on health and safety of employees, contractors, communities and on the value of properties. We believe that laws and regulations intended to preserve the environment and to safeguard health and safety of workers and communities are particularly severe in our businesses due to their inherent nature because of flammability and toxicity of hydrocarbons and of industrial processes to develop, extract, refine and transport oil, gas and products. Generally, these laws and regulations require acquisition of a permit before drilling for hydrocarbons may commence, restrict the types, quantities and concentration of various substances that can be released into the environment in connection with exploration, drilling and production activities, including refinery and petrochemical plant operations, limit or prohibit drilling activities in certain protected areas, require to remove and dismantle drilling platforms and other equipment and well plug-in once oil and gas operations have terminated, provide for measures to be taken to protect the safety of the workplace and of plants and infrastructures, the health of employees, contractors and other Company collaborators and of communities involved by the Company's activities, and impose criminal or civil liabilities for polluting the environment or harming employees' or communities' health and safety as result from the Group's operations. These laws and regulations control the emission of scrap substances and pollutants, discipline the handling of hazardous materials and set limits to or prohibit the discharge of soil, water or groundwater contaminants, emissions of toxic gases and other air pollutants or can impose taxes on polluting air emissions, as in the case of the European Trading Scheme that requires the payment of a tax for each tonne of carbon dioxide emitted in the environment above a pre-set allowance, resulting from the operation of oil and natural gas extraction and processing plants, petrochemical plants, refineries, service stations, vessels, oil carriers, pipeline systems and other facilities owned or operated by Eni. In addition, Eni's operations are subject to laws and regulations relating to the production, handling, transportation, storage, disposal and treatment of waste. Breaches of environmental, health and safety laws and regulations as in the case of negligent or wilful release of pollutants and contaminants into the atmosphere, the soil, water or groundwater or exceeding the concentration thresholds of contaminants set by the law expose the Company to the incurrence of liabilities associated with compensation for environmental, health or safety damage and expenses for environmental remediation and clean-up. Furthermore, in the case of violation of certain rules regarding the safeguard of the environment and the health of employees, contractors and other collaborators of the Company, and of communities, the Company may incur liabilities in connection with the negligent or wilful violation of laws by its employees as per Italian Law Decree No. 231/2001.

Environmental, health and safety laws and regulations have a substantial impact on Eni's operations. Management expects that the Group will continue to incur significant amounts of operating expenses and expenditures in the foreseeable future to comply with laws and regulations and to safeguard the environment and the health and safety of employees, contractors and communities involved by the Company operations, including:

- costs to prevent, control, eliminate or reduce certain types of air and water emissions and handle waste and other hazardous materials, including the costs incurred in connection with government action to address climate change (see the specific section below on climate-related risks);
- remedial and clean-up measures related to environmental contamination or accidents at various sites, including those owned by third parties (see discussion below);
- damage compensation claimed by individuals and entities, including local, regional or state administrations, should Eni cause any kind of accident, oil spill, well blowouts, pollution, contamination, emission of GHG and other air pollutants above permitted levels or of any other hazardous gases, water, ground or air contaminants or pollutants, as a result of its operations or if the Company is found guilty of violating environmental laws and regulations; and

- costs in connection with the decommissioning and removal of drilling platforms and other facilities, and well plugging at the end of oil&gas field production.

As a further consequence of any new laws and regulations or other factors, like the actual or alleged occurrence of environmental damage at Eni’s plants and facilities, the Company may be forced to curtail, modify or cease certain operations or implement temporary shutdowns of facilities. For example, in Italy Eni has experienced in recent years a number of temporary plant shutdowns at our Val d’Agri oil treatment centre due to environmental issues and oil spillovers, causing loss of output and of revenues. The Italian judicial authorities have started legal proceedings to verify alleged environmental crimes or crimes against the public safety and other criminal allegations as described in the notes to the Consolidated Financial Statements.

If any of the risks set out above materialise, they could adversely impact the Group’s results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni’s shares.

