Elements of risk and uncertainty

Introduction

This chapter illustrates the main elements of uncertainty featured in the ordinary management of Snam's operations.

The risks identified by Snam are broken down into financial and non financial risks. The latter are classified in the following categories:

- strategic;
- legal and non-compliance;
- operating.

Financial risks are illustrated in Note 25. "Guarantees, commitments and risks – financial risk management", of the Notes to the consolidated financial statements.

STRATEGIC RISKS

Regulatory and legislative risk

Regulatory and legislative risk for Snam is linked to the regulation of activities in the gas sector. The decisions of the Italian Regulatory Authority for Energy, Networks and the Environment (ARERA) and the National Regulatory Authorities of the countries in which the foreign subsidiaries operate, European and national regulations and, more generally, the change in the regulatory reference framework, could have a significant impact on the operations, results and financial stability of the Company.
It is not possible to foresee the effect that future changes in legislative and fiscal policies could have on Snam's business and on the industrial sector in which it operates.
Considering the specific nature of its business and the context in which Snam operates, changes to the regulatory context with regard to criteria for determining reference tariffs are particularly significant.

Macroeconomic and geo-political risk

Because of the specific nature of the business in which Snam operates, there are also **risks associated with political, social and economic instability in natural gas supplier countries**, mainly related to the gas transportation sector. A large part of the natural gas transported in the Italian national transportation network is imported or moved through countries in the MENA area (Middle East and North Africa, particularly Algeria, Tunisia, Libya and, in terms of the TANAP-TAP, Turkey along with the states bordering the Eastern Mediterranean) and in the former Soviet bloc (Russian Federation, Ukraine and in the future, Azerbaijan and Georgia), nations subject to political, social and economic instability which could evolve into potential crisis scenarios in the future.
In particular, the import and transit of natural gas from/ and through these countries are subject to an extensive set of risks, including: terrorism and common crime, changes in political-institutional balances; armed conflict, socio-political and ethno-sectarian tensions; disorder and unrest; inadequate legislation on insolvency and creditor protection; limits on investment and the import and export of goods and services; introduction of and increases in taxes and excises; forced renegotiation of contracts; nationalisation of assets; changes in trade policies and monetary restrictions.
If a Shipper using the transportation service via Snam's networks cannot procure the transportation of natural gas from/or through the aforementioned countries because of said adverse conditions, or in any way suffers from said adverse conditions, to an extent such so as to determine or incentivise the consequential inability to fulfil contractual obligations towards Snam, this could have negative effects on the Snam Group's operations, results, balance sheet and cash flow.
In addition, Snam is exposed to macro-economic risks deriving from relocation or tension on financial markets or situations deriving from exogenous phenomena, which could have an impact on liquidity and access to financial markets.

Commodity risk linked to changes in the price of gas

With reference to the **risk connected with changes in the price of natural gas**, however, pursuant to the regulatory framework currently in force, changes in the price of natural gas to cover own gas and network leakages do not represent a significant risk factor for Snam, since all gas for its core activities is provided by Shippers in kind. Similar coverages of risk are guaranteed by the regulations of countries in which the foreign affiliates operate or the relative transportation contracts. However, in relation to transportation activities, the Energy, Networks and Environment Regulatory Authority (ARERA) has defined, starting with the third regulatory period (2010-2013), procedures for payment in kind, by users of the service to the leading transportation company, of quantities of gas to cover unaccounted-for gas (UFG), due as a percentage of the quantities respectively injected into and withdrawn from the transportation network. Specifically, the Authority, by means of Resolution 514/2013/R/gas, defined the permitted level of the UFG given the average value registered over the last two years, and decided to keep

this amount fixed for the entire regulatory period in order to incentivise the main transmission system operator to deliver further efficiency improvements. For the relevant regulatory period, amounts of UFG higher than the permitted level would not be compensated. This approach was subsequently confirmed for the years 2018 and 2019 of the transition period as well.
Through resolution no. 114/2019/R/gas, under the scope of the process for revising the criteria for calculating the revenues recognised for the natural gas transportation and metering service for the fifth regulatory period (2020-2023), the criteria for recognising UFG were also defined. On the basis of these criteria, from 2020, the recognition of quantities of own gas, network leaks and UFG will take place in monetary terms instead of recognition in kind by shippers. However, the change in the price of natural gas will continue not to represent a significant risk factor for Snam, since there is a hedging mechanism for the risk associated with differences between the price recognised for own gas, network leaks and UFG volumes and the effective procurement price. With reference to the quantities recognised, the above-mentioned resolution confirmed the current criterion relating to own gas and leaks, while for UFG the permitted level will be updated annually and will therefore be equal to the average of the quantities effectively recorded in the last four years available.
Taking the above-mentioned unaccounted for gas mechanisms into consideration, with reference to the transition period, concluded on 31 December 2019, the uncertainty with reference to any UFG quantities recorded in excess of the quantities recognised remains. In this regard note that, under the scope of the dialogue established with the ARERA, in 2019, it recognised part of the higher charges incurred in 2018 and early recognition for the same phenomena on any quantities in excess of the quotas recognised in 2019. Generally speaking, the change in the regulatory framework with regard to the recognition of natural gas quantities to cover own gas, network leaks and UFG could have negative effects on the Snam Group's operations, result balance sheet and cash flow.

