



Avio S.p.A.

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Administrative offices in Colferro (Rome), via Ariana Km 5.2
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2022 HALF-YEAR REPORT

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HIGHLIGHTS

Net revenues

Euro 134.0 million (+4.9% on H1 2021)

EBITDA

Reported: Euro 3.2 million (-60.9% on H1 2021)

Adjusted: Euro 5.6 million (-46.3% on H1 2021)

EBIT

Reported: loss of Euro 6.2 million (loss Euro 2.4 million in H1 2021)

Adjusted: loss of Euro 3.7 million (breakeven in H1 2021)

Profit before taxes

loss of Euro 6.5 million (loss of Euro 2.5 million in H1 2021)

Net Profit

loss of Euro 7.6 million (loss of Euro 2.4 million in H1 2021)

Net cash position

Euro +40.9 million (cash of Euro +57.2 million at December 31, 2021)

Investments

Euro 10.4 million (14.8 in H1 2021)

Backlog

Euro 848.4 million at June 30, 2022 (Euro 877.0 million at December 31, 2021)

Research and development

net costs of Euro 51.8 million incurred in H1 2022, equal to 38.7% of net revenues for H1 2022 (net costs of Euro 38.1 million incurred in H1 2021, equal to 29.8% of net revenues for H1 2021)

Employees at period end

1,047 at June 30, 2022 (991 at December 31, 2021)

LETTER TO THE SHAREHOLDERS

Dear Shareholders

the first half of the year featured the final steps for the development of the new Vega-C launcher, with Avio as the prime contractor, concluding on July 13 with a fully successful maiden flight from the European Space Port in Kourou, French Guyana.

The launch marked the crowning achievement of the long-term commitment of the ESA, of Avio as prime contractor, and of the industrial partners from 13 ESA member nations to carry forward the legacy of its predecessor, Vega.

The mission placed in the planned orbit the main LARES 2 payload, an Italian Space Agency (ASI) scientific mission and six research CubeSats from France, Italy and Slovenia for the secondary payload. A further Vega C launch is planned for Q4 2022. This Vega C success further reinforces the market's confidence in the product and confirms its role as the only qualified European light launcher capable of carrying critical missions into orbit for both institutional customers, such as the Copernicus missions for the European Union, and commercial constellations such as Airbus Defence & Space's Pléiades Neo.

Vega E development activities also continued with testing of the launcher's new M10 oxygen-liquid methane third-stage cryogenic motor at the SPTF test facilities in Sardinia, the first with this technology to be tested in Europe.

The manufacturing of the motor casings for the P120C motor continued based on the relative production agreements.

The development of the Space Rider system continued in the period, composed of an "Avum Orbital module" service module and a "Re-entry Module" designed to be launched with Vega C, ensuring an orbital life for the payload of approx. 6 months before returning to land.

Two flights of the Ariane 5 launcher for satellites in geostationary orbit were conducted on June 22 and September 7, 2022. An additional Ariane 5 mission is planned by the end of 2022. The future Ariane 6 launcher is expected to carry out its first mission in 2023.

The first half of the year saw Russia's invasion of Ukraine on February 24, 2022. Despite unanimous condemnation and international sanctions against Russia, the conflict between the two countries continues.

The Group's operations also involve using strategic suppliers operating in Ukraine for the AVUM 4th stage main motor for the Vega and Vega-C launchers and for the carbon-carbon inserts used to make the nozzles for the Z40 and Z9 motors of the Vega-C launch vehicle.

No specific medium-term impacts on Vega and Vega C operational continuity are currently expected. The procurement process for the fourth-stage Vega and Vega C motor produced in Ukraine, which has been underway for several years, has provided a "strategic" stock which guarantees Avio's deliveries for launches planned in the short and medium term. In the long term, the ESA recently decided to dedicate financial resources to initiate technical and industrial actions aimed at mitigating the supply risk in the long term through the development of complementary technological solutions.

These assessments were reported in the press releases dated February 25, 2022, March 25, 2022, and most recently July 17, 2022 and are still accurate.

In the first half of the year, the activities as part of the National Recovery and Resilience Plan (PNRR) continued, with which the Italian government launched a number of projects, some of which specifically address the evolution of space propulsion technologies and products related to launchers. The contracting, project management and execution of these projects have been entrusted to the ESA, and specifically involve the construction of two in-flight demonstrators of a small liquid propulsion launcher and a high-thrust methane motor. These projects represent an opportunity for the Company to significantly extend its product portfolio and technological expertise, capitalizing on its ongoing experience with Vega E and the stated M10 liquid oxygen-methane motor. In parallel, the PNRR provides for the creation of an Italian satellite constellation for Earth observation, with activities similarly awarded to the ESA, whose missions will be carried out with Vega launchers.

In particular, as reported to the market¹, the PNRR and the complementary funds for 2022-2026 amount to a total of approx. Euro 2.3 billion, of which approx. Euro 1.0 billion is for Earth observation projects, which includes the Italian satellite constellation whose missions will be carried out with Vega launchers, and approximately Euro 300 million for the "Space Factory", which includes the construction of a high-thrust methane engine, a technology already being developed by the Company, and an in-flight demonstrator of a small liquid-propulsion launcher.

Within this ambit, on June 29, 2022 Avio announced² that it had been awarded the first two contracts within the scope of space-industry initiatives for implementation of Next Gen EU. This involves an Italian government investment upon completion of approx. Euro 340 million. The investment seeks to enhance the space access technological capabilities of the Italian industrial sector. Specifically, the first contract will begin a program to develop an in-flight demonstrator of new

¹ See the following "Investors" section of Avio's website: http://avio-data.teleborsa.it/2022%2f20220215-Avio-FY-2021-results_vDEF_1_20220315_100105.pdf;

² See the press release of June 29, 2022 at the link: [l-Announcements/firmati-contratti-next-gen-eu-finanziati-con-340-milioni-di-euro-al-completamento-per-nuove-tecnologie-di-lancio/MXxjb211bmljYXRpLjE3NzEwMDAwNDMyMDJyMXwxfDIwMjIwODA1](#)

technologies and designs for a two-stage liquid propellant-propelled light-load launcher using liquid-oxygen and methane motors with lower environmental impacts, while the second contract covers the development of a new liquid-oxygen and methane motors with reduced environmental impacts and high thrust. Preparatory activities with a total value of approx. Euro 10 million have been contracted, with the signing of the remaining section of the contract expected in Q1 2023.

During the first half of the year, mainly due to the price dynamics triggered by the afore-mentioned ongoing conflict, energy costs remained high and at the levels reached in the final months of 2021. Consequently, the first half of 2022 ended with a slowdown in operating-financial results on the first half of the previous year, mainly due to outside factors related to energy costs and indirect cost effects from the ongoing conflict. Reported EBITDA was Euro 3.2 million, down Euro 4.9 million (-61%), with Adjusted EBITDA of Euro 5.6 million, contracting Euro 4.9 million (-46%), and a net loss of Euro 7.6 million (compared to a loss of Euro 2.4 million in H1 2021). The medium and long-term outlook on the other hand remain very strong in view of that outlined above and also due to an order backlog of Euro 848 million and the net revenues of Euro 134 million, up 5% on the same period of 2021.

In the short term, activities are still expected to be influenced to some extent by the high energy costs, the ongoing conflict between Russia and Ukraine which is also indirectly pushing costs up generally, and the continuation of some containment and restrictive measures to combat COVID-19.

In view of this and a number of opportunities which may however emerge, Reported EBITDA was revised to a range of between Euro 17 and 25 million (compared to the previous range of Euro 24 and 30 million), with Adjusted EBITDA forecast of between Euro 22 and 30 million (compared with the previous forecast of between Euro 29 million and 35 million). Forecast non-recurring costs remain unchanged at approx. Euro 5 million, while the forecast net result is now between a loss of Euro 2 million and a profit of 3 million (compared with the previous forecast of a profit of between Euro 5 and 10 million). Confirming the solidity of the business and operational prospects, the 2022 forecasts for the net backlog remain unchanged at between Euro 870 and 920 million, as does the forecast for net revenues of between Euro 330 and 350 million. Financial management at June 30, 2022 reports a solid cash position of Euro 40.9 million, despite the seasonality effect (+4.3 million, +12% on June 30, 2021).

In this context, the Company however has looked to the future by bringing in-house strategic expertise for the business through the full acquisition of an avionics engineering enterprise (Temis) and of a stake in the former parent company (ART) operating in the infotainment sector for performance and sports cars in view of the interconnections between the operations and technologies of the two companies.

Finally, the strong growth in defense investment seen to date, particularly in the U.S. market, was confirmed based on market demand forecasts for the coming years.

This trend confirms the sector's potential, and as such, we will continue to support the Group's future growth and to increase Avio's value for all of our stakeholders, with a sense of determination and confidence based on the resilient foundation of the business and technologically innovative projects.

Giulio Ranzo
Chief Executive Officer and General Manager
Avio S.p.A.

DIRECTORS' REPORT

THE AVIO GROUP

PROFILE

The Avio Group (hereafter in this Directors' Report also "Avio" or the "Group") is an aerospace sector global leader. The experience and know-how built up over more than 50 years lies behind Avio's embodiment of excellence in terms of launch systems, solid, liquid and cryogenic propulsion and military systems propulsion.

The Group directly employs in Italy and overseas over one thousand highly-qualified personnel at the main Colleferro facilities on the outskirts of Rome and at other locations in Campania, Piedmont and Sardinia. Additional operating sites are located overseas (in France and French Guyana).

The Group is currently involved in the Launch Systems and space propulsion sector, particularly with regards to the design, development, production and integration of:

- space transport systems (Vega Launcher and future developments);
- solid and liquid propulsion systems for launchers (Ariane 5 Launcher and Ariane 6 Launcher);
- solid propulsion systems for tactical missiles (Aspide, Aster, CAMM-ER, MARTE);
- liquid propulsion systems for satellites;
- new low environmental impact propulsion systems;
- ground infrastructure for launcher preparation and launch.

The current **Launch Systems** with Avio components are:

- Ariane 5 for the launch of up to 10-ton satellites into Geostationary Earth Orbit (36,000 km). Since the end of the 1980's, Avio has supplied the liquid oxygen turbo-pump boosters (solid propulsion motors) for the Vulcain 2 engine;
- Ariane 6 currently under development. The launcher has two distinct configurations for feasible missions, guaranteeing greater payload flexibility. In particular, the A62, with two P120C solid propulsion boosters, and the A64, with four P120C solid propulsion boosters, will be used for both GEO (geostationary) satellite positioning, at an altitude of 36,000 km, and other kinds of mission, such as launches to LEO orbits, SSO (sun-synchronous) polar orbits, MEO (medium earth) orbits, 4.5 ton satellites to GEO orbits, and 20 ton satellites to LEO orbits. In this context, Avio supplies solid boosters for both Ariane 6 configurations, as well as two oxygen turbopumps for the liquid stages of the Vulcain 2 and Vinci engines;
- Vega, for the launch of up to 2-ton satellites into Low Earth Orbit (between 300 and 2,000 km above sea level). Since 2000, Avio has been developing and implementing the Vega program for the European 2,000kg payload satellite launcher, which successfully completed its first qualifying flight in February 2012, 5 flights in December 2015 under the VERTA contract for completion of the qualification process, and its first commercial flight in 2016. The success of this product has allowed Italy to enter the extremely exclusive group of countries capable of developing and producing its own space launcher;
- Vega C, the latest evolution of Vega, is a launcher in the completion phase of development as part of the European Space Agency's space program. Vega C is designed for a greater payload than the Vega and at the same time optimises production costs thanks to the sharing of the new first stage (P120C) with Ariane 6. Vega-C successfully completed its maiden flight on July 13, 2022.

Regarding **tactical missiles**, Avio participates in the major national and international programs. These include:

- ASTER, ground-to-air weapon system;
- CAMM-ER, ground-air weapon system currently under development;
- MARTE, helicopter and ship launched anti-ship weapon.

In the field of **satellite propulsion**, Avio has developed and supplied the European Space Agency (ESA) and the Italian Space Agency (ASI) with propulsion subsystems for the launching and control of several satellites, including the latest SICRAL, Small GEO and EDRS-C satellites. Avio is currently participating in the development and qualification of the propulsion systems of the Hera satellite and of the Mars Sample Return mission, for the Orbit Insertion Module and for the Return Module.

The Group operates in the following business lines:

- **Ariane**

Ariane is a space program for ESA-sponsored GEO missions, in which ArianeGroup (“AG”) is the prime contractor and Avio operates as a subcontractor for the production of the P230 solid propulsion boosters and the liquid oxygen turbo pump (LOX) for the Vulcain 2 engine. Avio is also the subcontractor for the next-generation Ariane 6 launcher scheduled for 2022, for which Avio, through its subsidiary Europropulsion, is producing (i) the solid propellant P120C engine, (ii) the liquid oxygen turbopump for the Vulcain 2 engine and (iii) the liquid oxygen turbopump for the Vinci engine.

- **Vega**

Vega is a space program for LEO missions, whose development has been funded by the ESA, with mainly Italian funding, and for which the Group is the prime contractor for the production and integration of components for the entire launcher and for the production of the solid propulsion engines P80, Zefiro 23 and Zefiro 9 and of the AVUM liquid propulsion module. The Group also plays the role of the ESA's prime contractor for the development of the new generation of Vega Consolidated (Vega-C) and Vega Evolution (Vega-E) launchers, whose test launch was carried out on July 13, 2022 and scheduled for late 2026. The Group is responsible for the development and production of these entire launchers, in addition to (i) the development of the solid propulsion engine P120 C (first stage to replace the current P80), which is constructed in synergy with the Ariane program 6), (ii) the Z40 solid propellant engine (second stage to replace the current Z23) and (iii) an engine that uses oxygen-methane liquid known as M10 for the upper Vega-E stage.

- **Tactical propulsion**

Avio is responsible for the design and production of the following products:

- Aster 30 - in particular, the booster motors, the Thrust Vector Control (TVC) actuation system and the aerodynamic control surfaces (fins);
- Aster 15 - in particular, the aerodynamic control surfaces (fins);
- Aspide propulsion units;
- Marte sustainer.

Regarding development programs:

- CAMM-ER - development of the booster and single stage sustainer motor, wiring and aerodynamic control surfaces (fins);
- Aster 30 MLU - development of the new Aster 30 booster to replace the current one in production, from 2022, solving REACH and obsolescence issues.

With net revenues in the first half of 2022 of Euro 134.0 million and Reported EBITDA of Euro 3.0 million, the Group currently occupies a leading position in the Italian and European space industry, substantially supported by its high degree of competitiveness - drawing over 98% of its revenues from overseas.

The highly technological content of Avio's operations has required research and development spend - for the portion principally commissioned by the ESA, ASI and Member State ministries - accounting for 38.7% of net revenues in H1 2022. These activities were carried out both in-house and through sub-contractors and a network of laboratories and partnerships with some of the leading domestic and international universities and research centres.

CORPORATE BOARDS & COMMITTEES

Board of Directors

On May 6, 2020, the Shareholder's Meeting appointed the new Board of Directors of the parent company Avio S.p.A., which in turn, on May 7, 2020, decided upon the internal appointments and the granting of the powers required to complete company operations.

On August 23, 2021, the non-executive and independent director and member of Avio's Sustainability Committee, Mr. Stefano Pareglio, resigned due to incompatibilities relating to new professional commitments. On December 21, 2021, the Board of Directors approved the co-opting of Ms. Marcella Logli as a Non-Executive and Independent Director of the Company, replacing Mr. Stefano Pareglio until the Shareholders' Meeting that approved the 2021 Annual Accounts.

On April 28, 2022, the Shareholders' Meeting confirmed the Director co-opted by the Board of Directors, Ms. Marcella Logli, until the conclusion of mandate of the other directors.

The term of office of the Board of Directors so defined is three years, concluding with approval of the 2022 Annual Accounts.

Monica Auteri	Independent Director (a)
Raffaele Cappiello	Independent Director (b)
Letizia Colucci	Director (b)
Giovanni Gorno Tempini	Independent Director (a) (d)
Donatella Isaia	Independent Director (a)
Roberto Italia	Chairperson (c) (d)
Marcella Logli	Independent Director (c)
Luigi Pasquali	Director (d)
Elena Pisonero	Independent Director (c)
Giulio Ranzo	Chief Executive Officer (d)
Donatella Sciuto	Independent Director (b)

- a. Member of the Appointments and Remuneration Committee
- b. Member of the Control & Risks Committee
- c. Member of the Sustainability Committee
- d. Member of the Planning and Scenarios Committee

Board of Statutory Auditors

On May 6, 2020, the Shareholders' Meeting of the parent company Avio S.p.A. appointed the Company's next Board of Statutory Auditors, whose term of office is three years, concluding with the approval of the 2022 Annual Accounts.

Vito Di Battista	Chairperson
Mario Matteo Busso	Statutory Auditor
Michela Zeme	Statutory Auditor
Roberto Cassader	Alternate Auditor
Sara Fornasiero	Alternate Auditor

Supervisory Board

On May 7, 2020, the Board of Directors of the parent company Avio S.p.A. resolved to confirm its new Supervisory Board, whose term of office is three years, concluding with the approval of the 2022 Annual Accounts.