Climate-related risks

The civil society and the national governments adhering to the 2015 COP 21 Paris Agreement are stepping up efforts to reduce the risks of climate change and to support an ongoing transition to a low-carbon economy, which will likely lead to the adoption of national and international laws and regulations intended to curb carbon emissions, as well as to the implementation of fiscal measures which could possibly drive technological breakthrough in the use of hydrogen, exponential growth in the development of renewables energies and fast-growing adoption of electric vehicles, thus reducing the world’s economy reliance on fossil fuels. These trends could materially affect demand for hydrocarbons in the long-term, while we expect increased compliance costs for the Company in the short-term. Eni is also exposed to risks of unpredictable extreme meteorological events linked to climate change. All these developments may adversely and materially affect the Group’s profitability, businesses outlook and reputation

The civil society and the national governments adhering to the 2015 COP 21 Paris Agreement, with the EU playing a leading role, are advancing plans and initiatives intended to transition the economy towards a low-carbon model in the long run, as the scientific community has been sounding alarms over the potential, catastrophic consequences for human life on the planet in connection with risks of climate change, based on the scientific relationship between global warming and increasing GHG concentration in the atmosphere, mainly as a result of burning fossil fuels. This push, as well as increasingly stricter regulations in this area, could adversely and materially affect the Group’s business.

Those risks may emerge in the short and medium-term, as well as over the long term.

Eni expects that the achievement of the Paris Agreement goal of limiting the rise in temperature to well below 2° C above pre-industrial levels, or the more stringent goal advocated by the Intergovernmental Panel on Climate Change (IPCC) of limiting global warming to 1.5° C, will strengthen the global response to the issue of climate change and spur governments to introduce measures and policies targeting the reduction of GHG emissions, which are expected to bring about a gradual reduction in the use of fossil fuels over the medium to long-term, notably through the diversification of the energy mix, likely reducing local demand for fossil fuels and negatively affecting global demand for oil and natural gas.

Recently, governmental institutions have responded to the issue of climate change on two fronts: on the one side, governments can both impose taxes on GHG emissions and incentivise a progressive shift in the energy mix away from fossil fuels, for example, by subsidising the power generation from renewable sources; on the other side they can promote worldwide agreements to reduce the consumption of hydrocarbons. This trend has been progressively gaining traction with an increasing number of governments adopting national agendas and strategies intended to reach the goals of the Paris Agreement and formally pledging to obtain net-zero emissions by 2050, like the EU’s Green Deal, which may lead to the enactment of various measure to constrain, limit or prohibit altogether the use of fossil fuels. This trend could increase both in breadth and severity if more governments follow suit.

The dramatic fallout of the COVID-19 pandemic on economic activity and people’s lifestyle could possibly result in a breakthrough in the evolution towards a low-carbon model of development. The unprecedented contraction in economic activity caused by the lockdown measures adopted throughout the world to contain the spread of the virus, which resulted in the suppression of demand for hydrocarbons, could have an enduring impact on the future role of hydrocarbons in satisfying global energy needs. This is because many governments and the EU have deployed massive amounts of resources to help rebuild entire economies and industrial sectors hit by the pandemic-induced crisis and a large part of this economic stimulus has been or is planned to be directed to help transitioning the economy and the energy mix towards a low-carbon model, as in the case of the EU's recovery fund, which provides for huge investments in the sector of renewable energies and the green economy, including large-scale adoption of hydrogen as a new energy source. At the same time, the auto industry is ramping up production of electric vehicles (EVs) and boosting the EVs line-up, while large amounts of risk capital and financing is propelling the growth of an entire new industry of pure-EV players. The growing role of EVs in transportation is leveraging on state subsidies to incentivize the purchase of EVs and growing interest among consumers towards EVs. Other potentially disruptive technologies designated to produce energy without fossil fuels and to replace the combustion engine in the transport sector are emerging, driven by the development of hydrogen-based innovations. These trends could disrupt demand for hydrocarbons in the not so distant future, with many forecasters, both within the industry, or state agencies and independent observers predicting peak oil demand sometimes in the next ten years or earlier; some operators still consider 2019 as the peak year for oil demand. A large portion of Eni's business depends on the global demand for oil and natural gas. If existing or future laws, regulations, treaties, or international agreements related to GHG and climate change, including state incentives to conserve energy or use alternative energy sources, technological breakthrough in the field of renewable energies or mass-adoption of electric vehicles trigger a structural decline in worldwide demand for oil and natural gas, our results of operations and business prospects may be materially and adversely affected.