Market risk

With reference to the **risk connected with demand for gas**, based on the tariff system currently applied by the Authority to natural gas transportation activities, Snam's revenue, via its directly controlled transportation companies, is partly related to volumes transported. The ARERA, however, introduced a guarantee mechanism with respect to the share of revenues related to the volumes transported.
This mechanism provides for the reconciliation of major or minor revenues, exceeding ± 4% of the reference revenues related to the volumes transported. Under this mechanism, approximately 99.5% of total revenues from transportation activities are guaranteed. This mechanism was also confirmed, through resolution 114/2019/R/gas for the fifth regulatory period.
Based on the tariff system currently applied by the ARERA to natural gas storage activities, Snam's revenues, via Stogit, relate to infrastructure usage. However, the ARERA has introduced a mechanism to guarantee reference revenues that allows companies to cover a significant portion of revenues recorded. Until the fourth regulatory period (2015-2019), the minimum guaranteed level of revenues recognised was around 97%, while for the fifth regulatory period (2020-2025) resolution 419/2019/R/gas extended the level of guarantee to all recognised revenues (100%). This resolution also introduced an upgraded incentive mechanism following a reduction in the share of revenue recognised subject to the hedge factor. This mechanism will be defined by the ARERA with subsequent provisions.
Lastly, with reference to the tariff regulation criteria for the LNG regasification service for the fifth regulatory period (2020-2023), resolution 474/2019/R/gas confirmed the reference revenue hedging mechanism at a minimum guaranteed level of 64%.
In general, the change to the regulatory framework in force could have negative effects on the Snam Group's operations, results, balance sheet and cash flow.
Abroad, protection from market risk is offered by the French regulatory authority (Terēga') and Greek (Desfa), from the TAP and Austria long-term contracts (different expiry dates for TAG and Gas Connect from 2023). In Austria and the United Kingdom (Interconnector UK) regulation does not guarantee hedging volume risk.

NFS Risk of climate change

Over the last few years, significant climatic phenomena have occurred with increasing frequency, which, together with the ever-increasing data on CO_2 emissions, have led to the introduction of regulations that have introduced increasing CO_2 reduction targets, with particular reference to European operators. The evolution of these phenomena and the introduction of these regulations could represent a growing risk against which, however, companies have the opportunity to act, mitigating it, both by implementing increasingly stringent and demanding policies to reduce greenhouse gas emissions (possibly also by taking actions that could increase the cost of compliance with current regulations), and by continuing to position themselves in the energy transition, thus seizing the opportunities. In this sense, Snam will continue its commitment to strengthen a sustainable business model on all ESG factors, starting with those that have an impact on the climate and the environment, and define a virtuous path towards climate neutrality by 2050.

The **risks connected with the emissions market** fall within the scope of the European Union Directives on the sale of permits relating to carbon dioxide emissions and the rules on controlling emissions of certain atmospheric pollutants. With the start of the third regulatory period (2013-2020) of the European Emissions Trading System (EU - ETS), the updating of the sector regulations has had as its main objective the authorisations for emitting greenhouse gases and a constant reduction of the quotas on emissions released free of charge. The allowances will be assigned to each plant on a gradually decreasing basis, and will no longer be constant, and will also depend on the actual functionality of the plants. The shares assigned free of charge to Group plants are no longer sufficient to comply with the regulatory obligations relating to ETS mechanisms, therefore Snam will procure the missing shares on the market. The further development in progress of the European regulation could lead to identifying new methods for the management of the necessary shares.

Through resolution 114/209/R/gas of 28 March 2019 the ARERA defined the regulatory criteria for the fifth regulatory period (2020-2023) of the natural gas transportation and metering service, including, among other things, the recognition of costs relating to the Emission Trading System (ETS). Resolutions 419/2019/R/gas and 474/2019/R/gas introduced the recognition of costs relating to the ETS mechanism for the storage system as well (regulatory period 2020-2025) and for the regasification service (2020-2023).