Alessandro De Nicola	Chairperson
Giorgio Martellino	Member
Raoul Vitulo	Member

Independent Audit Firm

Deloitte & Touche S.p.A. (2017-2025)

RECENT HISTORY

1994

The FIAT Group, operating since the early 1900's in the aviation sector, acquired in 1994 BPD Difesa e Spazio, a company founded in 1912 and growing to over 4,000 staff, focused on munitions development and production for Italian and foreign militaries.

2000

In 2000, adding to its traditional aeronautical and aerospace activities, the Group, in collaboration with the Italian Space Agency (ASI), established ELV S.p.A. (held 70%) for the complete development and design of a new launcher. In this role, under the auspices of the European Space Agency (ESA), the Group assumed the role of lead contractor for the European launcher VEGA.

2006

The Avio Group was acquired by BCV Investments, owned by the private equity fund Cinven (81%), Finmeccanica Group (14%, now Leonardo Group) and other investors (5%).

2012

In February, the European space launch system named VEGA, designed and engineered by Avio, was approved. In December, Avio announced the signing of an agreement for the sale of its aeronautical division to General Electric.

2013

In May, Avio's new VEGA launcher successfully completed its first commercial flight. On August 1, 2013, Avio sold GE Avio S.r.l., which operated its aeronautic division, to General Electric.

2014

In December, the European Space Agency Ministerial Conference of Member States decided to finance the VEGA launcher development program until its completion, including a first rocket stage (the P120 C) to be shared with the forthcoming Ariane 6 launcher, also fully financed.

2015

The outcome of the Ministerial Conference of ESA countries, held the previous December 2014, led in August 2015 to the signing of major development contracts for the Vega-C and Ariane 6 launchers. Avio's key role was recognized thanks to its participation in the development program for Vega-C and Ariane 6's shared rocket stage, the P120, and its lead systems engineering role in the VECEP program for the development of the Vega-C launcher.

For the first time in the history of the Kourou Space Centre as many as 12 launches were made in one year, including 6 involving Ariane and 3 for Vega.

2016 - 2017

In the fourth quarter of 2016, the operation for the acquisition and listing of the Avio Group by Space2 S.p.A., an Italian SPAC listed on the MIV market/SIV segment of Borsa Italiana S.p.A., was initiated.

This operation was completed on March 31, 2017 with the acquisition by Space2, Leonardo S.p.A. and In Orbit S.p.A. (a company formed by a number of Avio managers) of an 85.68% holding in Avio. The remaining investment was already held by Leonardo. On the same date, CONSOB authorised publication of the listing prospectus for ordinary Space2 post-merger with Avio shares on the Italian Stock Exchange. The merger by incorporation with Space2 was thereafter effectively executed on April 10, 2017.

Also on April 10, 2017, Space2 post-merger with Avio, maintaining the name "Avio S.p.A.", was listed on the Italian Stock Exchange's STAR segment.

2018

As part of the process initiated by European Space Agency (ESA) member states for new governance of the European launchers sector, in order to transfer to the prime contractors (Ariane Group for Ariane 6 and Avio for Vega-C) the responsibility for commercial exploitation of the new products and the associated risks, and following completion of the accompanying flights for Vega launcher testing, the shareholders of ELV S.p.A. (held 70% by Avio S.p.A. and 30% by ASI) reorganised operations, with development, production and distribution of launchers carried out by the industrial shareholder Avio, while ELV S.p.A. concentrates on the research and development of new technologies and on aviation testing.

Therefore, on March 1, 2018, the subsidiary ELV S.p.A. transferred to Avio S.p.A. the launchers development, production and distribution business unit. Following this reorganisation, the subsidiary ELV S.p.A. took from May 9, 2018 the new name of Spacelab S.p.A., focusing on the research and development of new technologies and space transport product testing.

On February 7, 2018, the company Avio Guyane SAS was incorporated, fully owned by Avio S.p.A. and operating at the Kourou launch site in French Guyana. The company is involved in coordinating the launch campaigns and managing the ground infrastructure for the Vega launches, optimising the industrial processes and boosting productivity ahead of a future increase in the number of Vega launches.

2019-2021

On August 19, 2019 the company Avio France S.A.S., with registered office in Paris and wholly-owned by Avio S.p.A., was incorporated. Its corporate scope is to undertake engineering activities to study and design space transport systems and subsystems.

Following the two failures of July 2019 and November 2020, Vega returned to flight with three successful launches in just a little over 6 months in 2021, demonstrating the reliability of the Vega launcher, whose reliability rate is above average for launchers over its first 19 completed missions.

BUSINESS AREAS

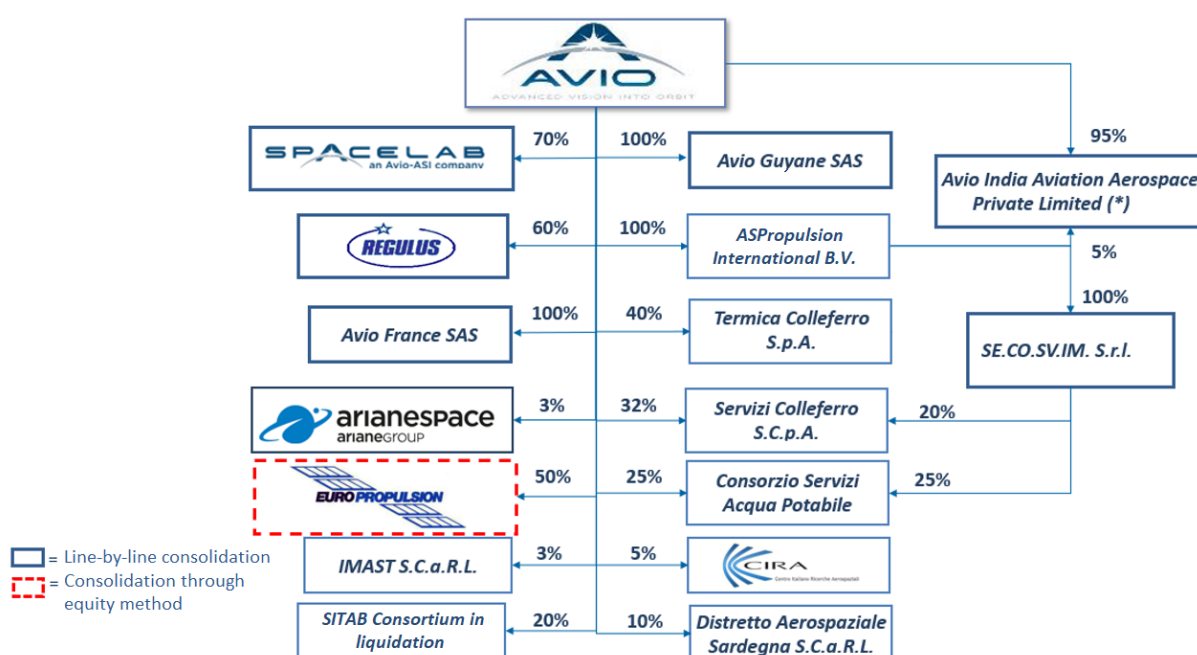
Core operations: design, development and production of solid and liquid propellant propulsion systems for space launchers; design, development and production of solid propellant propulsion systems for tactical missiles; development, integration and supply of complete light space launchers (VEGA); research and development of new low environmental impact propulsion systems and of satellite tracking control motors.

Main programmes: Ariane, VEGA, Aster, CAMM-ER

Main clients: Arianespace, ESA (European Space Agency), ArianeGroup (previously Airbus Safran Launchers), ASI (Italian Space Agency) and MBDA

GROUP STRUCTURE AND INTERNATIONAL PRESENCE

The Avio Group's ownership structure is reported below:



* indicates that the company is in voluntary liquidation. No financial significant commitments are expected for the Avio Group related to the liquidation.

The Group has production facilities in Italy, primarily in Colleferro (Rome) and Villaputzo (Cagliari), and in France, where the joint venture Europropulsion S.A. is based. There is also a research lab in Airola (Benevento), Italy. In Kourou, French Guyana, there is the European spaceport where loading and integration of the Ariane 5 solid-propellant booster segments, as well as integration of the VEGA launcher, take place.

Moreover, the Group, through its subsidiary Spacelab S.p.A., has a shareholding with a nominal value of Euro 350 thousand in the E. Amaldi Foundation, whose primary objective is to promote and support scientific research aimed at technology transfer, starting from the space sector, as a fundamental tool for the economic development of the country and as a source of innovation to improve competitiveness, productivity and employment.

STRATEGY

Avio Group's strategy in the current decade is mainly orientated by the agreements:

- at national level with:
 - o the Italian Government, which, through ESA and ASI, intends to implement the initiatives of the National Recovery and Resilience Plan (NRRP) regarding the Space sector,
 - o the Defence Administration and MBDA for the development, production and sale of military products,
- at European level with:
 - o the European Space Agency (ESA) for the development of new products and services in line with its activities at a national level, and
 - o Arianespace for the production, integration and batch sale of the Vega and Vega C launchers
 - o ArianeGroup for the production, integration and batch sale of the P120C motors.

These interests mean that Avio is among the very small number of companies worldwide operating in the field of Space Access.

In the area of Development Activities, in accordance with the outcomes of the 2014, 2016 and 2019 Ministerial Conferences, which confirmed the European strategy for developing its launchers (from Vega to Vega C and Ariane 5 to Ariane 62/64). In accordance with the contracts signed from 2015 onwards, Avio is therefore pursuing:

- qualification of the **Vega C** launcher to replace Vega, which will permit (i) an increase in performance of approximately 60% due to the new P120 engines (stage one) and Z40 (stage two) and lighter structures, (ii) an increase in the launch system's flexibility due to larger-capacity liquid tanks and (iii) an increase in available market share due its greater performances and larger payload fairing in order to carry satellites with greater mass and volume and lighter structures, and finally (iv) a reduction in the k€/kg launch price, in a scenario where this key parameter in the choice of a launch service is continuously declining (effect of competition). Vega C's qualification flight is scheduled for July 13, 2022;
- the increase in the cadence of production of the **P120** motor and its successor the P160, as a common element of Vega-C (stage one) and Ariane 6 (booster);
- the development of an enhanced version of the P120 motor, the **P160**, which will have a greater quantity of solid fuel, and therefore bring a delta performance to the Vega C+ launcher of approximately 200 kg in the same reference orbit;
- the development of **enabling technologies** to further increase the performance of future launchers, as well as reduce their cost, in particular:
 - o Liquid fuel tanks in composite material;
 - o Modular avionics 3.0;
 - o Non-explosive stage separation systems;
 - o Sub-orbital and orbital demonstrators that incorporate the aforementioned technologies, considered precursors of the new Micro Launch Vehicle (MLV) class of launchers;
- the LOX/CNG based **M60 motor**, the evolution of the M10 engine that will equip the Vega E, considered the building block of the post-Vega-E Vega Next launcher (time horizon beyond 2032);
- the development of a **MPGE motor** as an alternative to the Ukrainian MEA intended to equip the Vega C as a fourth stage starting from 2025, and its adaptation for IOS missions, including a enabling technology demonstrator provided for under the National Recovery and Resilience Plan (NRRP);
- the development of an alternative source for the supply of **Carbon-Carbon**, a material used for the manufacture of nozzle throat inserts manufactured by Avio for Vega C;
- developing **Vega E**, and, in particular, its Upper Stage, with the new M10 motor with cryogenic oxygen and methane propellants. Vega-E (a three-stage launcher based on P120, Z40 and a LOx-Methane Upper Stage), in addition to cutting the launch price in €/kg compared to the Vega C, will further improve: (i) Vega-C's performance and (ii) the

- range and flexibility of satellite services, enabling, among other benefits, more extensive orbital parameter changes than possible with Vega and Vega-C;
- the development of the **Space Rider**, the European return vehicle, in which Avio is the Prime Contractor of the ESA (together with TASI) for the supply of the Attitude & Vernier Upper Module Orbital Module (AOM) derived from Vega C. Space Rider is a spacecraft taken into orbit by Vega-C, capable of carrying up to 500 kg of payload for different applications, of remaining in that orbit for a period of time in the order of 2 months, in order to carry out a series of experiments or orbital services, and finally return to earth for the recovery of the payloads;
 - developing Smart Payload Adapters (**PLA**), which make it possible to adapt launches to the varying needs of commercial and institutional customers who increasingly use greater numbers of satellites with reduced masses and volumes. These PLAs can, therefore, offer different types of missions, from single/double to Piggyback and Rideshare launches via SSMS (already used in Vega flight VV16).

Regarding operations, Avio:

- intends to stabilize the frequency of flights at 4 per year, then raise it to 5 per year, through investments in French Guiana, including a new launcher stage Storage Building and new Integration Building;
- through the subsidiary Avio Guyane, acquired control of the Zone de Lancement Vega (ZLV) launch area and the management; in particular it ensures main launcher assembly installation maintenance (e.g. Control Centre, Integration and Launch building, Propellant Loading Stations). This consolidates its ground activities role, i.e. mechanical, electrical and hydraulic management activities at the Kourou launch base, which was assumed in 2016 and extended its scope of expertise.

In the military sector, Avio is assessing the opportunity of offering technological solutions to the Italian armed forces, within the scope of national and European initiatives.

SHAREHOLDERS

At June 30, 2022, the share capital of Avio S.p.A. of Euro 90,964,212.90 comprised 26,359,346 ordinary shares, of which:

- 22,533,917 ordinary shares from the merger with Space2, which resulted in the listing of Avio S.p.A. on April 10, 2017 (the "business combination") on the STAR segment of the Italian Stock Exchange (MTA);
- 1,800,000 shares following the conversion of 400,000 special shares into 2 tranches. In particular, the first tranche of 140,000 special shares was converted into 630,000 ordinary shares at the effective merger date of April 10, 2017, while the second tranche of 260,000 special shares was converted into 1,170,000 ordinary shares on May 17, 2017;
- 2,025,429 shares following the exercise of 7,465,267 market warrants in the June 16 - August 16, 2017 period.

In addition, Space Holding S.p.A., the promoter of the business combination, holds 800,000 sponsor warrants, exercisable within 10 years from the effective merger date of April 10, 2017, on the condition that Avio S.p.A. share price reaches Euro 13.00, with a conversion ratio with Avio S.p.A. post-merger shares of 1 against the payment of an exercise price of Euro 13.00. At the effective merger date (April 10, 2017, the first trading day of the Avio S.p.A. share on the MTA), the condition for the exercise of the Sponsor Warrants was satisfied. At December 31, 2021, no exercise requests were received from holders.

At June 30, 2022, on the basis of the communications received as per Article 120 of the CFA and the information available to the Company, the Avio S.p.A. shareholder structure was as follows:

Shareholder	% share capital
Leonardo S.p.A.	29.63%
Cobas AM	5.02%
Space Holding S.p.A.	4.08%
In Orbit S.p.A.	4.07%
Servizi Cgn S.r.l.	4.00%
Delfin S.a.r.l.	3.79%
Treasury shares	4.19%
Remaining MTA free float	45.22%
Total	100.00%

H1 2022

H1 SIGNIFICANT EVENTS

Business

Development of the Vega-C launcher

The first 6 months of the year were marked by:

- Completion of the integration of the 4th stage in Colleferro, and its delivery to the launch base for integration with the launcher
- Retrofit activities on the A2 and A3 stages already sent to the launch site, introducing small changes aimed at strengthening the project
- Final acceptance of the control desk and mechanical and fluid means (fuel loading units) necessary for launch
- Start of the launch campaign with the integration of the VEGA-C launcher
- Meetings needed to obtain launch authorization (FRR, BTR, LRR)

As reported in the following paragraph “Subsequent events to the period-end”, the launch took place successfully on July 13, exactly 10 years and 5 months after Vega’s inaugural launch. The mission was almost totally free of anomalies, and the Italian Space Agency’s LARES2 satellite and six CubeSats were successfully positioned in their target orbits.

Complete analysis of the flight data in the second half of the year will make it possible to approve the flight qualification of the VEGA C launcher for commercial use.

As the latest version of the Vega launcher, Vega-C allows a 60% increase in performance, increasing market access for this launcher of Low Earth Orbit (LEO) satellites, a substantial part of which can be launched in multiple payloads.

Development of the VEGA-E launcher

The development activities of the Vega-E launcher, the evolution of the Vega-C launcher, mainly concerned fire tests of the DM1 prototype of the M10 motor. In the 6 months, 9 motor fire tests were carried out, representing approximately 70% of the test plan. Subsequent activities, for the second half of the year, will focus on the completion of the test plan and analysis of the fire test data. The analysis results will make it possible to refine the design of the 3rd prototype of the motor, denominated DM3, currently at the design phase.

Simultaneously, work continued on the construction of the 2nd prototype of the M10 motor, which is expected to be completed by the end of the year.

The M10 is a cryogenic liquid (oxygen and methane) propulsion motor intended for the 3rd stage of the Vega-E launcher, replacing the Z9 solid propulsion motor and the LPS propulsion module of the 4th stage which currently equips the VEGA-C carrier.

It is underlined that the M10 is the first motor made in Europe to use oxygen and liquid methane fuel technology.

System activities focused on the definition of components for the 3rd stage (tanks and valves), the performance of the launcher, and specifications for the new launch base. The System Requirement Review (SRR) was carried out in the first half of the year, while the Preliminary Design Review (PDR) is scheduled for the second half.