We expect our operating and compliance expenses to increase in the short-term due to the likely growing adoption of carbon tax mechanisms. Some governments have already introduced carbon pricing schemes, which can be an effective measure to reduce GHG emissions at the lowest overall cost to society. Today, about half of the direct GHG emissions coming from Eni's operated assets are included in national or supranational Carbon Pricing Mechanisms, such as the European Emission Trading Scheme (ETS), as a result of which the Company incurs operating expenses. For example, under the European ETS, Eni is obligated to purchase, on the open markets, emission allowances in case its GHG emissions exceed a pre-set amount of free emission allowances. In 2020 to comply with this carbon emissions scheme, Eni purchased on the open market allowances corresponding to 10.5 million tonnes of CO_2 emissions. Due to the likelihood of new regulations in this area and expectations of a reduction in free allowances under the European ETS and of the adoption of similar schemes by a rising number of governments, Eni is aware of the risk that a growing share of the Group's GHG emissions could be subject to carbon-pricing and other forms of climate regulation in the not so distant future, leading to additional compliance obligations with respect to the release, capture, and use of carbon dioxide that could result in increased investments and higher project costs for Eni. Eni also expects that governments will require companies to apply technical measures to reduce their GHG emissions.

The scientific community has concluded that increasing global average temperature produces significant physical effects, such as the increased frequency and severity of hurricanes, storms, droughts, floods or other extreme climatic events that could interfere with Eni's operations and damage Eni's facilities. Extreme and unpredictable weather phenomena can result in material disruption to Eni's operations, and consequent loss of or damage to properties and facilities, as well as a loss of output, loss of revenues, increasing maintenance and repair expenses and cash flow shortfall.

Finally, there is a reputational risk linked to the fact that oil companies are increasingly perceived by institutions and the general public as entities primarily responsible for global warming due to GHG emissions across the hydrocarbons value-chain, particularly related with the use of energy products. This could possibly make Eni's shares less attractive to investment funds and individual investors who have been more and more assessing the risk profile of companies against their carbon footprint when making investment decisions. Furthermore, a growing number of financing institutions, including insurance companies, appear to be considering limiting their exposure to fossil fuel projects, as witnessed by a pledge from the World Bank to stop financing upstream oil and gas projects and a proposal from the EU finance minister to reduce the financing granted to oil&gas projects via the European Investment Bank (EIB). This trend could have a material adverse effect on the price of our securities and our ability to access equity or other capital markets. Accordingly, our ability to obtain financing for future projects or to obtain it at competitive rates may be adversely impacted. Further, in some countries, governments and regulators have filed lawsuits seeking to hold fossil fuel companies, including Eni, liable for costs associated with climate change. Losing any of these lawsuits could have a material adverse effect on our business prospects.

As a result of these trends, climate-related risks could have a material and adverse effect the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares.

Eni is exposed to the risk of material environmental liabilities in addition to the provisions already accrued in the consolidated financial statement.