The climate change scenarios could cause a change in the choice of energy mixes of various European countries and in the behaviour of the population and could have an impact on the demand for natural gas and volumes transported, and could also influence the development of the use of alternatives to gas, promote greater penetration of renewable bases (biomethane, synthetic methane and hydrogen) and the promotion of new businesses.

Climate change could also increase the severity of extreme weather events (floods, droughts, extreme temperature fluctuations), worsening natural and hydro-geological conditions in some areas with a possible impact on the quality and continuity of the service provided by Snam as well as on Italian and European gas demand. With reference to the effects of the change in the gas demand on the balance sheet, income statement and financial position of the Snam Group, see the previous paragraph “Market risk”.

With regard to the new climate agreements in force globally (including the Paris Agreement adopted at COP 21 in 2015 in which governments agreed to maintain the average increase in global temperature to below 2°C compared with pre-industrial levels as the long-term objective) aimed at promoting the transition to a more sustainable economy that promotes zero-emission energy sources, can anticipate a regulatory and legislative risk related to the possible implementation of increasingly stringent regulations at a European and national level, which could also have an impact on the development and financing of energy infrastructure globally.

Legal and non-compliance risk

Legal and non-compliance risk concerns the failure to comply, in full or in part, with the European, national, regional and local rules and regulations with which Snam must comply in relation to the activities it carries out. The violation of such rules and regulations may result in criminal, civil and/or administrative sanctions, as well as damage to Snam's balance sheet, financial position and/or reputation. As regards specific cases, the infringement of regulations on the protection of workers' health and safety and of the environment, and the infringement of anti-corruption rules, inter alia, may also result in (possibly significant) sanctions on the Company based on the administrative responsibility of entities (Legislative Decree 231 of 8 June 2001). With regard to the **Risk of Fraud and Corruption**, Snam believes it is of vital importance to ensure a climate of fairness and transparency in corporate operations and repudiates corruption in all its forms in the widest context of its commitment to abiding by ethical principles. Snam's top management is strongly committed to pursuing an anti-corruption policy, trying to identify possible areas of vulnerability and eliminating them, strengthening its controls and constantly working to increase employees' awareness of how to identify and prevent corruption in various business situations.

Reputational checks and also accepting and signing the Ethics and Integrity Agreement are pillars of the control system designed to prevent the risks associated with illegal behaviour and criminal infiltration of our suppliers and sub-contractors, with the goal of guaranteeing transparent relations and professional morality requirements throughout the supply chain and for the entire duration of the association.

Snam has been working since 2014 in partnership with Transparency International Italia and joined the Business Integrity Forum (BIF) and, in 2016, became the first Italian company to join the Global Corporate Supporter Partnership. As part of this collaboration, in October 2018 Snam renewed its partnership with the Transparency International, General Secretariat in Berlin, on the eighteenth International Anti-Corruption Conference of Transparency International held in Copenhagen. On this occasion Snam took part in a select round table discussion which, for the first time, included the participation of 4 companies from the private sector as well, including Snam as the only Italian company.

In 2019, Snam also strengthened its collaboration with other important bodies active in the fight against corruption. Specifically, in October Snam became part of the Partnering Against Corruption Initiative (PACI) of the World Economic Forum, an initiative with the intention of bringing together the main Compliance & Anti-corruption Officers of several of the most important companies in the world at least twice a year to share and reinforce best practices and preventive arrangements; in November it joined the Integrity & Compliance Taskforce of the B20 under the Presidency of Saudi Arabia, whose work began in January 2020 with an inception event and will continue for the entire year until the summit in October in which the results of the works and the proposals to submit to the G20 will be presented.

In addition to new collaborations, in 2019 Snam also participated in a series of events dedicated to the issues of transparency, integrity, business ethics, as well as best practices and good governance for the prevention of corruption. Among the most significant events that Snam took part in 2019, first and foremost those held at the OECD should be mentioned, namely the Global Anti-Corruption & Integrity Forum in March on "Tech for Trust: risks and opportunities of new technologies for anti-corruption & integrity", the Trust in Business Forum and the Working Party on State Ownership and Privatisation Practices in October at the OECD and, lastly, Snam also participated in the Working Group on Bribery in December 2019, an annual consultation which was preceded by a select meeting of permanent members of the business at the OECE (BIAC). In addition, in October, Snam's General Counsel was also appointed as Vice Chairman of BIAC's Anti-corruption Committee, an extremely important recognition, which will see Snam — the only Italian company in the BIAC leadership — even more committed and involved in the activities of the OECD on the issues of integrity and anti-corruption.