Vega-E, as the evolution of Vega-C, will allow for a further 20% increase in the launcher’s performance, increasing its competitiveness thanks to the better exploitation of load capacity for multiple satellite launches.

The 1st flight of the Vega-E launcher is currently scheduled for 2026.

Space Propulsion Test Facility (SPTF) project

The LRE bench for conducting fire tests of cryogenic liquid propulsion engines was built at the Space Propulsion Test Facility (SPTF), within an area granted for use by Avio at the Salto di Quirra firing range in Sardinia.

The LRE bench was used in the first half of the year to carry out fire tests of the M10 motor's DM1 prototype, which demonstrated a remarkable operational capacity. Ordinary and extraordinary maintenance activities are planned for the second half of the year in preparation for the start of the new fire test plan of the DM2 prototype at the beginning of 2023.

Space Rider

The final phase of the development of the Space Rider System began in January 2021, following the signing of the contract for its development and qualification in December 2020. The Space Rider System is composed of an AVUM (Attitude & Vernier Upper Module) Orbital Module, denominated AOM, and a re-entry module, denominated RM, whose development was assigned by ESA to two prime contractors, Avio and TAS-I. The modules, designed to be launched with Vega-C, ensure an orbital life for the payload of approximately 6 months before returning to land on the ground.

In the first half of the year, the system Critical Design Review (CDR) was carried out, which reoriented the responsibility for certain critical subsystems to different suppliers, leading to their redesign. The CDR Steering Board met in July to approve the reorientation and authorize the start of the qualification phase. Consequently, functional tests of some of the devices have already begun.

Ariane

A flight of the Ariane 5 launcher took place on June 22, 2022.

Manufacturing activities for the casings of the P120C motors continued, due to equip the Ariane 6 and VEGA C launchers in accordance with the production plan. The P120C motor that equipped the 1st stage of the VEGA C launcher during its maiden flight demonstrated nominal flight behaviour. The analysis of the P120C motor's flight data will be completed by September, which will allow it to be qualified for commercial use. The P120C motor's first commercial flight will be VV2 VC02, expected to take place by the end of 2022.

Regarding cryogenic propulsion, for integration purposes, liquid oxygen turbopumps were produced for Ariane 6 (Vinci and Vulcain) and Ariane 5 (Vulcain), with, however, delays in customer withdrawals and production plans as a direct consequence mainly of the delay to the Ariane 6 programme.

Tactical propulsion

In H1 2022, production and delivery activities of the Aster 30 Booster (lots 1 and 2) and Marte Sustainer continued according to the production plan agreed with the customer MBDA. The refurbishment activities of the Aspide motors were also completed.

Activities for the qualification of the CAMM-ER motor continued with "accelerated ageing" tests to assess any deterioration in performance towards the middle and end of its operational life.

Finally, PRIBES development activities were completed with a suborbital target pre-project to verify interception by anti-missile systems. The Ministry of Defence has now entered into a contract for the next phase, and related activities are already underway.

Satellite Propulsion

The following activities have been launched:

- development and manufacturing of the chemical propulsion system (CPS) for the Hera probe. The probe is set to be launched at the end of 2024, as part of a joint NASA-ESA project to validate models for the deflection of asteroids at risk of impact with the Earth. At the end of June 2022, the integration of the satellite propulsion system was approved, and is expected to be completed by the end of 2022.
- development and manufacturing of the chemical propulsion system (CPS) for the orbital module and return module of the Mars Sample Return probe. During the half-year, subcontractors were approved, qualification reviews of off-the-shelf components and functional qualification tests of calibrated orifices were carried out, and the start of the first phase of the propulsion system integration activities was approved.

National Recovery and Resilience Plan projects managed by ESA

The initial phases of the following projects were contracted:

- 1) **Development of strategic technologies and demonstrators:** the main objective is to accelerate the development and acquisition of know-how of liquid cryogenic lox-methane propulsion systems from direct in-flight test experience, and to develop several key technologies to be used in new generation launch systems in order to:
 - introduce very low shock inducing stage separation systems
 - reduce the mass of the launcher through increased use of composite materials for cryogenic tanks
 - introduce new generation avionics systems
 - demonstrate the effectiveness of the developed technologies through flight test demonstrators that validate the behaviour of the liquid motor and stage under microgravity conditions, with specific attention paid to the multiple reignition capability.
- 2) **Cryogenic High Thrust Engine (HTE) development:** the main objective is to develop a cryogenic engine suitable for use in the lower stages of future launchers, as a building block for continuing VEGA's transition to a liquid propulsion equipped system that will increase competitiveness, flexibility and environmental sustainability.

Both activities have been started.

Increased energy costs

Late 2021 and H1 2022 saw a sudden increase in energy costs, which led to increased volatility. This in turn caused an increase in energy costs in H1 2022 on H1 2021, based on like-for-like consumption, that impacted industrial costs. This increase in energy is the chief factor in the slowdown of financial results in H1 2022 compared to H1 2021.

The Company has already taken action by concluding a partnership with Cogenio-Enel X in December 2021 for the management of a thermoelectric power plant to ensure the future security of energy and steam supplies at the best financial conditions.

Main agreements and contractual events in H1 2022

With reference to Ariane 5 production activities, the contract variant for discounting 2021 prices was signed.

In view of the commercialisation prospects of Ariane 6, particularly for Mega-constellation launch opportunities, specific agreements on sales prices of the P120C motor have been finalized.

More generally, contracts have been signed for Ariane 6 transition phase production of the P120C motor and Oxygen Turbopumps (TPOs) for the Vulcain 2 and Vinci cryogenic motors. These contracts relate to supplies for the first 14 launchers and cover the periods to 2024 (P120C) and 2023 (TPO) respectively, and were agreed considering that in the future P120C production activities are likely to coexist with those for the development of its elongated P120C+ version.

Regarding Vega production, supplemental orders were received for the production of specific structures dedicated to launches within the scope of batch 3.

With reference to Vega development activities, contract variants were acquired to support the completion of the Vega C launcher development and qualification program and the initial development activities of the new Vega E launcher.

On June 29, 2022 Avio announced³ that it had been awarded the first two contracts within the scope of space-industry initiatives for implementation of Next Gen EU. This involved an Italian government investment of approx. Euro 340 million. The investment seeks to enhance the space access technological capabilities of the Italian industrial sector, with the European Space Agency (ESA) as the Contracting Authority and the supervision of the Prime Minister's Office, the Italian Space Agency (ASI) and the Minister of Technological Innovation and Digital Transition. Specifically, the first contract will begin a program to develop an in-flight demonstrator of new technologies and designs for a two-stage liquid propellant-propelled light-load launcher using liquid-oxygen and methane motors with lower environmental impacts, while the second contract covers the development of a new liquid-oxygen and methane motors with reduced environmental impacts and high thrust.

The two projects, which are scheduled to be completed by 2026, target a new generation of space transportation systems, subsequent to Vega E and based on "green" and potentially reusable liquid propulsion.

Other significant events

Ongoing conflict in Ukraine

Please refer to the risks section with regards to the ongoing conflict in the Ukraine.

Incorporation of Avio USA Inc.

On April 25, 2022, the company Avio USA Inc. (wholly-owned by Avio S.p.A.) was incorporated in the state of Delaware to explore business opportunities on the US market.

The total number of shares that can be issued by Avio USA Inc. is 1,000, with a par value per share of USD 0.01, for a total value of USD 10.00.

On April 25, 2022, Avio S.p.A. subscribed for 100 shares with a par value per share of USD 0.01, for a total of USD 1.00.

Acquisition of Temis S.r.l. and of 5% of ART S.p.A.

On June 20, 2022, the parent company Avio S.p.A. signed (i) a contract for the acquisition of the entire share capital of Temis S.r.l. ("TEMIS") from ART S.p.A., and (ii) a contract for the acquisition of 5% of ART S.p.A. (hereinafter, "ART"); Temis, that was supplier of Avio, operates into a strategic industry with particular relevance for Avio Group, constituted by the avionics engineering. ART is a primary Italian company in the infotainment industry for sport and luxury cars and is industrial partner of Temis.

Temis operates in a sector of strategic importance pursuant to Articles 10 and 12 of Presidential Decree No. 179 of December 18, 2020, the "Golden Power" implementing decrees, and, according to the applicable law, last modifications occurred in March 2022, the acquisition of this company is finally subject to the Golden Power notification. Following the modifications of the Legislative Decree 21 March 2022, no. 21 (the "DL Ucraina"), the notification of the business combination to the Presidency of the Council of Ministers has been made both from the target (Temis and ART) and the acquiring company (Avio).

Treasury shares

As of December 31, 2021, the Company held 671,233 treasury shares, corresponding to 2.55% of the shares constituting the share capital.

As reported in the Press Release of February 3, 2022, the Board of Directors on the same date, in execution of that authorised by the Shareholders' Meeting of April 29, 2021, resolved to launch a share buyback program, for a total maximum value of approx. Euro 9.1 million, until the conclusion of the authorisation granted by the Shareholders' Meeting (October 30, 2022). In execution of the aforementioned programme, between February 3, 2022 and June 30, 2022, 432,000 treasury shares were purchased, resulting in a total number of 1,103,233 treasury shares, corresponding to 4.19% of the number of shares constituting the share capital.

³ See the press release of June 29, 2022 at the link: [I-Announcements/firmati-contratti-next-gen-eu-finanziati-con-340-milioni-di-euro-al-completamento-per-nuove-tecnologie-di-lancio/MXxjb211bmljYXRpLjE3NzEwMDAwNDMyMDIyMXwxfDIwMjIwODAx](https://www.avio.com/it/Announcements/firmati-contratti-next-gen-eu-finanziati-con-340-milioni-di-euro-al-completamento-per-nuove-tecnologie-di-lancio/MXxjb211bmljYXRpLjE3NzEwMDAwNDMyMDIyMXwxfDIwMjIwODAx)

Approval of the 2022-2024 Performance Shares Plan

On April 28, 2022, the Shareholders' Meeting of Avio S.p.A. approved the "2022-2024 Performance Share Plan," which grants Avio's top management rights to receive free of charge up to a maximum of 105,460 Company Shares, representing 0.40% of the share capital. This is subject to the achievement of predetermined performance targets at the end of the three-year period 2022-2024, based on the order intake, which reflects business sustainability and growth in the medium term and corresponds to the cumulative value of new contract acquisitions in the three-year period 2022-2024.

Since the Plan is based on the allocation of shares already held in the Company's portfolio, it will not lead to dilutive effects on Avio's share capital.

On March 28, 2022, Avio's Board of Directors approved the cancellation of the 2020-22 and 2021-23 cycles of the existing 2020-24 Monetary Long-Term Incentive Plan, whose retention and incentive purposes had ceased to exist in light of the changed circumstances following the extraordinary events of the last few years. The 2022-2024 Performance Share Plan is therefore extraordinary in nature and provides for a single grant, the amount of which was determined based on the grants for the two cycles of the incentive plan being cancelled, applying a significant reduction to the original value. The final 2022-2024 cycle of the 2020-24 Monetary Long-Term Incentive Plan remains active.

The Board of Directors has not yet assigned the rights to the beneficiaries; therefore, no obligation has been recognised for the period under review in accordance with IFRS 2 – Share-based Payment.

Collection of VAT receivables

On June 24, 2022, the Tax Agency reimbursed Avio for VAT receivables totalling Euro 5,235 thousand plus Euro 40 thousand in interest for the year 2020.

MARKET PERFORMANCE AND OPERATIONS

General overview: historic and future outlook

In the H1 2022, 75 orbital launches were carried out (compared with 62 in the same period of 2021), 3 of which reported a failure (the same number as in H1 2021). These 75 launches took 1,203 satellites into orbit, totalling a transported mass of 394 t. H1 2022 has seen the continuation of 2021's trend thanks to the deployment (i) of Space X's Starlink constellation of 762 satellites, equal to 220 t of mass, over 15 dedicated Falcon 9 launches, and (ii) OneWeb's constellation of 34 satellites, equal to 5 t of mass, both offering satellite internet access. Excluding these constellations, the market remains constant, with 402 satellites orbited in H1 2022, totalling 164 t of mass, compared with 415 satellites orbited in H1 2021, totalling 169 t of mass.

The numbers for 2022, therefore, confirm the trend in the launch sector (and space in general), due largely, as evident from 2019 onwards, to the deployment of low orbit satellite constellations, such as not only Space X's Starlink, but also OneWeb, O3B, and other minor constellations.

From the perspective of orbits, low Earth orbit (LEO) missions (Vega's target segment) continue to consistently increased, alongside a parallel decline in geostationary transfer orbit (GTO) and geostationary orbit (GEO) missions (Ariane's target segment). In H1 2022 globally, there were 58 LEO launches (with a transported mass of 275 tonnes, excluding launches to the ISS), against 6 GTO/GEO launches (with a transported mass of 28 tonnes). The trend set for the first time in 2020 of LEO transported mass exceeding that of GTO/GEO is therefore confirmed, with the phenomenon largely attributable to the launch of mega-constellations.

In terms of the types of satellites, it is also useful to underline that, of the 1,203 satellites put into orbit in H1 2022, 1,127 were SmallSats (i.e. with a mass <500 kg), testifying to the fact that this technology, in growth since 2013, has established itself on the applications market, in particular for Mega-Constellations broadband internet, but also for Earth observation, IoT and technology demonstrations.

Apart from the Starlink constellation (satellites manufactured, launched and operated by Space X, without the possibility of open competition, and also subsidized by the Federal Communications Commission - FCC - with subsidies worth over USD 900 M), and launches of unknown origin, missions continued to be mainly institutional (22 civil government launches, 12 military launches, 20 commercial launches), proving, once again, that, for this sector, public funds are of vital importance.

As for applications, these are mainly in the perimeter of telecommunications services, such as broadband internet, mobile telephony and the Internet of Things, but also in the field of earth observation and navigation.

Finally, analysis of the leading countries in the sector in H1 2022 reports 35 launches for the USA (297 tonnes), 22 for China (only 46 tonnes, indicating a very low filling factor of the launchers which is only possible because the launches are exclusively governmental), 8 for Russia, and just 2 for Europe (due to the suspension of Arianespace launches with Soyuz and the preparation of the Vega C maiden flight).

The effects of the COVID-19 pandemic (which, from 2020, led to the closure or suspension of operations at various production sites, both in terms of satellites and launchers, in addition to a slowdown at launch bases across the world) seem to have been overcome.

Forecasts for this decade and the next (produced by sector consulting firms) indicate a strong growth in transported mass, with a CAGR of 5% from 2020 to 2030, and 10% from 2030 to 2040. This growth is expected to occur above all in LEO orbits (deployment and replenishment of constellations, infrastructures and space logistics), but also in escape orbits (the Moon, Mars, exploration and colonization operations), not only at institutional but also at commercial level.

Globally, it is estimated that revenues generated by the launch segment, equal to approximately USD 7.5 billion in 2020, will rise to USD 11 billion in 2030 (CAGR=4%) and USD 18 billion in 2040 (CAGR=5%), 50% of which pertaining to the North American market.

Launchers market

H1 2022 confirmed the global trend of recent years in which few nations had a launch service offer capable of responding not only to the steadfast institutional market, but also to the stable and slightly growing commercial market. As already mentioned in the previous paragraph, these countries were the USA, China (together covering 76% of launches, and 87% of the mass launched), and, to a lesser extent, Russia, Europe, India, and Japan. Among emerging countries in this sector, New Zealand (thanks to its presence on the US market, regarding small institutional satellites) has carried out, from 2017 to today, 27 launches of the Electron Mini Launcher, developed and operated by Rocket Lab.

Missions of new launchers and new versions of existing launchers included: (i) Angara A5 (Russia), which flew after its 2021 partial failure, and (ii) Nuri (South Korea), which flew after its 2021 failure. The most used "legacy" launchers remained the

Falcon 9, with 26 launches, the CZ in its various versions, with 20 launches, and the Soyuz, with 7 launches, used only for 1 European launch following the outbreak of confrontations in Ukraine.

23 missions dedicated to small satellites used so-called Mini Launchers: 4 Electron launches; 1 Chinese Kuaizhou launch; and 1 LauncherOne launch, operated by Virgin Galactic, which appears to be starting to establish itself in this market segment. 4 missions (3 Falcon 9 and 1 CZ), on the other hand, were carried out in Rideshare (one of the markets operated by Vega with the Small Spacecraft Mission Service - SSMS), which is becoming an increasingly frequent launch mode.

The data are compiled by Avio from information reported on the websites <https://space.skyrocket.de> and <http://spacelaunchreport.com> in addition to SpaceNews Magazine."

GROUP OPERATING PERFORMANCE AND FINANCIAL AND EQUITY POSITION

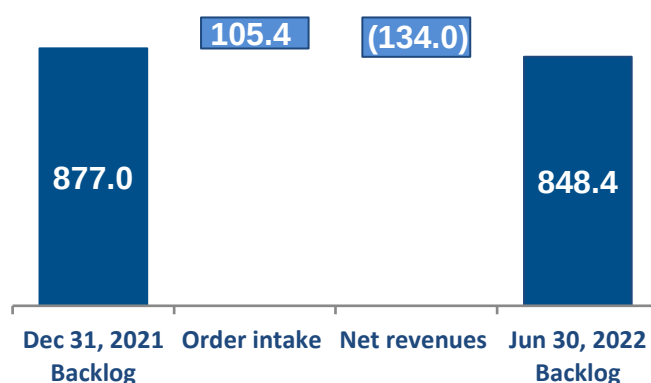
Backlog

The industrial sector of space programs in which Avio operates is characterised by medium-long term projects with limited volatility, associated with an order backlog that provides solid medium-long term visibility.