Eni has incurred in the past and may incur in the future material environmental liabilities in connection with the environmental impact of its past and present industrial activities. Eni is also exposed to claims under environmental requirements and, from time to time, such claims have been made against us. Furthermore, environmental regulations in Italy and elsewhere typically impose strict liability. Strict liability means that in some situations Eni could be exposed to liability for clean-up and remediation costs, environmental damage, and other damages as a result of Eni's conduct of operations that was lawful at the time it occurred or of the conduct of prior operators or other third parties. In addition, plaintiffs may seek to obtain compensation for damage resulting from events of contamination and pollution or in case the Company is found liable of violations of any environmental laws or regulations. In Italy, Eni is exposed to the risk of expenses and environmental liabilities in connection with the impact of its past activities at certain industrial hubs where the Group's products were produced, processed, stored, distributed or sold, such as chemical plants, mineral-metallurgic plants, refineries and other facilities, which were subsequently disposed of, liquidated, closed or shut down. At these industrial hubs, Eni has undertaken several initiatives to remediate and to clean-up proprietary or concession areas that were allegedly contaminated and polluted by the Group's industrial activities. State or local public administrations have sued Eni for environmental and other damages and for clean-up and remediation measures in addition to those which were performed by the Company, or which the Company has committed to perform. In some cases, Eni has been sued for alleged breach of criminal laws (for example for alleged environmental crimes such as failure to perform soil or groundwater reclamation, environmental disaster and contamination, discharge of toxic materials, amongst others). Although Eni believes that it may not be held liable for having exceeded in the past pollution thresholds that are unlawful according to current regulations but were allowed by laws then effective, or because the Group took over operations from third parties, it cannot be excluded that Eni could potentially incur such environmental liabilities. Eni's financial statements account for provisions relating to the costs to be incurred with respect to clean-ups and remediation of contaminated areas and groundwater for which a legal or constructive obligations exist and the associated costs can be reasonably estimated in a reliable manner, regardless of any previous liability attributable to other parties. The accrued amounts represent management's best estimates of the Company's existing liabilities. Management believes that it is possible that in the future Eni may incur significant or material environmental expenses and liabilities in addition to the amounts already accrued due to: (i) the likelihood of as yet unknown contamination; (ii) the results of ongoing surveys or surveys to be carried out on the environmental status of certain Eni's industrial sites as required by the applicable regulations on contaminated sites; (iii) unfavourable developments in ongoing litigation on the environmental status of certain of the Company's sites where a number of public administrations, the Italian Ministry of the Environment or third parties are claiming compensation for environmental or other damages such as damages to people's health and loss of property value; (iv) the possibility that new litigation might arise; (v) the probability that new and stricter environmental laws might be implemented; and (vi) the circumstance that the extent and cost of environmental restoration and remediation programs are often inherently difficult to estimate leading to underestimation of the future costs of remediation and restoration, as well as unforeseen adverse developments both in the final remediation costs and with respect to the final liability allocation among the various parties involved at the sites. As a result of these risks, environmental liabilities could be substantial and could have a material adverse effect the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares.

Risks related to legal proceedings and compliance with anti-corruption legislation

Eni is the defendant in a number of civil and criminal actions and administrative proceedings. In future years Eni may incur significant losses due to: (i) uncertainty regarding the final outcome of each proceeding; (ii) the occurrence of new developments that management could not take into consideration when evaluating the likely outcome of each proceeding in order to accrue the risk provisions as of the date of the latest financial statements or to judge a negative outcome only as possible or to conclude that a contingency loss could not be estimated reliably; (iii) the emergence of new evidence and information; and (iv) underestimation of probable future losses due to circumstances that are often inherently difficult to estimate. Certain legal proceedings and investigations in which Eni or its subsidiaries or its officers and employees are defendants involve the alleged breach of anti-bribery and anti-corruption laws and regulations and other ethical misconduct. Such proceedings are described in the notes to the condensed consolidated interim financial statements, under the heading "Legal Proceedings". Ethical misconduct and noncompliance with applicable laws and regulations, including noncompliance with anti-bribery and anti-corruption laws, by Eni, its officers and employees, its partners, agents or others that act on the Group's behalf, could expose Eni and its employees to criminal and civil penalties and could be damaging to Eni's reputation and shareholder value.

Internal control risks

Risks from acquisitions

Eni is constantly monitoring the oil and gas market in search of opportunities to acquire individual assets or companies with a view of achieving its growth targets or complementing its asset portfolio. Acquisitions entail an execution risk–the risk that the acquirer will not be able to effectively integrate the purchased assets so as to achieve expected synergies. In addition, acquisitions entail a financial risk–the risk of not being able to recover the purchase costs of acquired assets, in case a prolonged decline in the market prices of oil and natural gas occurs. Eni may also incur unanticipated costs or assume unexpected liabilities and losses in connection with companies or assets it acquires. If the integration and financial risks related to acquisitions materialise, expected synergies from acquisition may fall short of management's targets and Eni's financial performance and shareholders' returns may be adversely affected.