Lastly, in December Snam took part in the Italian Business Integrity Day — an initiative under the patronage of the Anti-corruption Coordination of the Ministry of Foreign Affairs — which took place at the 8th Conference of the Member States of the United Nations Convention Against Corruption in Abu Dhabi. In that setting, Snam reported the challenges that it faces daily in the fight against corruption and the best practices implemented to manage various complex issues In this context, Snam also participated in a round table discussion organised by the United Nations Office on Drugs and Crime called "Private sector as a Partner in Anti-Corruption Education", in which it reported on its experience and its commitment to education, aimed not only at its personnel but also to the outside.

OPERATIONAL RISKS

Ownership of storage concessions

The risk linked to **maintaining storage concessions** is associated for Snam to the business in which the subsidiary Stogit operates on the basis of concessions provided by the Ministry of Economic Development. Eight of the ten concessions (Alfonsine, Brugherio, Cortemaggiore, Minerbio, Ripalta, Sabbioncello, Sergnano and Settala) expired on 31 December 2016 and can be renewed no more than twice for a duration of ten years each time. With regard to these concessions, Stogit submitted — within the statutory terms — the extension request at the Ministry of Economic Development and the proceedings are currently pending before the Ministry. Pending said proceedings the Company's activities, as provided for by the reference regulations, will continue until the completion of the authorisation procedures in progress envisaged by the original authorisation, which will be extended automatically on expiry until said completion. One concession (Fiume Treste) will expire in June 2022 and has already been renewed for the first ten-year extension period in 2011, and another concession (Bordolano) will expire in November 2031 and can be extended for a further ten years[38]. Following the appeals in 2011 submitted by the Municipalities of Azzanello, Verolavecchia and another seven parties also representing environmental associations, the Council of State, with the opinion included in the Presidential Decree of 16 September 2019 cancelled the evaluation of the environmental impact with regard to the Bordolano storage facility. From the perspective of the risk of business continuity for the storage activities at Bordolano, note that: (i) the Council of State's decision is without prejudice to the contents of the 2009 VIA Decree and with reference to the subsequent provisions with illegality confirming the lasting validity of the provisions contained therein, protecting security and public safety; (ii) Article 29, paragraph 3 of the environment act requires that in the case of the cancellation of the VIA provision in a judicial setting relating to a project already realised, the competent authority can allow the works or activities to continue. Through Note U.0025890 of 22 November 2019, the Ministry of Economic Development issued a provision pursuant to Article 29, paragraph 3 of Legislative Decree 152/2006 relating to the continuation of operations for the Bordolano storage facility. The note of the Ministry of the Environment DVA - U.28389 of 29 October 2019, reopened the VIA proceedings with the participation of the Municipalities of Azzanello and Verolavecchia; the proceedings are in progress and are being followed by Stogit.

If Snam is unable to retain ownership of one or more of its concessions or if, at the time of the renewal, the concessions are awarded under terms less favourable than the current ones, there may be negative effects on the Company's operations, results, balance sheet and cash flow.

NFS MALFUNCTION AND UNEXPECTED SERVICE INTERRUPTION

The risk of the **malfunctioning and unforeseen interruption of the service** is determined by accidental events, including accidents, breakdowns or malfunctions of equipment or control systems, reduced output of plants, and extraordinary events such as explosions, fires, landslides or other similar events outside of Snam's control. Such events could result in a reduction in revenue and could also cause significant damage to people, with potential compensation obligations. Although Snam has taken out specific insurance policies to cover some of these risks, the related insurance cover could be insufficient to meet all the losses incurred, compensation obligations or cost increases.

38 The Stogit concessions issued prior to the entry into force of Legislative Decree 164/2000 can be extended by the Ministry of Economic Development a maximum of twice, for ten years at a time, pursuant to Article 1, paragraph 61 of Law 239/2004. Pursuant to Article 34, paragraph 18 of Decree-Law 179/2012, converted by Law 221/2012, the duration of the single Stogit concession issued after the entry into force of Legislative Decree 164/2000 (Bordolano) is for thirty years with the possibility of extension for a further ten years.