The order backlog at June 30, 2022 was Euro 848.4 million, substantially unchanged from the value at December 31, 2021.

The order intake in 2022 totalled Euro 105.4 million, mainly concerning orders for:

- Vega E production and development activities (approx. Euro 23 million);
- production of P120 motor (approx. Euro 35 million);
- tactical propulsion and turbopumps (approx. Euro 20 million);



With regards to the backlog at June 30, 2022, which coincides with the remaining outstanding obligations totalling Euro 848.4 million, it is reasonably estimated that it shall give rise to the recognition of revenues of approx. 25% of the amount in H2 2022, for approx. 45% in 2023, with the remainder mainly in 2024.

The H1 2022 results press release dated September 9, 2022⁴ noted that the Board of Directors has updated the 2022 Guidance in order to consider the changes due to energy costs in Europe and in Italy, further increased from June to August 2022, that make difficulties to planning the economics for the future periods.

An indication of the Order Backlog during H1 2022 is also provided in the institutional presentation to investors and analysts made on the occasion of the approval of the 2022 Quarterly Supplementary Periodic Information and in the associated Press Release, available on the Company's website in the "Investors" section.

As reported in the section "Subsequent events to the period end", on August 2, 2022 Avio announced⁵ that it had been awarded new orders from MBDA totalling more than Euro 40 million. The first relates to increased production of boosters for the Aster 30 missile system for a European and NATO member state. The second order was signed for the development, qualification and production of the initial thrust propulsion system of the next-generation Teseo MK2/E anti-ship missile system for the Italian Navy.

⁴ Avio's website, in the "Investors" section: <https://investors.avio.com/Investors/Financial-Announcements/>;

⁵ See the press release dated August 2, 2022: [http://syndication.teleborsa.it/Avio/Financial-Announcements/firma-di-nuovi-ordini-per-la-propulsione-tattica/MXxib211bmliYXRpLiE3NzEwMDAwNDcyMDIyMXwxfDIwMjIwODIz](http://syndication.teleborsa.it/Avio/Financial-Announcements/firma-di-nuovi-ordini-per-la-propulsione-tattica/MXxib211bmliYXRpLiE3NzEwMDAwNDcyMDIyMXwxfDIwMjIwODIz;);

Operating results

The table below summarises the comparable performance of the Group for the first half of 2022 and the first half of 2021 (in Euro thousands):

	H1 2022	H1 2021	Change
Revenues	133,516	132,879	637
of which: Pass-through revenues	(473)	5,135	(5,608)
Revenues, net of pass-through revenues	133,989	127,744	6,245
Other operating revenues and changes in inventory of finished products, in progress and semi-finished	11,152	5,707	5,445
Costs for goods and services, personnel, other operating costs, net of capitalised costs & pass-through	(140,096)	(125,825)	(14,271)
Effect valuation of investments under equity method - operating income/(charges)	(1,888)	442	(2,329)
EBITDA	3,158	8,067	(4,909)
Amortisation, depreciation & write-downs	(9,375)	(10,477)	1,102
EBIT	(6,218)	(2,410)	(3,807)
Interest and other financial income (charges)	(298)	(91)	(207)
Net financial charges	(298)	(91)	(207)
Investment income/(charges)	-	-	-
Profit/(loss) before taxes	(6,516)	(2,501)	(4,014)
Current and deferred taxes	(1,115)	60	(1,175)
Profit/(loss) for the period	(7,631)	(2,441)	(5,190)

The following paragraph outlines “pass-through” revenues. These revenues stem from contractual agreements between the subsidiary ELV S.p.A. (now Spacelab S.p.A.) and the European Space Agency in August 2015 for the development and construction of the new “P120” motor for future generation Vega-C and Ariane 6 launches. As a result of the implementation of these agreements, the Avio Group consolidated revenues include the following dual invoicing:

- an initial invoice from the parent company Avio S.p.A., as the sub-supplier, to the Europropulsion S.A. joint venture with revenues and margins not eliminated during the consolidation of the Avio Group as this joint venture is not fully consolidated;
- a second invoice up until February 28, 2018 from the subsidiary ELV S.p.A. (now Spacelab S.p.A.) and from March 1, 2018 (following the acquisition by the parent company Avio S.p.A. of the launcher’s business unit of the subsidiary ex-ELV S.p.A.) directly by Avio S.p.A., as prime contractor, to the final client the European Space Agency. This concerns a simple re-invoicing of costs received by Europropulsion, without margins, not eliminated in the Avio Group consolidation process as concerning third parties and defined as “pass-through” in this report.

Revenues net of “pass-through” revenues were Euro 133,989 thousand in the first half of 2022, increasing Euro 6,245 thousand (+4.9%) on the first half of 2021. This net increase relates mainly to increased activities in both the development and production of the P120 motor and the VEGA-C launcher, net of the reduced activities in the Ariane 5 programme, which is being phased out; revenues related to tactical propulsion also decreased, while revenues related to satellite activities increased.

The above revenues breakdown by business line as follows (Euro thousands):

	H1 2022	H1 2021	Change
Vega	77,935	73,627	4,308
Ariane	41,562	37,840	3,722
Tactical Propulsion	9,304	14,590	(5,286)
Satellite	5,188	1,687	3,501
Revenues, net of pass-through revenues	133,989	127,744	6,245

EBITDA in the first half of 2022 was Euro 3,158 thousand, decreasing Euro 4,909 thousand on H1 2021.

EBIT was a loss of Euro 6,218 thousand, decreasing Euro 3,807 thousand on H1 2021.

The movement in EBITDA compared to the first half of 2021 was mainly influenced by the increase in energy costs and the ongoing situation regarding the conflict between Russia and Ukraine, which also indirectly led to general cost effects. The lesser decrease in EBIT is attributable to lower amortisation and depreciation

The result for H1 2022 was also shaped by the research and development tax credit of Euro 1,916 thousand (Euro 1,124 thousand in H1 2021), mainly relating to research and development activities, commissioned by the European Space Agency, recognised in the results for the period on the basis of the costs incurred for the Group's long-term research and development projects to which the grant refers, as well as to the Industry 4.0 and technological innovation investments.

For a more complete representation of the Group's earnings performance, the EBITDA and EBIT adjusted to exclude Group non-recurring and unusual components are presented below. The above adjusted amounts (in Euro thousands) and the relative margins for H1 2022 and H1 2021 are reported below:

	H1 2022	H1 2021	Change
Adjusted EBITDA	5,631	10,484	(4,853)
Adjusted EBITDA Margin (against revenues net of pass-through revs.)	4.2%	8.2%	
Adjusted EBIT	(3,745)	6	(3,751)
Adjusted EBIT Margin (against revenues net of pass-through revs.)	-2.8%	0.0%	

The Adjusted EBITDA is considered by management as representative of the Group's operating results as, in addition to not considering the effects of amortisation and depreciation policies, the amounts and types of employed capital funding and any rate changes, already excluded from EBITDA, it also excludes non-recurring and extraordinary components of Group operations, improving the comparability of the operating results.

The H1 2022 Adjusted EBITDA was Euro 5,631 thousand (4.2% of net revenues), decreasing Euro 4,853 thousand on Euro 10,484 thousand for H1 2021 (8.2% of net revenues). This decrease is mainly due to the same effects described for the reported EBITDA.

Adjusted EBIT, also considered by management as representative of the Group's operating results, consists of EBIT excluding non-recurring or extraordinary components, already excluded for the calculation of Adjusted EBITDA.

Adjusted EBIT for H1 2022 was a loss of Euro 3,745 thousand, decreasing Euro 3,751 thousand on a profit of Euro 6 thousand in H1 2021. Net of the effect of the lower amortisation and depreciation, the decrease in Adjusted EBIT reflects the same underlying developments as for the movement in Adjusted EBITDA.

The reconciliation between EBIT, Adjusted EBIT and Adjusted EBITDA for the first half of 2022 and the first half of 2021 is provided below (Euro thousands):

	H1 2022	H1 2021	Change
A EBIT	(6,218)	(2,410)	(3,807)
Non-recurring Charges/(Income) comprising:			
- Settlement agreements / incentives	71	259	(188)
- Corporate, legal and AFC consultancy	400	1	399
- COVID-19 extraordinary charges	533	636	(103)
- Other non-recurring charges/(income)	1,419	1,457	(38)
- Investor Fees	50	64	(14)
B Total Non-recurring Charges/(Income)	2,473	2,417	56
C Adjusted EBIT A+B	(3,745)	6	(3,751)
D Net amortisation & depreciation	9,375	10,477	(1,102)
E Adjusted EBITDA C+D	5,631	10,484	(4,853)

“COVID-19 extraordinary charges” concerns mainly the COVID-19 prevention procedure costs, mainly for protection and distancing equipment at employee work and transport stations.

“Other non-recurring charges/(income)” refer to one-off costs incurred in H1 2022, related in part to activities concerning preparation of the maiden flight of VEGA-C, which then took place on July 13. In H1 2021, this aggregate related mainly to costs incurred for the Vega VV18-VV20 return to flight to implement the IEC recommendations following the VV17 failure of November 2020.

Financial results analysis

Net financial charges in the first half of 2022 amounted to Euro 298 thousand, as compared to Euro 91 thousand in H1 2021.

Balance Sheet

The Group balance sheet is broken down in the following table (in Euro thousands):

	June 30, 2022	December 31, 2021	Change
Tangible assets and investment property	129,134	126,383	2,751
Right-of-use	8,259	9,456	(1,197)
Goodwill	61,005	61,005	-
Intangible assets with definite life	128,860	129,352	(492)
Investments	9,707	11,595	(1,888)
Total fixed assets	336,966	337,790	(825)
Net working capital	(85,703)	(82,997)	(2,706)
Other non-current assets	67,767	70,926	(3,159)
Other non-current liabilities	(118,473)	(119,830)	1,357
Net deferred tax assets	79,695	79,436	259
Provisions for risks and charges	(24,239)	(28,229)	3,990
Employee benefits	(9,318)	(10,344)	1,026
Net capital employed	246,694	246,752	(58)
Non-current financial assets	6,495	6,415	80
Net capital employed & Non-current financial assets	253,189	253,167	22
Net financial position	40,895	57,160	(16,265)
Equity	(294,084)	(310,327)	16,243
Source of funds	(253,189)	(253,167)	(22)

“Total fixed assets” amounted to Euro 336,966 thousand at June 30, 2022, a net decrease of Euro 825 thousand on December 31, 2021 as a combined effect of the following main movements:

- a net increase of Euro 2,751 thousand in Property, plant and equipment and Investment property, primarily due to investment in progress, totalling Euro 6,147 thousand – mainly related to the construction of buildings for production of the P120 motor and to construction of the Group’s new head office in Colleferro, as well as to the purchase of new production machinery and to extraordinary maintenance – net of depreciation for the period;
- a net decrease of Euro 1,197 thousand in Rights-of-use, mainly due to the net effect of new contracts of use and the termination of previous contracts net of depreciation for the period;
- a net decrease of Intangible assets with finite useful life of Euro 492 thousand, due to increases for development costs for Euro 2,481 thousand, mainly concerning design and testing for the development of new liquid-oxygen and methane motors and other capitalisations for Euro 1,766 thousand, mainly for the revision of permanent production procedures in application of the IEC recommendations following the Vega failures and for the Industry 4.0 investment project, net of amortisation for the period;
- an increase in Investments for Euro 1,888 thousand, due to the change in the period relating to the investment in the jointly-controlled company Europropulsion S.A., which is measured at equity. The net decrease is due to the reduction in the company’s share of equity, in view of the fact that it paid dividends to Avio for Euro 2,400 thousand and reported a profit, with this shareholder’s portion amounting to Euro 512 thousand.

The “Other non-current assets” and “Other non-current liabilities” in the balance sheet respectively include a receivable from the General Electric Group and a related tax payable of Euro 58,220 thousand recognised in 2016, following the receipt from the Tax Agency of the settlement notice of registration tax, mortgage tax and land tax, for a total amount of Euro 58,220 thousand, relating to the corporate transactions which in 2013 resulted in the sale of the company GE Avio S.r.l. (containing the assets of the AeroEngine division of the Avio Group) to the General Electric Group. In 2020 the Tax Agency appealed the judgment of the second instance, favourable to the Company, to the Court of Cassation. The Company acted promptly, filing its counter-appeal.

The recognition of the above-mentioned receivable from the General Electric Group is based on specific contractual clauses by which this latter is required to indemnify Avio S.p.A. with reference to any liabilities which may arise in relation to indirect taxes concerning the corporate operations which in 2013 resulted in the sale of the company GE Avio S.r.l. (containing the assets of the *AeroEngine* division of the Avio Group) to the General Electric Group.

In addition, also on the basis of specific contractual provisions, the General Electric Group is required to make available to Avio S.p.A. any amounts requested by the Tax Agency by the payment deadlines.

For further details, reference should be made to paragraphs 3.9 “Other non-current assets” and 3.25 “Other non-current liabilities”, in addition to the section “Legal and tax disputes and contingent liabilities” in the Explanatory Notes.

“Other non-current liabilities” includes liabilities to MiSE for facilities under Law No. 808/85.

During the first half of the year, as part of a regulation that introduced urgent measures to contain electricity and natural gas costs, develop renewable energies and revitalise industrial policies, a regulation was also introduced concerning royalties arising from the sale of products using the technologies developed within the scope of the projects already receiving funding under Article 3, paragraph 1, letter a) of Law No. 808 of December 24, 1985. The regulation was designed to ensure the continuity of investments in research and development within the aerospace sector, including those targeting ecological and digital transition, in the area of national security, by requiring the beneficiaries to make a special declaration regarding royalties.

The Company sent the declaration required by the new provision, and discussions and verifications are currently underway with the Ministry for Economic Development.

“Net working capital” was substantially stable on December 31, 2021, resulting in an excess of liabilities over assets of Euro 85,703 thousand. The main components are outlined in the following table (in Euro thousands):

	June 30, 2022	December 31, 2021	Change
Contract work-in-progress, net of advances	(199,270)	(155,826)	(43,444)
Inventories	67,413	57,100	10,313
Advances to suppliers	114,268	97,632	16,636
Trade payables	(58,126)	(76,927)	18,801
Trade receivables	2,337	3,696	(1,359)
Other current assets and liabilities	(12,325)	(8,672)	(3,653)
Net working capital	(85,703)	(82,997)	(2,706)

“Other current assets and liabilities” of net working capital reported a net decrease of Euro 3,653 thousand to a negative Euro 12,325 thousand. The main components of this account are outlined in the following table (in Euro thousands):

	June 30, 2022	December 31, 2021	Change
VAT receivables	3,805	10,763	(6,958)
Research and development tax credits, technological innovation and industry 4.0.	4,082	3,348	734
Current tax receivables	3,741	3,545	196
Other current assets	11,285	7,376	3,909
Current income tax liabilities	(7,144)	(7,322)	178
Other current liabilities	(28,094)	(26,383)	(1,711)
Other current assets and liabilities	(12,325)	(8,672)	(3,652)

“VAT receivables” report a net decrease of Euro 6,958 thousand, due to the VAT refund received by the Company for Euro 5,235 thousand (including interest of Euro 40 thousand) related to 2020 and received at the end of the period and to offsets recognised.

With regards to the research and development, technological innovation and Industry 4.0 tax credits, the Avio Group recognised R&D tax credits of Euro 4,082 thousand for the period under review, attributable entirely to the parent company, Avio S.p.A., and accrued in 2020 and 2021 and in H1 2022.

“Other current assets” increased by Euro 3,909 thousand on December 31, 2021, mainly related to the accrual of costs invoiced at the beginning of the year and have one-year validity, mainly due to software licences.

Analysis of the net cash position

In response to the EMSA guidelines issued in March 2021 and the subsequent Consob communication No. 5/21 issued in April 2021, the cash position of the Avio Group is presented below in accordance with these guidelines of the regulatory authorities.

	June 30, 2022	December 31, 2021	Change
A Cash and cash equivalents	(77,085)	(104,614)	27,529
B Other liquidity	-	-	-
C Other current financial assets	-	-	-
D Liquidity (A+B+C)	(77,085)	(104,614)	27,529
E Current financial debt (including debt instruments but excluding the current portion of non-current financial debt)	4,516	10,655	(6,139)
F Current portion of non-current bank payables	10,041	10,048	(8)
G Current financial debt (E+F)	14,557	20,703	(6,146)
H Net current financial debt (G-D)	(62,528)	(83,911)	21,383
I Non-current financial debt (excluding current portion and debt instruments)	21,633	26,751	(5,118)
J Debt instruments	-	-	-
K Trade payables and other non-current payables	-	-	-
L Non-current financial debt (I + J + K)	21,633	26,751	(5,118)
M Total financial debt (H + L)	(40,895)	(57,160)	16,265

At June 30, 2022, the Avio Group reports a net cash position of Euro 40,895 thousand (Euro 57,160 thousand at December 31, 2021), with cash and cash equivalents exceeding financial liabilities.