Eni's crisis management systems may be ineffective

Eni has developed contingency plans to continue or recover operations following a disruption or incident. An inability to restore or replace critical capacity to an agreed level within an agreed period could prolong the impact of any disruption and could severely affect business, operations and financial results. Eni has crisis management plans and the capability to deal with emergencies at every level of its operations. If Eni does not respond or is not seen to respond in an appropriate manner to either an external or internal crisis, this could adversely impact the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares.

Disruption to or breaches of Eni's critical IT services or digital infrastructure and security systems could adversely affect the Group's business, increase costs and damage our reputation

The Group's activities depend heavily on the reliability and security of its information technology (IT) systems and digital security. The Group's IT systems, some of which are managed by third parties, are susceptible to being compromised, damaged, disrupted or shutdown due to failures during the process of upgrading or replacing software, databases or components, power or network outages, hardware failures, cyber-attacks (viruses, computer intrusions), user errors or natural disasters. The cyber threat is constantly evolving. The oil and gas industry is subject to fast-evolving risks from cyber threat actors, including nation states, criminals, terrorists, hacktivists and insiders. Attacks are becoming more sophisticated with regularly renewed techniques while the digital transformation amplifies exposure to these cyber threats. The adoption of new technologies, such as the Internet of Things (IoT) or the migration to the cloud, as well as the evolution of architectures for increasingly interconnected systems, are all areas where cyber security is a very important issue. The Group and its service providers may not be able to prevent third parties from breaking into the Group's IT systems, disrupting business operations or communications infrastructure through denial-of-service attacks, or gaining access to confidential or sensitive information held in the system. The Group, like many companies, has been and expects to continue to be the target of attempted cybersecurity attacks. While the Group has not experienced any such attack that has had a material impact on its business, the Group cannot guarantee that its security measures will be sufficient to prevent a material disruption, breach or compromise in the future. As a result, the Group's activities and assets could sustain serious damage, services to clients could be interrupted, material intellectual property could be divulged and, in some cases, personal injury, property damage, environmental harm and regulatory violations could occur.

If any of the risks set out above materialise, they could adversely impact the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's share.

Violations of data protection laws carry fines and expose us and/or our employees to criminal sanctions and civil suits

Data protection laws and regulations apply to Eni and its joint ventures and associates in the vast majority of countries in which we do business. The EU General Data Protection Regulation (GDPR) came into effect in May 2018 and increased penalties up to a maximum of 4% of global annual turnover for breach of the regulation. The GDPR requires mandatory breach notification, a standard also followed outside of the EU (particularly in Asia). Non-compliance with data protection laws could expose us to regulatory investigations, which could result in fines and penalties as well as harm our reputation. In addition to imposing fines, regulators may also issue orders to stop processing personal data, which could disrupt operations. We could also be subject to litigation from persons or corporations allegedly affected by data protection violations. Violation of data protection laws is a criminal offence in some countries, and individuals can be imprisoned or fined.

If any of the risks set out above materialise, they could adversely impact the Group’s results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni’s shares.

Risks related to financial matters

Exposure to financial risk–We are exposed to treasury and trading risks, including liquidity risk, interest rate risk, foreign exchange risk, commodity price risk and credit risk and we may incur substantial losses in connection with those risks

Our business is exposed to the risk that changes in interest rates, foreign exchange rates or the prices of crude oil, natural gas, LNG, refined products, chemical feedstocks, power and carbon emission rights will adversely affect the value of assets, liabilities or expected future cash flows.

The Group does not hedge its exposure to volatile hydrocarbons prices in its business of developing and extracting hydrocarbons reserves and other types of commodity exposures (e.g. exposure to the volatility of refining margins and of certain portions of the gas long-term supply portfolio) except for specific markets or business conditions. The Group has established risk management procedures and enters into derivatives commodity contracts to hedge exposure to the commodity risk relating to commercial activities, which derives from different indexation formulas between purchase and selling prices of commodities. However, hedging may not function as expected. In addition, we undertake commodity trading to optimize commercial margins or with a view of profiting from expected movements in market prices. Although Eni believes it has established sound risk management procedures to monitor and control commodity trading, this activity involves elements of forecasting and Eni is exposed to the risks of incurring significant losses if prices develop contrary to management expectations and of default of counterparties.