DELAYS IN THE PROGRESS OF INFRASTRUCTURE IMPLEMENTATION PROGRAMS

There is also the concrete possibility that Snam could incur **delays in the progress of infrastructure construction** programmes as a result of several unknowns linked to operating, economic, regulatory, authorisation, competition and social factors, regardless of its intentions. Snam is therefore unable to guarantee that the projects to upgrade and extend its network will be started, be completed or lead to the expected benefits in terms of tariffs. Additionally, the development projects may require greater investments or longer timeframes than those originally planned, affecting Snam's financial position and results.
Investment projects may be stopped or delayed due to difficulties in obtaining environmental and/or administrative authorisations or to opposition from political forces or other organisations or may be influenced by changes in the price of equipment, materials and workforce, by changes in the political or regulatory framework during construction, or by the inability to obtain financing at an acceptable interest rate. Such delays could have negative effects on the Snam Group's operations, results, balance sheet and cash flow.
In addition, changes in the prices of goods, equipment, materials and workforce could have an impact on Snam's financial results.

ENVIRONMENTAL RISKS

Snam and the sites in which it operates are subject to laws and regulations relating to pollution, environmental protection, and the use and disposal of hazardous substances and waste. These laws and regulations expose Snam to potential costs and liabilities related to the operation and its assets. The costs of possible environmental restoration obligations are subject to uncertainty regarding the extent of contamination, appropriate corrective actions and shared responsibility and are therefore difficult to estimate.
Snam cannot predict if and how environmental regulations and laws may over time become more binding and cannot provide assurance that future costs to ensure compliance with environmental legislation will not increase or that these costs can be recovered within the mechanism's tariffs or the applicable regulation. Substantial increases in costs related to environmental compliance and other aspects related to it and the costs of possible sanctions could negatively impact the business, operating results and financial and reputational aspects.

EMPLOYEES AND STAFF IN KEY ROLES

Snam's ability to operate its business effectively depends on the skills and performance of its personnel. The loss of "key" personnel or the inability to attract, train or retain qualified personnel (particularly for technical positions in which the availability of appropriately qualified personnel may be limited) or situations in which the capacity to implement the long-term business strategy is influenced negatively due to significant disputes with employees could trigger an adverse effect on the business, financial conditions and operating results.

Risk linked to foreign equity investments

Snam's investee companies abroad may be subject to regulatory/legislative risk, conditions of political, social and economic instability, market risks, and the cyber security, credit and financial and other risks typical of the natural gas transportation and storage segments identified for Snam such to negatively influence their operations, economic results, balance sheet and cash flows. For Snam, this could have negative impacts on the contribution to profit generated by such investments.

Risks associated with future acquisitions/ equity investments

Every investment made under the scope of joint venture agreements and any future investment in Italian or foreign companies could involve an increase in the complexity of the Snam Group's operations and it may not be possible to ensure that these investments generate the anticipated income under the scope of the acquisition or investment decision and are correctly integrated in terms of quality standards, policies and procedures consistent with the rest of Snam's operations. The integration process could require additional costs and investments. The failed integration of the investment made could have a negative impact on the business, operating results and financial aspects.

NFS CYBER SECURITY

Snam carries out its activities through a complex technological architecture relying on an integrated model of processes and solutions capable of promoting the efficient management of the entire country's gas system. The development of the business and recourse to innovative solutions capable of continuous improvement, however, requires increasing attention to be focused on aspects of cyber security. For this reason, Snam has developed its own cyber security strategy based on a framework defined in accordance with standard principles on the subject and focusing constant attention on Italian and European regulatory developments, especially as far as the world of critical infrastructures and essential services is concerned.
First and foremost, this strategy involves adapting one's own processes to the provisions of standards ISO/IEC 27001 (Information Security Management Systems) and ISO 22301 (Business Continuity Management Systems) and the formal certification of conformity to the listed standards. Alongside this and in accordance with technological developments, solutions aimed at protecting the Company from the cyber threats and malware are assessed and, where deemed appropriate, implemented.
More specifically, Snam has defined a cyber security incident management model intended to prevent and, when necessary, guarantee prompt remediation against events potentially capable of harming the confidentiality, integrity and availability of information processed and the IT systems used. At the basis of these activities is a Security Incident Response Team which, by relying on technologies that make it possible to collect and correlate all security events recorded throughout the company's IT infrastructure, has the task of monitoring all anomalous situations that could have negative impacts for the company and activate, when necessary, suitable escalation plans to guarantee the involvement of the various operating structures.
With reference to the management of information supporting business processes, it is worth highlighting that the company owns (fibre) assets used for data transmission to and from the country; this gives greater intrinsic security thanks to not being dependent on the service provided by third-parties and the possibility of using the communication channel exclusively. Lastly, as part of the cyber incident management activities (preventive and reactive) information-sharing with national and European institutions and peers is used in order to improve the capacity and speed of response following various possible negative events. A great deal of attention is also paid to increasing awareness and specialist training of personnel, in order to facilitate the identification of weak signals and raising consciousness about risks of a cyber nature that could occur during normal work activities.