The net cash position, reported at item "M Total financial debt (H+L)" of the table above as per the recommendations of the regulatory authorities, reduced from a positive balance of Euro 57,160 thousand at December 31, 2021 to Euro 40,895 thousand at June 30, 2022, decreasing Euro 16,265 thousand, principally due to the cyclical nature of cash flows on operations, that respect provisions, of capital expenditures for the period and finally of dividends paid by the parent company and own shares capital acquired. There were no restrictions on liquidity.

The current financial debt, amounting to Euro 14,557 thousand (Euro 20,703 thousand at December 31, 2021), includes:

- current financial liabilities to the jointly-controlled company Europropulsion S.A. for Euro 2,749 thousand (Euro 7,749 thousand at December 31, 2021) arising from the cash pooling agreement with the joint venture;
- current financial liabilities for leased assets of Euro 1,767 thousand (Euro 2,906 thousand at December 31, 2021);
- the financial liability related to the current portions of two EIB loans, amounting to Euro 10,041 thousand (Euro 10,048 thousand at December 31, 2021), which includes:
 - two instalments of the total loan granted of Euro 10 million (of which Euro 5 million due on October 31, 2022 and Euro 5 million due on April 30, 2023);
 - the accrued interest at June 30, 2022 amounting to Euro 41 thousand.

The non-current financial debt, amounting to Euro 21,633 thousand (Euro 26,751 thousand at December 31, 2021), includes:

- non-current financial liabilities to the EIB of Euro 17,000 thousand (Euro 22,000 thousand at December 31, 2021);

- non-current financial liabilities for leased assets of Euro 4,633 thousand (Euro 4,751 thousand at December 31, 2021).

Statement of changes in Equity

Consolidated equity at June 30, 2022 amounts to Euro 294,084 thousand, decreasing Euro 16,243 thousand compared to Equity at December 31, 2021, as a result of the following main movements:

- distribution of dividends of Euro 4,493 thousand;
- recognition of the consolidated half-year net loss of Euro 7,631 thousand;
- purchase of treasury shares for Euro 4,592 thousand;
- positive impact of actuarial gains of Euro 479 thousand.

RESEARCH AND DEVELOPMENT

Investment in research and development is a key factor in achieving and maintaining a competitive position in the space industry.

Avio, as always, devoted considerable resources to the research, development and innovation of products and processes which further its mission. Among its objectives is also the environmentally sustainable development of its activities and products, with particular attention paid to the issues of environmental protection, facility safety and the protection of its workforce.

Regarding such key issues, Avio continues to collaborate closely with national institutions such as the Italian Space Agency (ASI), the Ministry of Education, Universities and Research (MIUR) and the Economic Development Ministry (MISE), in addition to international institutions such as the European Space Agency (ESA) and the European Union.

Avio has developed a network of partnerships with Universities and research bodies in Italy and Europe, among which the Italian Aerospace Research Center (CIRA), the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), the Universities of Rome, the Polytechnic University of Milan, the 'Federico II' University of Naples, the University of Padua, the University of Forlì, the Sardinian AeroSpace District (DASS) and the Polymeric and Composite Materials and Structures Engineering cluster of Campania (the CRdC). Avio also forms part of various consortia between European research institutes and industrial partners to support research in the field of energetic materials.

The Group has maintained its participation in research projects with various national and international organizations active in aerospace research. In particular, it continues to collaborate with universities involved in researching advanced solid propellants, composite materials, solid rocket motor (SRM) propulsion systems, cryogenic propulsion, hybrid propulsion and with major global manufacturers and research institutes developing propulsion technologies and innovative modules and components that can benefit from the synergy of individual specific competencies.

Research and development costs incurred by the Avio Group in H1 2022 amounted to Euro 51.3 million (Euro 43.2 million in H1 2021), equating to 38.5% of gross consolidated revenues for H1 2021 (32.5% in H1 2021).

If we consider the aforementioned data net of so-called pass-throughs, the Group's research and development costs in H1 2022 amounted to Euro 51.8 million, equal to 38.7% of revenues net of pass-throughs (Euro 38.1 million in H1 2021, equal to 29.8% of revenues net of pass-throughs).

Self-financed and self-executed activities amounted in H1 2022 to Euro 4.5 million (Euro 7.5 million in H1 2021). Self-financed activities in H1 2022 included Euro 2.5 million relating to development costs capitalised as intangible assets with definite life (Euro 5.7 million in H1 2021) and Euro 2.0 million concerning research costs or development costs not capitalisable and directly recharged to the income statement (Euro 1.8 million in H1 2021).

The total amount of costs related to self-financed activities charged to the income statement in H1 2022 was Euro 4.0 million (Euro 5.2 million in H1 2021), comprising Euro 2.0 million of directly expensed non-capitalisable costs (Euro 1.8 million in H1 2021) and Euro 2.1 million for the amortisation of development costs capitalised (principally) in previous years (Euro 3.4 million in H1 2021).

In the first half of 2022, Avio continued its innovation upon the main product lines, harmonising basic research, applied research and pre-competitive development activities.

Solid Propulsion

In Avio's strategic vision, solid propulsion represents a mature but competitive technology that significantly reduces the cost of launch services and keeps the European space carrier market competitive on the global scene. Avio has made clear that its vision includes the consolidation and further development of both VEGA and the forthcoming Ariane 6 launcher, set to replace Ariane 5.

H1 2022 saw the completion of the integration of the new Avio solid-fuel motors P120, Z40 and enhanced Z9 with the Vega C launcher, which guaranteed Vega C's maiden flight in June 2022.

At the same time, Avio further consolidated its VEGA C market position through the configuration capable of competing in the large SAR satellite segment for earth observation. In the area of solid fuel motors, Avio continued to carry out research

on consolidating and optimizing qualified product production technologies for the Ariane and VEGA launchers, in order to guarantee the performance required of the next generations of Ariane 6, VEGA C+ and VEGA E European launch vehicles.

Following the signing of an ATP with MBDA, in H1 2022 work continued on the development of the axial booster of the next-generation TESEO MK2/E weapon system, a long-range, dual-role, anti-ship missile with land-attack capability. Negotiations are also underway with MBDA for Project ACQUILA, a first-stage solid rocket booster for the new TWISTER endo-atmospheric interceptor for hypersonic threats.

Research and development in materials continued to focus on the development of advanced, high performance and low toxicity solid propellants for implementation in the Ariane and Vega programs. Additionally, the possible expansion of the Avio composite materials production chain has been carefully researched and analyzed, leading to the identification of various possible spin-offs in other sectors.

Liquid Propulsion

Avio considers cryogenic propulsion based on liquid oxygen and methane as the answer to future generations of late stages for launch vehicles, as well as for exploration spacecraft.

In the first half of 2022, work continued on the design and testing of the liquid propulsion module (LPM) aimed at managing the propellant needed to fuel the M10 motor. The development of the M10 motor also continued for the provision of propulsion for the third stage of the future VEGA E.

After completing the Preliminary Design Review of the motor system and successfully closing the PDR's of the main subsystems, including those on the valves, the combustion chamber and the oxygen turbo pump, the first 2 full-scale prototypes of the M10 motor's LOX/CH₄ combustion chamber were built entirely in ALM, and successfully subjected to mechanical pressure and cold fluid dynamics testing at the Avio Colleferro facility. The second prototype was then assembled with the rest of the equipment - including valves, tubing, sensors and harness - and configured for the firing test. The first fire test campaign was successfully concluded at the end of February 2020 at NASA's Marshall Space Flight Center. This was the first test campaign for a prototype for an innovative 100KN combustion chamber with cooling channel, manufactured in ALM by implementing the Avio "Single Material Single Part" patent.

The results confirmed that additive technology can indeed be used to achieve a suitable thermal exchange for a full-scale combustion chamber with a single low thermal diffusion material (100 KN combustion chamber constructed with one piece and one material utilising ALM technology). This marks an important step forward for the development and qualification of the M10 LOX-CH₄ motor (for the upper stage of the Vega E), fully using ALM.

The first development model of the entire M10 motor, denominated DM1, was fully integrated during the second half of 2021, together with the turbomachinery components to support the cryogenic fuel regeneration cycle. This allowed the start and continuation, during the first half of 2022, of the fire test campaign at Avio's innovative Space Propulsion Test Facility (SPTF), inaugurated in October 2021 on the Salto di Quirra military firing range in Sardinia.

Vega E, whose first flight is scheduled for 2026, thanks to the introduction of the innovative, high-performance M10 motor, will be able to carry a payload of approximately three tons into orbit, that is, double the maximum payload mass of the current version of Vega, and significantly more than the next version of Vega C. Furthermore, thanks to the manoeuvrability features of the M10 motor, with re-ignition and active thrust control capabilities, the Vega E launcher will be able to release many satellites in different orbits during the same mission and at very competitive cost.

The development of the M10 motor and the definition and architecture of Vega E's Upper Stage (VUS) were funded for the first phase (2017-2019) under CM2016. The results obtained in the first phase made it possible to acquire new funding for the second development phase (2020-2022), as agreed at the recent European Ministerial Conference in November 2019.

H1 2022 saw the continuation of the development of a new generation of large composite LOx and LCH₄ cryotanks without internal liners, which are potentially integrable as common bulk in future versions of the Vega E's upper stage, to obtain a further increase in the maximum payload. For this purpose, the design of a carbon fibre and thermo-plastic resin cryotank model was finalized, which was then made with "automatic fibre placement" technology. This technology will allow the

introduction of a more suitable manufacturing process, and demonstrates the feasibility of a future LOX/LCH4 common bulk tank for the optimization of the M10 motor's fuel system on the Vega E's 3rd stage.

Space Transport Systems

In H1 2022, Avio finalised the development and construction of the Vecep (ESA) contract Vega launcher. The new Vega C launcher is based on a first stage with 50% greater total thrust than the current Vega and a fourth stage with 15% greater total thrust. The goal, among others, is to improve the launcher's capabilities by increasing its reference payload by over 50%.

In response to increasing small satellite demand, in H1 2022 research into developing the new VEGA Light launcher continued. The performance of this new launcher will be optimised to put into circular orbit (500X500 Km SSO) a payload of approx. 250 KG.

Space Rider is an unmanned and reusable space transport system, which, thanks to its integration with the Vega modules, will allow the creation of an integrated offer of Vega Space Systems services. Continuing in H1 2022 were activities for the development and production of its propulsion system, entirely entrusted to Avio, under the ESA contract with Thales Alenia Space. The system's Critical Design Review (CDR) is due in June 2022.

Finally, in H1 2022 the development of the Hera propulsion system continued, to support ESA's Critical Design Review. HERA is a planetary defence project funded by ESA, involving a consortium of European companies led by OHB System AG. The ESA's Hera mission is scheduled for launch in 2024 and will be carried out in synergy with NASA's Double Asteroid Redirect Test (DART). Hera and DART will have the goal of exploration and the altering of the trajectory of a binary system of asteroids (a pair of near-Earth asteroids known as Didymos), which will be reached by the Hera spacecraft in 2026.

Tactical Propulsion

In H1 2022, CAMM-ER missile motor development activities continued as planned. Qualification activities continued, as did accelerated ageing to verify mid and end-of-life performance, in addition to the industrialisation activities. Avio support of MBDA has also continued in relation to the environmental testing following the delivery of 2 more inert motors.

Production and delivery of the Aster 30, Aster Sustainer 15 and 30, Aspide Improved and Marte boosters to export customers continued.

Obsolescence solution activities also continued for Aster MLU. Activities of particular note included: the use of fibre developed and produced by Avio for the construction of motor casings, the development of a new propellant with the same ballistic performance that maintains its mechanical characteristics at low temperatures and extension of the useful life, and the replacement of materials subject to non-European government authorisations, avoiding restrictions such as those imposed by the USA.

A second tranche of a contract for the production of new Aster Booster motors for the Italian armed forces was acquired, with an order to cover an additional five years of production.

Avio has also acquired a new development programme for an anti-ship system and is in negotiations for participation in a consortium to collaborate on the design and production of an anti-ballistic missile in order to broaden the company's offering in the defence sector.

With regard to Italy's National Military Research Plan (or "PNRM"), Avio continued to collaborate with Polytechnic University of Milan on development of a sub-orbital target.

HUMAN RESOURCES

At June 30, 2022, Avio Group employees numbered 1,047, increasing on 944 at June 30, 2021.

The number of employees does not include those of the company Europropulsion S.A., consolidated at equity. The majority of the workforce is employed by the parent company, Avio S.p.A., which at the same date numbered 929 (819 at June 30, 2021).

Organisation

A number of organisational changes were made in April 2022, with the key objectives of:

- strengthening the management of compliance processes. The "Corporate & Compliance" Organisational Unit brought together the "Risk Management and Internal Control" unit, as well as the newly created "Sustainability Office" unit;
- promoting and supporting experimentation within industrial processes. The 2nd level unit "Experiments" was created in the Industrial Operations Directorate, with coordination of the Composite Materials Research Centre and the SPTF project in Sardinia;
- supporting development and management of defence programs/projects. New organizational units were created in the Engineering Department dedicated to "Defence Launch Systems Development," and in the propulsion area to "Tactical Developments Engineering." Likewise, in the Quality Department, within the "Launch Systems Product Quality" unit, the "Defence Launch Systems" Department was created;
- Supporting the transformation processes scheduled in the Factories. The "Strategic Machine Plants and Equipment" unit was created in the "Purchasing" Department.

It has also been decided to outsource the function of the Chief Technical Officer (CTO) to the company Finis Terrae Srl and to introduce a cyber-security office outsourced to IT System Srl with the goal of defining, monitoring and orchestrating the proper execution of cyber-security programmes and adopting all appropriate cyber-security measures.

Also in April, the organisational instructions for the companies SE.CO.SV.IM and SPACELAB were amended.

Industrial Relations

In the first half of the year, the elections for the new General Workers' Representative Body (RSU) were held as scheduled. The body, on the basis of the current workforce, now has 16 members (previously comprising 13 representatives).

Meetings with the RSU continued during the fiscal year in order to involve and inform trade union representatives about the Company's development and the initiatives introduced by the Company, such as that related to the introduction of fuel vouchers for employees.

With the new RSU, trade union agreements were signed on:

- management of the 2022 EBITDA with the introduction of an attendance bonus for seconded workers;
- summer closure;
- training plan for Fondimpresa funds;
- 2021 Participation Bonus (paid in 2022).

Negotiations are ongoing on the introduction of remote working, which, moreover, has already been adopted by the Company since April 1 without a trade union agreement.

In the second half of the year, the RSU will meet to renew the Participation Bonus, which expires on December 31, 2022, and to discuss extending remote working for 2023.

Blue-collar workers

The following was undertaken during the first half of the year:

- 10 temporary workers were made full employees (2 of which in Airola);
- 5 new temporary workers were hired on fixed-term contracts (Vega);
- 1 employee was hired on a fixed-term contract in Perdasdefogu;
- 1 employee was hired on a fixed-term contract in Avio;
- 3 transfers from fixed-term to permanent contracts at the Colleferro site.

Forecasts for the future:

- 8 new temporary workers are to be hired on fixed-term contracts in the areas of Production, QC, Experimentation, and Integration;
- 2 additional new hires for Perdasdefogu on fixed-term contracts.

Development and Training

In H1 2022, in line with the need to maintain and develop the business and, in particular, to deal with the activities related to the Vega C and Vega E programmes and the orbital launch systems, the Company launched a hiring plan that provided for a roughly 11% increase (20% white-collar) on 2021 levels. In the first half of 2022, 90 employees were hired as follows: 78 managers/white-collar (17% Managers, 33% Professionals and 50% Office staff) and 12 blue-collar. Mostly graduates, the hired personnel have different degrees of experience, and are in possession of specific skills relating to various professional areas. Of these, 50% were hired for Engineering, 32% for Industrial Operations, 15% for Business, Purchasing and Quality, and 3% in staff positions. In 24 cases out of the 90 total, the hirings involved changes of contract type (i.e. from consulting agreements for 12 office workers and from temporary work for 10 blue-collar workers). In addition, 9 people were hired either as temporary workers or on staff-leasing agreements (4 office staff and 5 blue-collar workers).

To support the organization, and in line with the assignment of tasks and responsibilities in relation to the various corporate programmes, the company has again implemented a substantial Merit and Development Plan for 2022. In the first half of the year, this involved 20% of the workforce. Specifically, 83 promotions were made - involving 16% of the white-collar population - of which 6 to the qualification of *Professional Expert* (i.e. the highest Manager level), 10 to the qualification of Manager, and 17 to the company title of Professional (chemical contract levels B1 and B2).

Again this year, the Company has implemented a system of variable bonuses, tied to Avio Group targets for 2022, for Managers and Professionals (roughly 450 people, or 46% of the total workforce). Determination and disbursement of the bonus will be dependent on achievement of individual and organisational performance targets.