We are exposed to the risks of unfavourable movements in exchange rates primarily because our consolidated financial statements are prepared in Euros, whereas our main subsidiaries in the Exploration & Production sector are utilizing the U.S. dollar as their functional currency. This translation risk is normally unhedged. Furthermore, our euro-denominated subsidiaries incur revenues and expenses in currencies other than the euro or are otherwise exposed to currency fluctuations because prices of oil, natural gas and refined products generally are denominated in, or linked to, the U.S. dollar, while a significant portion of Eni’s expenses are incurred in euros and because movements in exchange rates may negatively affect the fair value of assets and liabilities denominated in currencies other than the euro. Therefore, movements in the U.S. dollar (or other foreign currencies) exchange rate versus the euro affect results of operations and cash flows and year-on-year comparability of the performance. These exposures are normally pooled at Group level and net exposures to exchange rate volatility are netted on the marketplace using derivative transactions. However, the effectiveness of such hedging activity is uncertain, and the Company may incur losses also of significant amounts. As a rule of thumb, a depreciation of the U.S. dollar against the euro generally has an adverse impact on Eni’s results of operations and liquidity because it reduces booked revenues by an amount greater than the decrease in the U.S. dollar denominated expenses and may also result in significant translation adjustments that impact Eni’s shareholders’ equity.

We are exposed to fluctuations in interest rates that may affect the fair value of our financial assets and liabilities as well as the amount of finance expense recorded through profit. We enter into derivative transactions with purpose of minimizing our exposure to the interest rate risk.

Eni’s credit ratings are potentially exposed to risk from possible reductions of sovereign credit rating of Italy. On the basis of the methodologies used by Standard & Poor’s and Moody’s, a potential downgrade of Italy’s credit rating may have a potential knock-on effect on the credit rating of Italian issuers such as Eni and make it more likely that the credit rating of the debt instruments issued by the Company could be downgraded.

We are exposed to credit risk; our counterparties could default, could be unable to pay the amounts owed to us in a timely manner or meet their performance obligations under contractual arrangements. These events could cause us to recognize loss provisions with respect to amounts owed to us by our debtors or in the worst case to write off a credit altogether. In recent years, the Group has experienced a significant level of counterparty default due to the severity of the economic and financial downturn that has negatively affected several Group counterparties, customers and partners and to the fact that Italy, which is still the largest market to Eni's gas wholesale and retail businesses, has underperformed other OECD countries in terms of GDP growth. Those trends have been aggravated by the 2020 economic crisis caused by the lockdown measures adopted worldwide to contain the COVID-19 pandemic, resulting in a significantly deteriorated credit and financial profile of many of our counterparties, including national oil companies who are joint operators in our upstream projects, retail customers in the gas retail business and other industrial accounts. Therefore, in 2020 we incurred significant credit loss provisions based on management's expectations of an increased default rate going forward, as the economic crisis is poised to continue affecting the financial conditions of our counterparties, and on evidence of our performance at collecting billed invoices in the retail gas&power business.

We believe that the retail gas & power segment is particularly exposed to credit risk due to its large and diversified customer base, which includes a large number of medium and small-sized businesses and retail customers who are expected to be particularly hit by the Italian economic recession. Eni's Exploration & Production business is significantly exposed to credit risk because of the deteriorated financial outlook of many oil-producing countries due to the collapse recorded in crude oil prices and uncertainties about a stable recovery, which has negatively impacted petroleum revenues of those countries triggering financial instability. The financial difficulties of those countries have extended to state-owned oil companies and other national agencies who are partnering with Eni in the execution of oil&gas projects or who are buying Eni's equity production in a number of oil&gas projects. These trends have limited Eni's ability to fully recover or to collect timely its trade or financing receivables or its investments towards those entities. Eni believes that the management of doubtful accounts in the post pandemic environment represents a risk to the Company, which will require management focus and commitment going forward. Eni cannot exclude the recognition of significant provisions for doubtful accounts in future reporting periods. Management is closely monitoring exposure to the counterparty risk in its Exploration & Production business due to the magnitude of the exposure at risk and to the long-lasting effects of the oil price downturn on its industrial partners.

If any of the risks set out above materialises, this could adversely impact the Group's results of operations, cash flow, liquidity, business prospects, financial condition, and shareholder returns, including dividends, the amount of funds available for stock repurchases and the price of Eni's shares.

Liquidity risk

Liquidity risk is the risk that suitable sources of funding for the Group may not be available, or that the Group is unable to sell its assets on the marketplace in order to meet short-term financial requirements and to settle obligations. Such a situation would negatively affect the Group's results of operations and cash flows as it would result in Eni incurring higher borrowing expenses to meet its obligations or, under the worst conditions, the inability of Eni to continue as a going concern. Global financial markets are volatile due to several macroeconomic risk factors, including the fiscal outlook of the hydrocarbons-producing countries. In 2020, due to a collapse in hydrocarbons consumption and prices caused by an almost standstill of the global economy and travel in response to the COVID-19 pandemic, we experienced a material contraction in our cash flows from operations, which reduced the Company's cash reserves. We were forced to reduce a significant portion of our liquidity reserves and we tapped the financial markets, as we managed through the downturn. We did not incur worsened borrowings conditions with respect to standard market terms or past fiscal years, nor were our finance expenses unusually high. However, due to an increase in the Company's net exposure towards the financial system and indebtedness ratio, our liquidity risk profile has deteriorated. In case of new restrictive measures in response to a resurgence of the pandemic leading to a double-dip in economic activity and energy demand, in the event of extended periods of constraints in the financial markets, or if Eni is unable to access the financial markets (including cases where this is due to Eni's financial position or market sentiment as to Eni's prospects) at a time when cash flows from Eni's business operations may be under pressure, we may incur significantly higher borrowing costs than in the past or difficulties obtaining the necessary financial resources to fund our development plans, therefore jeopardizing Eni's ability to maintain long-term investment programs. Low investments to develop our reserves may significantly and negatively affect Eni's business prospects, results of operations and cash flows, and may impact shareholder returns, including dividends or share price. The oil and gas industry is capital intensive. Eni makes and expects to continue to make substantial capital expenditures in its business for the exploration, development and production of oil and natural gas reserves. Over the next four years, the Company plans to invest in the oil&gas business approximately an average of €4.5 billion per year. In 2021, Eni expects to make capital expenditures slightly below the level of €6 billion, of which about 70% in the Exploration & Production segment, at the planned exchange rate of 1.19 USD/EUR. Historically, Eni's capital expenditures have been financed with cash generated from operations, proceeds from asset disposals, borrowings under its credit facilities and proceeds from the issuance of debt and bonds. The actual amount and timing of future capital expenditures may differ materially from Eni's estimates as a result of, among other things, changes in commodity prices, available cash flows, lack of access to capital, actual drilling results, the availability of drilling rigs and other services and equipment, the availability of transportation capacity, and regulatory, technological and competitive developments. Eni's cash flows from operations and access to capital markets are subject to a number of variables, including but not limited to:

- the amount of Eni's proved reserves;
- the volume of crude oil and natural gas Eni is able to produce and sell from existing wells;
- the prices at which crude oil and natural gas are sold;
- Eni's ability to acquire, find and produce new reserves; and
- the ability and willingness of Eni's lenders to extend credit or of participants in the capital markets to invest in Eni's bonds.

If revenues or Eni's ability to borrow decrease significantly due to factors such as a prolonged decline in crude oil and natural gas prices, Eni might have limited ability to obtain the capital necessary to sustain its planned capital expenditures. If cash generated by operations, cash from asset disposals, or cash available under Eni's liquidity reserves or its credit facilities is not sufficient to meet capital requirements, the failure to obtain additional financing could result in a curtailment of operations relating to development of Eni's reserves, which in turn could adversely affect its business, financial condition, results of operations, and cash flows and its ability to achieve its growth plans. These factors could also negatively affect shareholders' returns, including the amount of cash available for dividend distribution and share repurchases, as well as the share price. In addition, funding Eni's capital expenditures with additional debt will increase its leverage and the issuance of additional debt will require a portion of Eni's cash flows from operations to be used for the payment of interest and principal on its debt, thereby reducing its ability to use cash flows to fund capital expenditures and dividends.