With regard to Avio Group training, in H1 2022, 14,654 hours of training were provided, with 1,673 participations (from personnel, contractors and staff leasing) in refresher courses, professional development courses, individual courses and soft skills and technical skills deployment training. A range of issues were of particular relevance in the first half of 2022. In particular, training focused on manufacturing processes concerning Vega-C and on the Guiana Space Centre (CSG) operations, and other training was organised on maintaining welding and crimping certifications. A training plan was issued for the gaining of technical skills for the Engineering unit (i.e. courses on Big Data & Data Analytics, Tolerance Systems, approaches to and applications of Design Thinking, the use of CAD, and Catia V5/V6). In support of career growth, the company maintained a training programme related to the corporate training catalogue, and more specifically: the New Professional training; training to support the new appointment of A3-level managers; individual coaching; and "Building the Future" management training. With regard to management training, the company has focused team building on practical training by implementing a tutorial aimed at helping schools to develop STEM programmes. Transverse individual courses were also organized to respond to needs expressed in terms of: Emotional Intelligence; Decision Making; Time Management; Recruiting; Training Trainers; and Finance for Non-financial Managers. Company management also focused on the provision of methodological courses, such as 8D, Project Management and Yellow Belt (in the latter case participants had to take an exam to complete certification) and began the LEAN BELT certification process. Additional training aimed at the entire workforce concerned cyber-security.

During the year, training activities were focused on the following main areas:

- training and updates on mandatory technical competences regarding safety issues;
- training on special and critical processes in manufacturing;
- soft skills training: development of managerial skills (participation at conventions and seminars);
- individual development plans;
- Get On Board Day: on-boarding for new hires;
- support for internationalisation with a focus on individual and group language training (French language courses, English language courses);
- Quality Management System training;
- training on Legislative Decree 231/01;
- methodological training;
- legal training on ITAR dual-use issues.

Distance learning training, both synchronous and asynchronous, had a positive impact on the total number of hours and participations, involving the entire company population. This allowed for the provision of courses during the Covid-19

emergency while respecting the social distancing required by company regulations. Using certified in-house trainers, safety and management training and information was provided. The e-learning platform has been enhanced, particularly in relation to the Quality area, in order to provide the course on the Quality Management System and to implement a dedicated multimedia area used to share course materials. The e-learning platform was a key tool also to provide training on safety issues and Seveso quarterly reports; in the regulatory area, to provide training on Legislative Decree No. 231; waste-management training; training on the administrative protection of state secrets and other confidential information; and multimedia training for the on-boarding of new hires.

Regarding training methods, the structured learning organisation model was used, as it has been in previous years. This allows the organisation to learn through the active involvement of managers in the design of training activities for both direct groups and cross-departmental groups, therefore supporting increased integration among the company population.

Organisation and management of personnel

In 2022, measures remained in place to counter the spread of COVID-19, through the publication of internal Avio procedures to measure body temperatures before entering the facility, check green passes, manage suspected or confirmed cases of infection, clean and sanitise work environments, for the distribution of masks (initially FFP2 masks then later surgical ones), the use of sanitation kits in meeting rooms, further expansion of office space, the immediate diagnostic service of antigen swabs and PCR etc. and through the adoption of a risk assessment document (DVR) setting the rules to be followed to prevent the spreading of the virus in the workplace environment. These rules were applied not only to the entire workforce but also to third-party employees and visitors.

In January, we also provided all employees with a medical chat service based on innovative technology and design features aimed at improving access to primary care, while developing a convenient, accessible service to make first contact with a general practitioner.

Also in January, Workstation Guidelines were updated to manage the assignment process for entry, movement and relocation of resources, the adequacy of existing set-ups, compliance with safety requirements, and the updating of company floor-plans.

In February, the travel guide providing tips and information for missions to French Guiana was updated, as were the procedures related to work-life balance measures.

Until March 31, 2022, the Company granted the possibility of remote work for parents with at least one child under the age of 14, as per Italian Legislative Decree 34/2020, the “Relaunch Decree”, and for “special-needs” employees with certain medical conditions. We then extended remote work from April 1 to December 31 also for workers not covered by Article 90, giving them the ability to work from home four days per month up to two days per week for the units Continuous Improvement, CTO, SPACELAB, Commercial, Programmes, Engineering, and Quality, and for six days per month up to two days per week for corporate positions (i.e. Communication and Public Relations, Corporate Relations, Legal Affairs and Compliance, Human Resources and Organisation, AFC, IT, and General Management).

In May and June, employees were provided with an online tax-filing platform with which employees could file their 730/22 substitute-tax forms for the 2021 fiscal year.

In June, in response to rising fuel prices as a result of the international macroeconomic landscape, the Company decided to provide all employees with a fuel bonus based on the length of their commute (i.e. less than or greater than 20 km). This bonus was provided in the form of ENI fuel vouchers and the provision or extension of limits on their ENI multcards.

In addition, in June, an agreement was signed with the Workers’ Representative Body regarding the Participation Bonus based on company and sector performance in 2021 used to calculate the bonuses to be paid in July 2022. Having met the legislative requirements for the 10% substitute tax, employees were also given the option to convert the bonus, or a portion thereof, into welfare benefits by activating the Timeswapp platform of the INAZ Group, which currently manages the payroll service.

The “INAZ Desk” was made available on the first Tuesday of each month throughout the first half of the year, in order to respond to requests for clarifications and explanations regarding pay.

COMMUNICATION AND SOCIAL RESPONSIBILITY

Avio promotes its image and its products through participation at major international events and a constant presence at Italian and international aerospace conferences regarding the research and development of new technologies in the specific field of space propulsion and launchers.

In addition, the Company develops its own network of scientific exchange and new product development through research collaborations with Italian and international universities and research institutes and through technical and operational collaborations with major European space agencies, in particular the Italian Space Agency (ASI), the French National Centre for Space Studies (CNES) and the European Space Agency (ESA).

The loosening of SARS CoV-2 made it possible to restore the company's corporate and external communications activities to near-full operations throughout the first half of 2022.

Key events in H1 2022 included:

- In December and January, the Italian Space Agency (ASI) and Arianespace signed new launch agreements for Vega-C, the launch of which had originally been set for May 2022. With this new agreement, the innovative PLATiNO 1 and PLATiNO 2 satellites will be put into orbit between 2022 and 2024.
- January 26 - Our CEO, Giulio Ranzo wrote an article on the SpaceNews website, discussing the importance of independent access to space for Europe and Avio's role with the preparation of the next Vega C flight. He also discussed the development and testing for the new M10 engine that will be the last stage of Vega E.
- January 29, Colleferro – The inauguration ceremony for the presidency of the CVA for 2022 was held at Colleferro's Vittorio Veneto Theatre and involved the participation of our Chief Executive Officer.
- February 13 – In conjunction with the 10-year anniversary of the first Vega launch, our CEO, Giulio Ranzo, spoke of the importance of this event in the transformation of Avio, underscoring how it enabled us to launch projects like Vega C, Vega E and Space Rider.
- February 17 – With the naming of Colleferro as the European Capital of Space for 2022, a documentary was presented on the history of the city and, consequently, of our organisation. Avio was a sponsor of the project and enabled employees to attend free of charge.
- March 14, Rome – The Board of Directors of Avio S.p.A. reviewed and approved the statutory financial statements and presented the consolidated financial statements for the year ended December 31, 2021.
- March 21 – An employee tennis tournament was held at the BPD Avio Colleferro Tennis Club. The tournament concluded on April 8.
- March 25, Rome – Avio confirmed that the war in Ukraine will not impact operations for the Vega and Vega C launchers, given that the company has a "strategic stock" of raw materials.
- April 5 – Arianespace signed an agreement with Amazon for 18 launches of the Ariane 6 launch vehicle to put broadband internet satellites into orbit. Four P120C motors developed by Avio are to be used on the Ariane 64 launch vehicle, including an enhanced version for 16 of the 18 scheduled launches.
- April 8 – The European Commission and the European Space Agency have selected Vega C for the launch of the Sentinel 1C satellite in the first half of 2023.
- April 11 – The awards ceremony for the first Space Games, organised by CTNA (Cluster Tecnologico Nazionale Aerospazio) in collaboration with the Italian Space Agency (ASI), La Sapienza University, and Leonardo Da Vinci University, was held.
- April 12 – Claudia di Trapani (Vega E Program Manager), together with Valentina Sumini (Space Architect at MIT Media Lab), were guests for an episode of the BFC broadcast Forbes Space Economy.
- April 22, Colleferro – Avio was featured at "Touchdown! Final Show! – @Girls in ICT", an event organised by Lazio Innova.

- April 27 – The month of April saw the kick-off of the Industry 4.0 project and the launch of joint working groups between Avio and the Accenture/Dassault team.
- May 3, Colleferro – Visit by Thomas Dermine, Belgium’s Secretary of State for Economic Recovery and Science Policy, who also oversees the aerospace sector. Joining him was Belgian ambassador Pierre-Emmanuel De Baux and a delegation of advisors and journalists.
- May 4 – Avio’s educational campaign began in collaboration with the City of Colleferro with the inauguration of the Space Lab at the Leonardo Da Vinci Middle School.
- May 5, Sardinia – Testing of the M10 oxygen and liquid-methane motor for the Vega E was successfully completed at the Space Propulsion Test Facility (SPTF) in Quirra.
- May 12, Colleferro – The second date of the Avio educational campaign, Avio Meets School, was held.
- May 17 – The project to generate ideas to improve production, “Metti un’idea nello spazio”, promoted by the Continuous Improvement unit, began.
- May 20 – The school amphitheatre commemorating Federica Parmigiani was inaugurated at Touschek Secondary School in Grottaferrata.
- May 23 – Get On Board Day, dedicated to employees hired after January 2023, was held in Morandi Auditorium and was attended by Mr. Ranzo.
- May 26, Quirra – The second, 30-second firing test of the new M10 motor was completed successfully, with the motor behaving as expected.
- May 29, Rome – Students at the Space Propulsion lab as part of the three-year degree programme in Aerospace Engineering at La Sapienza University launched their mini-rockets in conjunction with the longstanding event sponsored and overseen by Avio.
- June 1 – Our CEO, Giulio Ranzo, was interviewed by SpaceNews to talk about the future of the company, from the Kuiper project to the debut of Vega C.
- June 7 – The new M10 motor, the first in Europe to be fuelled by oxygen and liquid methane, was presented at a press conference in Altec’s offices in Turin.
- June 8, Quirra – The two 30-second firings in the third round of tests of the M10 motor were completed successfully.
- June 13 – Avio was featured in the third episode of Space Walks, a new broadcast dedicated to space and the space economy.
- June 17 – The lesson within Module 2 – Value Chains in the New Space Economy was held at Rome’s John Cabot University within the scope of the partnership between Avio and Politecnico di Milano.
- June 18 – Francesca Lillo was awarded the “Pavoncella” Prize for female creativity for the eleventh edition of the event.
- June 22, Colleferro – We welcomed a delegation of representatives from the space agencies and other authorities in Latin America, members of the Italo-Latin America Institute (IILA).
- June 23 – An international delegation of 30 experts from SpaceTec, a strategy-consulting firm for the aerospace industry, visited the company.
- June 30 – Avio was awarded the first two contracts within the scope of space-industry initiatives for implementation of Next Gen EU. Some Euro 340 million has been allocated by the Italian government to enhance the technological capabilities of Italian industry to access space.

GROUP PRINCIPAL RISKS AND UNCERTAINTIES

Risks related to the ongoing conflict in Ukraine

As reported in the financial statements as at December 31, 2021, the Russian-Ukrainian crisis is an ongoing diplomatic-military confrontation between Russia and Ukraine that began in February 2014. It centres on the status of Crimea, the Donbass region, and Ukraine's possible membership in NATO.

The information provided in this section - and more generally the information provided in these financial statements on the ongoing conflict in Ukraine - takes into account Consob's calls for attention dated March 18, 2022 and May 19, 2022. The latter fully referred to the recommendations provided by ESMA in the Public Statement "*Implications of Russia's invasion of Ukraine on half-yearly financial reports*" dated May 13, 2022.

As widely reported, on February 24, 2022, Russia began the invasion of Ukraine. Despite unanimous condemnation and international sanctions against Russia, the conflict between the two countries continues.

As previously reported in the prospectus of March 31, 2017 relating to the admission to trading on the STAR segment of the Italian Stock Exchange organised and managed by Borsa Italiana S.p.A., in undertaking transactions the Group mainly uses suppliers and sub-contractors for the supply of components, semi-finished products and raw materials. The Group's ability to fulfil its obligations to its clients also depends on the fulfilment of contractual obligations by its sub-contractors and suppliers. Also as reported in the prospectus, certain Group suppliers and sub-contractors, considering the skills and know-how they have developed, in addition to the qualification processes that have certified their compliance with specific requirements, are difficult to replace or, in any event, their replacement may entail a lengthy period of time and significant costs. In view of the Russian-Ukrainian crisis that had emerged even in February 2014, it was reported in the prospectus, in particular, that the then recent foreign policy events could affect the capabilities of suppliers operating in Russia and Ukraine. The prospectus also stated that such possible non-fulfilment could concern a varying range of components (such as the propellant tanks and the fourth stage motors of the Vega launcher, the pressure regulators and valves) or raw materials (such as ammonium perchlorate and carbon fibres) and, should significant cases of non-fulfilment by the Group's suppliers or subcontractors occur or, for any reason, should such suppliers no longer be able to meet their obligations or should they need to be replaced by the Group, the latter, also on account of any delays that might ensue, could be held liable by its clients and, therefore, be subject to possible claims for damages. The occurrence of one or more of these circumstances could impact upon the Group's financial statements.

Among the Group's strategic suppliers, due to the skills and know-how developed as well as the qualification processes that have certified their compliance with the specific requirements, which are difficult to replace or, in any case, whose replacement could require a lengthy period of time and significant costs, included, and still include, three Ukrainian suppliers who currently supply:

- The main motor of the 4th stage for the Vega and Vega-C launchers;
- The carbon-carbon inserts used to make the nozzles for the Z40 and Z9 motors of the Vega-C carrier.

Currently, there is no direct procurement from Russian suppliers.

In addition, since 2019, the Group has started a technical-engineering collaboration again with two of these three suppliers to fine-tune the processes for making the carbon-carbon inserts to be used in the manufacture of the nozzles of the Z40 and Z9 solid propellant motors of the Vega C launcher. This collaboration is expected to conclude in 2023 with support for the development of the carbon-carbon insert manufacturing process in Italy at Avio and another Italian supplier.

The state of supplies in Colleferro allows for the continuation of industrial activities without interruption with regard to the VEGA and VEGA C programs over the short and medium term. The situation is being monitored in order to take actions aimed

at protecting business continuity also in the long term: in this context, the ESA recently decided to dedicate financial resources to initiate technical and industrial actions aimed at mitigating the supply risk in the long term through the development of complementary technological solutions. On the basis of the information currently available, it cannot however be excluded that a worsening of the Ukrainian crisis, or the continuation of the current situation, could have possible future impacts on the Group's production activities with reference to the VEGA and VEGA C programmes.

As a result of the contacts regularly maintained with these suppliers, production activities were suspended for the carbon-carbon inserts used for the production of the nozzles of the Z40 and Z9 motors of the Vega-C launch vehicle, without, however, interrupting the production schedule of Avio's operations (the Company has acquired the components from a previously used European supplier), while production of the MEA motor continues.

As these assessments gradually matured, they were promptly reported in the press releases dated February 25, 2022, March 25, 2022, and most recently July 17, 2022, and are still accurate.

Based on the above, the risks from impacts from dependence on such Ukrainian strategic suppliers are qualified as possible.

At June 30, 2022, Avio had outstanding advances to Ukrainian suppliers totalling Euro 4.3 million, relating to contracts for Carbon-Carbon insert technology and MEA motors.

As regards the Carbon-Carbon inserts contract, down payments amounted to Euro 2.0 million, and recovery through contractually scheduled deliveries is expected to be completed by H1 2025.

As regards the MEA motors contract, down payments amounted to Euro 2.3 million for raw materials procurement for the ten MEA motors for Vega C Batch 4, and recovery through contractually scheduled deliveries is expected to be completed by the end 2024.

In this general context, it should be noted that the Batch 3 contract with the client Arianespace includes the possibility - where necessary - to invoke a *force majeure* clause for the obligations assumed by Avio. At present, also on the basis of in-depth analyses carried out by legal advisors, the application of this clause has not been invoked because, in light of the above, Avio is currently able to ensure the continuation of production activities of the Batch 3 contract.

In any case, the situation will be constantly monitored in order to be able to invoke the *force majeure* clause in a timely manner, if necessary.

The Group has already taken action – with the support of the European Space Agency – to identify possible alternative suppliers with reference to the above products, also analysing the process and methods necessary for the certification of these solutions in the qualification dossier of the Vega and Vega C launchers. Work to replace the carbon/carbon inserts has begun and will be completed in time to ensure the continuation of Vega-C production. With regard to replacement of the MEA, with the help of the Italian Space Agency, we have identified an alternate solution that is currently being completed in order to make it operational.

General macroeconomic risks related to the COVID-19 pandemic

The general economic context is still being significantly impacted by the COVID-19 pandemic, although the sector in which the Company operates is less exposed than others to the related risks.

H1 2022 was significantly affected by the continuation of the disruption of the COVID-19 pandemic, which continued to spread and threaten the lives of millions of citizens, in addition to the health of the world economy. In this context, Avio continued to guarantee the protection of the health of its workers, consultants, suppliers and customers, by implementing - in line with the epidemiological trends of the pandemic and regulatory provisions issued by the competent institutions - protective measures to limit the spread of the virus as much as possible, and to mitigate the potential risks associated with a safe continuation of production activities.