Item 4. INFORMATION ON THE COMPANY

History and development of the Company

Eni, the former Ente Nazionale Idrocarburi, a public law agency, established by Law No. 136 of February 10, 1953, was transformed into a joint stock company by Law Decree No. 333 published in the Official Gazette of the Republic of Italy No. 162 of July 11, 1992 (converted into law on August 8, 1992, by Law No. 359, published in the Official Gazette of the Republic of Italy No. 190 of August 13, 1992). The Shareholders' Meeting of August 7, 1992 resolved that the company be called Eni SpA. Eni is registered at the Companies Register of Rome, register tax identification number 00484960588, R.E.A. Rome No. 756453. Eni is expected to remain in existence until December 31, 2100; its duration can however be extended by resolution of the shareholders.

The name of the agent of Eni in the United States is Marco Margheri, Washington DC–USA 601, 13th street, NW 20005.

The Company engages in producing and selling energy products and services to worldwide markets, with operations in the traditional businesses of exploring for, developing, extracting and marketing crude oil and natural gas, manufacturing and marketing oil-based fuels and chemicals products and gas-fired power as well as energy products from renewable sources. The company is implementing a strategy designed to reduce in the long term its dependence on hydrocarbons and to increase the weight of decarbonized products in its portfolio and with the aim of reaching the target of net zero emissions of carbon dioxide ("CO_2") by 2050 to comply with the climate target of the Paris Agreement. According to the management, this strategic shift away from traditional hydrocarbon will place the Company in a very competitive position in the market for the supply of de-carbonized products, combining value creation, business sustainability and economic and financial robustness, lessening the Company's dependence on the volatility of the results of the hydrocarbons businesses.

In June 2020, Eni's Board of Directors established a new organizational structure with two business groups to align with the Company's decarbonization strategy. The "Natural Resources" business group is responsible for enhancing the oil & gas portfolio of the Exploration & Production ("E&P") segment in a sustainable manner, focusing also on energy efficiency activities, projects for forests conservation (REDD+) and projects for the capture, storage and/or utilization of CO_2 ("CCS" or "CCU"). In addition to E&P, this business group comprises the wholesale gas and LNG businesses as well as the activity of environmental protection and remediation managed by our subsidiary Eni Rewind. The other business group "Energy Evolution" is responsible for progressing and developing the renewable businesses of generating and selling renewable power and manufacturing and marketing sustainable products obtained from decarbonized industrial processes (blue products) and by biomass (bio-products). This business group comprises the Refining & Marketing business, the chemical business managed by Versalis SpA and its subsidiaries, the retail gas and power business managed by Eni gas e luce and the business of producing and selling power from thermoelectric plants and renewable sources.

In re-designing the Group's segment information for financial reporting purposes, management evaluated that the components of the Company whose operating results are regularly reviewed by the CEO (Chief Operating Decision Maker as defined by IFRS 8) to make decisions about the allocation of resources and to assess performance would continue being the single business units which are comprised in the two newly-established business groups, rather than the two groups themselves. Therefore, in order to comply with the provisions of the international reporting standard that regulates the segment reporting (IFRS 8), the new reportable segments of Eni, substantially confirming the pre-existing setup, are identified as follows:

- Exploration & Production, which also comprises the economics of the forestry projects (REDD+) and projects for CO_2 capture and storage and/or utilization. Eni's Exploration & Production segment engages in oil and natural gas exploration and field development and production, as well as in LNG operations, in 42 countries, most notably Italy, Libya, Egypt, Norway, the United Kingdom, Angola, Congo, Nigeria, Mexico, the United States, Kazakhstan, Algeria, Iraq, Indonesia, Ghana, Mozambique, Bahrain, Oman and United Arab Emirates. In 2020, Eni average daily production amounted to 1,609 KBOE/d on an available- for-sale basis. As of December 31, 2020, Eni's total proved reserves amounted to 6,905 mmBOE, which include subsidiary undertakings and proportionally consolidated entities and Eni's share of reserves of equity-accounted joint ventures and associates.

- Global Gas & LNG Portfolio: engages in the wholesale activity of supplying and selling natural