The effects of the health emergency were felt intermittently throughout H1 2022, and indirectly affected Avio's internal activities, as well as slowing down the activities of suppliers and sub-contractors in Italy and the rest of Europe. At the moment, operations at all Avio facilities, and in Colleferro and French Guiana in particular, are continuing with some difficulty but normally in order to ensure operational objectives are achieved. Specifically, Vega C development activities continued and culminated in the highly successful maiden flight on July 13, 2022.

Should the effects of COVID-19 continue and worsen in H2 2022 and beyond, impacts, including significant impacts, may be seen on the industrial, engineering and commercial activities of the entire aerospace sector.

In view of the above, the intrinsic risk associated with the potential effects that such an epidemic may entail is assessed as high (inherent risk high), while the control risk is assessed as medium, given that the internal control system introduced by

the regulations in force is being continuously monitored and developed at an institutional level and considering that the Crisis Committee, set up by the Company, is operating in a situation of persistent uncertainty.

The COVID-19 Committee, specifically set up by Avio, regularly updated the risk assessment that was necessary in view of the COVID-19 outbreak globally.

Although the Group considers the space programme sector less volatile in consideration of the long-term nature of projects and the backlog developed, a contraction in economic growth, a recession or a financial crisis may reduce (even significantly) demand for the components produced by the Group, with consequent impacts on operations and on the financial statements of Avio and of the Group companies.

In addition, a weak economic environment may impact the Group's access to the capital markets or the availability of favourable conditions, with consequent impacts on operations and on the financial statements of Avio and of the Group companies.

Excluding the possible macro-economic effects of COVID-19, the economic, equity and financial position of Avio is influenced by a number of macro-economic environment factors (including GDP movements, the cost of raw materials (in particular energy costs), the unemployment rate and interest rate movements), both in the countries in which the Group operates and at a global level, as a result of impacts upon the spending capacity of the individual countries (in particular in Europe) for the development of Space activities, through the national and European agencies.

Over recent years, the financial markets have featured particularly significant volatility with major repercussions on banks and financial institutions and, more generally, on the entire economy, therefore impacting the public accounts. The significant and widespread deterioration of market conditions was exacerbated by a serious and general difficulty in accessing credit, both for consumers and businesses, resulting in a lack of liquidity which affected industrial development and employment, therefore impacting the budgeting strategies of European states and consequently the spending capacity of the Space Agencies.

Although the governments and the monetary authorities have responded to this situation with extensive initiatives, including the cutting of interest rates to historic lows and the funding and bolstering of intermediaries, and although taking into consideration the signs indicating the exiting of recession for the leading economies, it currently is however not possible to predict whether and when the economy will return to pre-crisis levels, also in light of the above-mentioned COVID-19 epidemic, the situation related to the international geo-political environment and the slowing of Chinese economic growth, in addition to renewed volatility on the financial markets and tensions surrounding the financial situation and credit capacity of various countries.

Where this situation of significant weakness and uncertainty were to continue for significantly longer or worsen, particularly on the Group's market, the operations, strategies and prospects of the Group may be impacted, particularly with regards to production forecasts for future launches of Group spacecraft and for new research and development programmes, with a consequent possible impact on the Group financial statements.

In addition, as reported, the space programmes have principally been executed through the use of funding provided by the governments and the European authorities. These provisions depend on government policies and in general economic conditions in Europe. The demand for launchers is therefore supported both by the public sector and the private sector.

Risks related to sudden increase in energy costs

Late 2021 and H1 2022 saw a sudden increase in energy costs, which led to increased volatility. This increase became more acute in July and August 2022. The Company has already taken action by concluding a partnership with Cogenio-Enel X in December 2021 for the management of a thermoelectric power plant to ensure the future security of energy and steam supplies at the best financial conditions.

Should this situation of high energy costs and uncertainty be significantly prolonged or worsen, the Group's business, strategies and prospects could be adversely affected, which could have a negative impact on the Group's income statement, balance sheet and financial position.

Specific business risks

The space programmes, due to their inherent complexity, strategic important and source of funding, are generally dependent on plans and decisions undertaken at government level in Europe, both by individual countries and as part of international agreements, implemented by specific national and supranational institutions and agencies. These plans seek to guarantee independent access to space by the European nations.

Changes to space access policies, both at a domestic and European or international level, and unfavourable economic conditions impacting the spending allocated to these policies by national governments and supranational institutions, may impact Group operational levels with possible repercussions for operations and the Group financial statements.

Group business depends in addition on a limited number of programmes and therefore clients. Any interruptions, temporary suspensions, delays or cancellations to one or more major programmes constitutes a risk which may impact the Group's operations and financial statements. In H1 2022, the order backlog was substantially in line with the figure at the end of 2021. However, as a potential risk of aerospace industry groups, the backlog may be subject to unexpected adjustments and therefore may not be indicative of future revenues or operating results.

The Group operates in the space sector principally through long-term contracts, often at fixed prices or with inflation-linked price reviews. Fixed price contracts present the risk that any additional costs may not be or are only partially reabsorbed by the client, with possible negative impacts on the Group's operations and financial statements.

In addition, for the recognition of revenues and related margins deriving from long-term works contracts, the advancement percentage method is used, based on total cost estimates for the execution of contracts and verification of the state of advancement of operations. Both these factors are by their nature significantly subject to management estimates, which in turn depend on the objective possibility and capacity to forecast future events. The occurrence of unforeseeable events, such as the persistence of the COVID-19 epidemic, and foreseeable events, to a differing degree, resulted in an increase in costs incurred for the execution of long-term contracts, possibly also in the future, with impacts on the Group's operations and financial statements. To manage this risk, the Company has put into place IT procedures and systems, and can count on a workforce and skills that have been developed and consolidated over time.

The Group is not a Launch Service Provider with regards to Vega and Vega C launch services sales. Although the Group contributes to the definition of Arianespace's Business Plan regarding the marketing of the Vega launcher and its successors, in order to determine volumes and prices that allow, in addition to recurring launch system costs, balanced budgeting for the development of the launchers, where the Launch Service Provider does not correctly execute its role or adopts commercial practices which do not align with the Group's interest, this may have an impact on the operations and financial statements of the Group.

Group clients are responsible for declaring the compliance of products before acceptance and sale and may entirely or partially reject them where such compliance is not declared. In this case, the warranty clauses require us to replace or repair the non-compliant component, incurring the associated costs in addition to any costs necessary to understand the problem. Where the associated costs are not covered by insurance, the Group's results may be impacted. Once accepted by clients, the Group is no longer responsible for damage deriving from the malfunctioning of products, except where the pre-existence of any defects which were not evident upon acceptance is demonstrated, with the consequent further obligation to restore or repair the defective products before final use and/or launch.

In addition, for any damage, whatever the cause, and including damage deriving from defects and/or the malfunctioning of products supplied by the Group, caused during the flight of the launchers, the launch service provider shall exclusively be responsible and, where applicable, the ESA and the French government.

The Group's industrial operations require the use and the processing of explosive or chemically hazardous materials. Although these activities are conducted in accordance with applicable rules, as per a specific Safety Management System to prevent accidents, and high-quality equipment and personnel are used, accidents may occur which result in interruptions of varying lengths and thus a negative effect on the Group's results.

SUBSEQUENT EVENTS TO THE PERIOD-END

Business

Successful maiden flight of the new Vega-C launch vehicle

On July 13, at the European Kourou space port in French Guyana, the maiden flight of the new Vega C launch vehicle - with Avio as the prime contractor - went off without a hitch, putting the following into orbit as planned:

- the LARES 2 primary payload in a science mission of the Italian Space Agency (ASI);
- six research CubeSats from France, Italy and Slovenia for the secondary payload.

The launch marks the crowning achievement of the long-term commitment of the ESA, of Avio as prime contractor, and of the industrial partners from 13 ESA member nations to carry forward the legacy of its predecessor, Vega.

Energy costs

This increase in energy costs became more acute in July and August 2022. At the end of August 2022, the price of gas had doubled from the price at the end of June 2022.

As set out in the "Goodwill and impairment tests" section of the explanatory notes, based on these overall assessments, the steeper rise in energy costs in July and August 2022 and the ongoing conflict Russia-Ukraine conflict, which is also generating indirect costs generally, were considered trigger events and therefore the goodwill at June 30, 2022 was subjected to an impairment test. This test did not indicate the need to for any write-down.

For further information, reference should be made to the "Goodwill and impairment tests" section of the explanatory notes.

New contracts

On August 2, 2022 Avio announced⁶ that it had been awarded new orders from MBDA totalling more than Euro 40 million. The first relates to increased production of boosters for the Aster 30 missile system for a European and NATO member state. The second order was signed for the development, qualification and production of the initial thrust propulsion system of the next-generation Teseo MK2/E anti-ship missile system for the Italian Navy.

Other significant events

Acquisition of Temis S.r.l. and of 5% of ART S.p.A.

the Golden Power notification was filed on July 6, 2022 and on August 5, 2022, the Prime Minister's Office announced that it had accepted the proposal not to exercise special powers put forward by the MEF in its role as the body in charge of the investigation.

Having received the go-ahead as regards the golden power decrees, the transaction was therefore concluded on September 8, 2022.

The transaction will involve a total financial commitment of Euro 4,700 thousand, comprising:

- the purchase price of the holding in Temis for Euro 3,000 thousand, of which Euro 1,750 thousand paid in cash and Euro 1,250 thousand in Avio S.p.A. treasury shares;
- the purchase price of the holding in ART of Euro 1,700 thousand, which will be paid entirely in cash.

OUTLOOK

In the short term, activities are still expected to be influenced to some extent by the high energy costs.

⁶ See the press release dated August 2, 2022: <http://syndication.teleborsa.it/Avio/Financial-Announcements/firma-di-nuovi-ordini-per-la-propulsione-tattica/MXxjb211bmljYXRpLjE3NzEwMDAwNDcyMDIyMXwxfDIwMjIwODIz>

As reported in the Press Release on the 2022 Half-Year Results dated September 9, 2022⁷, the Company has therefore revised its 2022 forecasts for "EBITDA Reported", which is currently between Euro 17 million and 25 million (compared with the previous forecast of between Euro 24 million and 30 million). Forecast non-recurring costs remain unchanged at approx. Euro 5 million, while the forecast net result is now between a loss of Euro 2 million and a profit of 3 million (compared with the previous forecast of between Euro 5 million and 10 million).

Forecast net order backlog for 2022 remains unchanged at between Euro 870 and 920 million, as does the forecast for net revenues of between Euro 330 and 350 million.

As previously reported, in relation to the ongoing Russia-Ukraine conflict no specific medium-term impacts on Vega and Vega C operational continuity are currently expected. The procurement process for the fourth-stage Vega and Vega C motor produced in Ukraine, which has been underway for several years, has provided a "strategic" stock which guarantees Avio's deliveries for launches planned in the medium term. In the long term, the ESA recently decided to dedicate financial resources to initiate technical and industrial actions aimed at mitigating the supply risk in the long term through the development of complementary technological solutions.

These assessments were promptly reported in the press releases dated February 25, 2022, March 25, 2022, and most recently July 17, 2022 and are still accurate.

TRANSACTIONS WITH HOLDING COMPANIES, SUBSIDIARIES, JOINT VENTURES, ASSOCIATES AND INVESTEES

Transactions of the parent Avio S.p.A. with shareholders and with subsidiaries and associates of these latter, with subsidiaries, joint ventures, associates and investees, and with subsidiaries and associates of these latter, consist of industrial, commercial and financial transactions carried out as part of ordinary operations and concluded at normal market conditions. In particular, these concern the supply of goods and services, including of an administrative-accounting, IT, personnel management, assistance and funding and treasury management nature.

OTHER INFORMATION

As per Article 40 of Legislative Decree No. 127/1991, it is disclosed that, in consideration of the share buy-back programme, at June 30, 2022, the Parent Company held 1,103,233 shares, representing 4.1854% of the share capital.

CORPORATE GOVERNANCE

The Company adheres to the principles of the Corporate Governance Code of the Corporate Governance Committee for Listed Companies, established by Borsa Italiana and promoted by Borsa Italiana, ABI, Ania, Assogestioni, Assonime and Confindustria, last updated in January 2020, and has adjusted its governance system to the regulatory provisions indicated therein. The Corporate Governance Code is available on the Borsa Italiana S.p.A. website at <https://www.borsaitaliana.it/comitato-corporate-governance/codice/2020.pdf>.

In accordance with the regulatory obligations, the Corporate Governance and Ownership Structure Report is drawn up annually and (i) contains a general outline of the Corporate Governance System adopted by the company and (ii) information upon the ownership structure and compliance with the Corporate Governance Code, including the main governance practices applied and the features of the internal control and risk management system, also with regards to financial disclosure.

The Company, at June 30, 2022, had adopted:

- i. the **Internal Dealing Policy**, as approved by the Board of Directors of Space2 on September 29, 2016, amended on September 13, 2017 by the Board of Directors of Avio S.p.A., with effect from the acquisition date.
- ii. a **Related Party Transactions Policy** approved by the Board of Directors of Space2 S.p.A. on January 19, 2017, with effect from the efficacy date of the merger by incorporation and latterly amended by the Board of Directors of Avio on November 8, 2021. For a reliable analysis of information on significant transactions with related parties, see the Explanatory Notes section "7. Related party transactions";

⁷ Avio's website, in the "Investors" section: <https://investors.avio.com/Investors/Financial-Announcements/>.

the **Inside Information processing policy**, approved on December 21, 2017 by the Board of Directors of the company and latterly amended by the Board of Directors on March 3, 2022 for better efficacy and implementation;

- iii. an **Organisation, Management and Control Model, as per Legislative Decree No. 231/2001, as amended**, and updated on May 11, 2021, by the Company's Board of Directors to account for all legislative changes introduced by Legislative Decree 231/2001;
- iv. an **Avio Group Ethics Code**, approved on March 29, 2004 and amended latterly on December 21, 2021 by the Board of Directors of the Company, containing the requirements demanded by the company's stock market listing;
- v. the **Guidelines to the Internal Control and Risk Management System of the Company**, approved on March 29, 2004 and latterly amended on June 28, 2017 by the Board of Directors of the Company;
- vi. a **Diversity policy**, approved by the Board of Directors of the Company on March 19, 2021, in compliance with Article 123-bis, paragraph 2, letter d-bis) of the CFA, as supplemented by Article 10 of Legislative Decree No. 254/2016 and the recommendations of the Self-Governance Code. The policy was most recently updated by the Board of Directors on March 14, 2022;
- vii. of a **Shareholder Communication Policy**, approved by the Company's Board of Directors on March 3, 2022, in accordance with Recommendation No. 3 of the Corporate Governance Code. The policy seeks to foster transparency in dealings with the financial community and the markets by building, maintaining and developing an active relationship of trust with investors;
- viii. a **Policy on qualitative and quantitative criteria for assessing the independence requirements of Directors and Statutory Auditors**, approved by the Board of Directors on March 14, 2022 and in line with Recommendation 7, first sentence, points (c) and (d), in Article 2 of the Corporate Governance Code;
- ix. an **Avio Group Anti-corruption Code**, approved by the Company's Board of Directors on March 14, 2019 in compliance with Legislative Decree No. 231/2001 and international best practices.

For any further detailed information on corporate governance related to the Company and all corporate governance decisions made up to June 30, 2022, please refer to the "Corporate Governance" section of the Company's website.

* * *

September 9, 2022

The BOARD OF DIRECTORS
The Chief Executive Officer and General Manager
Giulio Ranzo

CONDENSED CONSOLIDATED HALF-YEAR FINANCIAL STATEMENTS AT JUNE 30, 2022

CONSOLIDATED BALANCE SHEET	Note	June 30, 2022	December 31, 2021
<i>(in Euro)</i>			
ASSETS			
Non-current assets			
Property, plant and equipment	3.1	125,960,020	123,171,430
Right-of-use	3.2	8,259,095	9,455,596
Investment property	3.3	3,173,533	3,211,128
Intangible assets with definite life	3.4	128,860,106	129,351,638
Goodwill	3.5	61,005,397	61,005,397
Investments	3.6	9,707,420	11,594,981
Non-current financial assets	3.7	6,495,000	6,415,000
- of which related parties		6,495,000	6,415,000
Deferred tax assets	3.8	79,694,838	79,435,789
Other non-current assets	3.9	67,767,152	70,926,224
Total non-current assets		490,922,561	494,567,183
Current assets			
Inventories and advances to suppliers	3.10	181,680,544	154,732,163
- of which related parties		44,169,431	28,876,340
Contract work-in-progress	3.11	402,710,735	453,807,958
- of which related parties		91,980,325	99,595,770
Trade receivables	3.12	2,337,121	3,696,299
- of which related parties		4,410,487	1,278,074
Cash and cash equivalents	3.13	77,085,145	104,614,266
Tax receivables	3.14	11,628,116	17,655,714
Other current assets	3.15	11,285,168	7,376,377
- of which related parties		18,481	4,093
Total current assets		686,726,830	741,882,777
TOTAL ASSETS		1,177,649,391	1,236,449,960

CONSOLIDATED BALANCE SHEET	Note	June 30, 2022	December 31, 2021
<i>(in Euro)</i>			
EQUITY			
Share capital	3.16	90,964,212	90,964,212
Share premium reserve	3.17	130,583,895	135,175,614
Other reserves	3.18	14,072,632	13,596,835
Retained earnings		58,244,290	54,263,653
Group net profit/(loss)		(9,453,889)	8,479,652
Total Group Equity		284,411,140	302,479,966
Equity attributable to non-controlling interests	3.20	9,672,681	7,847,258
TOTAL EQUITY		294,083,821	310,327,224
LIABILITIES			
Non-current liabilities			
Non-current financial liabilities	3.21	17,000,000	22,000,000
Non-current financial payables for leasing	3.22	4,633,391	4,750,980
- of which related parties		905,244	974,000
Employee Benefit Provisions	3.23	9,318,082	10,343,919
Provisions for risks and charges	3.24	15,205,346	17,364,250
Other non-current liabilities	3.25	118,473,126	119,830,433
Total non-current liabilities		164,629,944	174,289,582
Current liabilities			
Current financial liabilities	3.26	2,749,245	7,749,245
- of which related parties		2,749,245	7,749,245
Current financial liabilities for leasing	3.27	1,767,193	2,905,817
- of which related parties		155,895	146,000
Current portion of non-current financial payables	3.28	10,040,500	10,048,000
Provisions for risks and charges	3.24	9,033,931	10,864,556
Trade payables	3.29	58,126,176	76,926,918
- of which related parties		9,942,661	11,009,133
Advances from clients for contract work-in-progress	3.11	601,980,296	609,633,812
- of which related parties		121,328,529	100,988,173
Tax payables	3.30	7,144,108	7,321,796
Other current liabilities	3.31	28,094,178	26,383,011
- of which related parties		3,432,615	283,264
Total current liabilities		718,935,627	751,833,154
TOTAL LIABILITIES		883,565,571	926,122,736
TOTAL LIABILITIES AND EQUITY		1,177,649,391	1,236,449,960

CONSOLIDATED INCOME STATEMENT	Note	H1 2022	H1 2021
<i>(in Euro)</i>			
Revenues	3.32	133,516,251	132,878,754
- of which related parties		10,892,401	45,633,845
Change in inventory of finished products, in progress and semi-finished		4,290,754	2,790,280
Other operating income	3.33	6,861,350	2,916,602
Consumption of raw materials	3.34	(39,718,094)	(37,553,443)
Service costs	3.35	(60,766,834)	(59,194,067)
- of which related parties		(10,613,762)	(20,015,805)
Personnel costs	3.36	(40,663,756)	(39,157,447)
Amortisation & depreciation	3.37	(9,375,274)	(10,477,285)
Other operating costs	3.38	(1,973,403)	(2,332,213)
Effect valuation of investments under equity method - operating income/(charges)	3.39	(1,887,561)	441,757
Costs capitalised for internal works	3.40	3,499,026	7,276,783
EBIT		(6,217,540)	(2,410,278)
Financial income	3.41	252,955	347,834
- of which related parties		80,000	78,000
Financial charges	3.42	(551,012)	(438,970)
- of which related parties		(6,668)	(7,500)
NET FINANCIAL INCOME/(CHARGES)		(298,058)	(91,136)
Other investment income/(charges)		-	-
INVESTMENT INCOME/(CHARGES)		-	-
PROFIT/(LOSS) BEFORE TAXES		(6,515,598)	(2,501,414)
Income taxes	3.43	(1,115,136)	60,228
NET PROFIT/(LOSS) FOR THE PERIOD		(7,630,733)	(2,441,187)
-- of which: Owners of the parent		(9,453,889)	(2,449,845)
Non-controlling interests		1,823,156	8,658
Basic earnings/(losses) per share	3.44	(0.37)	(0.10)
Diluted earnings/(losses) per share	3.44	(0.36)	(0.09)

CONSOLIDATED COMPREHENSIVE INCOME STATEMENT	H1 2022	H1 2021
<i>(in Euro)</i>		
NET PROFIT/(LOSS) FOR THE PERIOD (A)	(7,630,733)	(2,441,187)
Other comprehensive income items:		
- Actuarial gains/(losses) - Actuarial gains/losses reserve	619,999	292,154
Gains/(losses) recorded directly to equity (which will be subsequently reclassified to P&L)		
- Gains/(losses) on cash flow hedge instruments recorded directly to cash flow hedge reserve		
Tax effect on other gains/(losses)	(140,951)	(88,770)
TOTAL OTHER COMPREHENSIVE INCOME ITEMS, NET OF TAX EFFECT (B)	479,048	203,384
COMPREHENSIVE NET PROFIT/(LOSS) FOR THE PERIOD (A+B)	(7,151,685)	(2,237,803)
-- of which: Owners of the parent	(8,977,108)	(2,247,353)
Non-controlling interests	1,825,423	9,550

STATEMENT OF CHANGES IN CONSOLIDATED SHAREHOLDERS' EQUITY

(Euro thousands)

	Other reserves						Retained earnings	Group result	Total Group equity	Non-controlling interest equity	Total Equity
	Share capital	Share premium reserve									
			Treasury shares	Unavailable reserve for treasury shares in portfolio	Legal reserve	Actuarial gains/(losses) reserve					
Equity at 31/12/2020	90,964	135,175	(9,081)	9,081	18,193	(4,342)	49,374	14,118	303,482	8,512	311,994
Allocation of prior year result	-	-	-	-	-	-	6,797	(6,797)	-	-	-
Distribution of dividends of the parent company Avio S.p.A.	-	-	-	-	-	-	-	(7,321)	(7,321)	-	(7,321)
Effect on retained earnings attributable to the Group and reserves attributable to minority interests of transactions under common control and approved dividends of Spacelab SpA	-	-	-	-	-	-	(1,907)	-	(1,907)	(1,318)	(3,225)
Comprehensive income											
- Net profit	-	-	-	-	-	-	-	8,480	8,480	653	9,133
- Other changes	-	-	-	-	-	-	-	-	-	-	-
- Actuarial gains/(losses), net of tax effect	-	-	-	-	-	(254)	-	-	(254)	1	(253)
Comprehensive income	-	-	-	-	-	(254)	-	8,480	8,226	654	8,880
Equity at 31/12/2021	90,964	135,175	(9,081)	9,081	18,193	(4,596)	54,263	8,480	302,480	7,847	310,327
Allocation of prior year result	-	-	-	-	-	-	3,987	(3,987)	-	-	-
Distribution of dividends of the parent company Avio S.p.A.	-	-	-	-	-	-	-	(4,493)	(4,493)	-	(4,493)
Acquisition of treasury shares	-	(4,592)	(4,592)	4,592	-	-	-	-	(4,592)	-	(4,592)
Other changes	-	-	-	-	-	(1)	(6)	-	(7)	-	(7)
Comprehensive income											
- Net Profit	-	-	-	-	-	-	-	(9,454)	(9,454)	1,823	(7,631)
- Other changes	-	-	-	-	-	-	-	-	-	-	-
- Actuarial gains/(losses), net of tax effect	-	-	-	-	-	477	-	-	477	2	479
Comprehensive income	-	-	-	-	-	477	-	(9,454)	(8,977)	1,825	(7,152)
Equity at 30/06/2022	90,964	130,583	(13,672)	13,672	18,193	(4,120)	58,244	(9,454)	284,411	9,673	294,084

CONSOLIDATED CASH FLOW STATEMENT

(Euro thousands)

	H1 2022	H1 2021
OPERATING ACTIVITIES		
Net Profit/(Loss) for the period	(7,630,733)	(2,441,187)
Adjustments for:		
- Income taxes	1,115,136	(60,228)
- (Income)/charges from measurement at equity of investment in Europropulsion S.A.	1,887,561	(441,757)
- Financial (Income)/Charges		91,136
- Amortisation & Depreciation	9,375,274	10,477,285
Net change provisions for risks and charges	(3,989,529)	(4,272,148)
Net change employee provisions	(546,789)	(189,432)
Changes in:		
- Inventories and advances to suppliers	(26,948,382)	(9,721,604)
- of which related parties	(15,293,091)	6,224,990
- Contract work-in-progress & advances from clients	43,443,707	10,521,145
- of which related parties	27,955,801	(6,293,948)
- Trade receivables	1,359,178	(2,357,573)
- of which related parties	(3,132,413)	87,505
- Trade payables	(18,800,742)	(13,779,483)
- of which related parties	(1,066,472)	(5,543,567)
- Other current & non-current assets	5,017,369	7,234,004
- of which related parties	(14,388)	(14,225)
- Other current & non-current liabilities	(938,962)	1,628,885
- of which related parties	3,149,351	17,764
Income taxes paid	-	14,537
Interest paid	(96,000)	(126,000)
Net liquidity generated/(employed) in operating activities	(A) 3,247,087	(3,422,419)
INVESTING ACTIVITIES		
Investments in:		
- Tangible assets and investment property	(6,147,018)	(7,104,453)
- Intangible assets with definite life	(4,246,665)	(7,675,433)
- Equity Investments		(1,000)
Liquidity generated (employed) in investing activities	(B) (10,393,683)	(14,780,886)
FINANCING ACTIVITIES		
EIB loan	(5,000,000)	(5,000,000)
Centralised treasury effect with Europropulsion S.A. joint control company	(5,000,000)	(5,000,000)
- of which related parties	(5,000,000)	(5,000,000)
Dividends paid by the parent Avio S.p.A.	(4,492,758)	(7,321,112)
Acquisition of treasury shares	(4,591,719)	-
Other changes to financial assets and liabilities	(1,298,049)	(1,121,592)
- of which related parties	(58,861)	(68,000)
Liquidity generated (employed) in financing activities	(C) (20,382,525)	(18,442,704)
INCREASE/(DECREASE) IN NET CASH AND CASH EQUIVALENTS	(A)+(B)+(C) (27,529,121)	(36,646,009)
NET CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	104,614,266	124,666,160
NET CASH AND CASH EQUIVALENTS AT END OF PERIOD	77,085,145	88,020,151

EXPLANATORY NOTES TO THE CONDENSED CONSOLIDATED HALF-YEAR FINANCIAL STATEMENTS AT JUNE 30, 2022

1. GENERAL INFORMATION

Avio S.p.A. (the “Company” or the “Parent Company”) is a limited liability company incorporated in Italy and registered at the Rome Companies Registration Office, with Registered Office at Rome, Via Leonida Bissolati, No. 76.

The Company was incorporated on May 28, 2015 under the name Space2 S.p.A., an Italian-registered Special Purpose Acquisition Company (“SPAC”), as an SIV (Special Investment Company) in accordance with the Borsa Italiana regulation, whose shares were listed on July 28, 2015 on the Professional Segment of the Investment Vehicles Market (MIV) organised and managed by Borsa Italiana S.p.A..

On March 31, 2017, Space2 S.p.A. acquired the company Avio S.p.A., parent company of the Avio Group and, on April 10, 2017 Avio S.p.A. was merged by incorporation. Space2 S.p.A. also changed its name to “Avio S.p.A.” following the above-mentioned operation.

At June 30, 2022, Avio S.p.A. held, directly or indirectly, investments in eight subsidiary companies (Spacelab S.p.A., Regulus S.A., Se.Co.Sv.Im. S.r.l., Avio Guyana S.A.S., Avio France S.A.S., Avio USA Inc., AS Propulsion International B.V. and Avio India Aviation Aerospace Private Ltd. in liquidation) and in a jointly controlled company (Europropulsion S.A.) included in the consolidation scope of these financial statements (collectively the “Group” or the “Avio Group”).

The consolidation scope changed in H1 2022 following the incorporation of Avio USA Inc. (for further details see the “H1 significant events” section of the Directors’ Report).

These Group consolidated financial statements are presented in Euro which is the Company’s principal functional currency. The Consolidated Balance Sheet, the Consolidated Income Statement and the Consolidated Comprehensive Income Statement are reported in units of Euro; the Statement of Changes in Consolidated Equity and the Consolidated Cash Flow Statement, as well as these Explanatory Notes, are reported in thousands of Euro where not otherwise indicated. The foreign subsidiaries are included in the consolidated financial statements in accordance with the accounting policies described in the notes below.

2. SIGNIFICANT ACCOUNTING POLICIES

2.1. Accounting Standards for the preparation of the condensed financial statements

These condensed half-year financial statements at June 30, 2022 were prepared in accordance with International Accounting Standards (hereafter also “IFRS”) issued by the International Accounting Standards Board (“IASB”) and approved by the European Union. IFRS refers to the International Financial Reporting Standards, the revised international accounting standards (“IAS”) and all of the interpretations of the International Financial Reporting Interpretations Committee (“IFRIC”) - previously known as the Standing Interpretations Committee (“SIC”).

In the preparation of these Condensed half-year financial statements, drawn up in accordance with IAS 34 – *Interim Financial Reporting*, the same accounting standards were adopted as for the preparation of the consolidated financial statements of the Avio Group at December 31, 2021, except for that outlined in paragraphs “2.7. Accounting standards and policies” and “2.8. New accounting standards” below. Therefore, these financial statements must be read together with the consolidated financial statements of the Avio Group at December 31, 2021.

The preparation of condensed financial statements in application of IFRS requires estimates and assumptions on the values of the assets and liabilities, on the disclosures relating to assets and contingent liabilities at the reporting date and on the revenues and costs in the period. If in the future these estimates and assumptions, which are based on the best current valuations made by management, should differ from actual circumstances, they will be modified appropriately in the period in which the circumstances change.

Some valuation processes, in particular the most complex such as the determination of any loss in value of non-current assets or the valuation of contingent liabilities, are generally made on a complete basis on the preparation of the annual accounts,

when all the necessary information is available, except where there are specific indications of impairment which require an immediate valuation of any loss in value or an accrual is required to the provision for risks and charges.

2.2. Financial Statements

The Condensed half-year financial statements at June 30, 2022 consist of the Consolidated Balance Sheet, the Consolidated Income Statement, the Consolidated Comprehensive Income Statement, the Statement of changes in Consolidated Equity, the Consolidated Cash Flow Statement and the Explanatory Notes.

The financial statements of the Group are presented as follows:

- for the Consolidated Balance Sheet, the separate presentation of non-current and current assets and of non-current and current liabilities, generally adopted by industrial and commercial groups;
- for the Consolidated Income Statement, the classification of costs based on their nature, with separate indication of the results from discontinued operations, where applicable;
- for the Consolidated Comprehensive Income Statement, the adoption of the separate presentation ("two-statement approach") with indication of other gains/losses net of the relative tax effect;
- for the Consolidated Cash Flow Statement, the adoption of the indirect method.

2.3. Comparative information

In accordance with IAS 34, these condensed half-year financial statements at June 30, 2022 present the 2021 comparative figures for the Balance Sheet items (Consolidated Balance Sheet and Statement of Changes in Consolidated Equity) and the first half year 2021 for the Income Statement items (Consolidated Income Statement, Consolidated Comprehensive Income Statement and Consolidated Cash Flow Statement).

2.4. Consolidation Principles

The consolidation principles adopted are in line with those utilised for the preparation of the consolidated financial statements at December 31, 2021 of the Avio Group, to which reference should be made for further information.

2.5. Translation of foreign entity financial statements

The financial statements of each company consolidated are prepared in the primary currency where they operate. For the condensed half-year financial statements, the financial statements of each foreign entity which utilises a currency other than the Euro is translated into this latter, as the Group's functional currency and the consolidated financial statement presentation currency. The transactions in currencies other than the Euro are translated into the functional currency at the exchange rate at the date of the transaction and the exchange gains and losses from the subsequent closure of these transactions are recorded in the income statement. Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rates at the reporting date. The positive and/or negative differences between the values adjusted to the closing exchange rate and those recorded in the period are also recognised in the income statement. Non-monetary assets valued at historical cost in currencies other than the functional currency are not translated at the current exchange rate at the reporting date.

2.6. Consolidation scope

The Condensed half-year financial statements at June 30, 2022 include the financial statements of the parent company, of the Italian and overseas companies in which it holds directly or indirectly at June 30, 2022 more than 50% of the share capital, consolidated under the line-by-line method, and the financial statements of the company Europropulsion S.A., held 50% jointly with another shareholder, consolidated under the equity method.

The consolidation scope at June 30, 2022 was as follows:

Companies included in the consolidation scope at June 30, 2022			Holding
Parent			
Company Name	Registered office	Share capital	% Held
Avio S.p.A.	via Leonida Bissolati, 76 - Rome	Euro 90,964,212.90	N/A
Companies consolidated by the line-by-line method			
Company Name	Registered office	Share capital	% Held
Spacelab S.p.A.	via Leonida Bissolati, 76 - Rome	Euro 3,000,000.00	70%
Regulus S.A.	Centre Spatial Guyanais - BP 0073 97372 Kourou (French Guiana - France)	Euro 640,000.00	60%
SE.CO.SV.IM. S.r.l.	Via degli Esplosivi, 1 - Colleferro (RM)	Euro 53,929,691.00	100% (*)
Avio Guyane S.A.S.	Centre Spatial Guyanais - BP 506 97388 Kourou (French Guiana - France)	Euro 50,000.00	100%
Avio France S.A.S.	3 Rue du Colonel Moll - 75017 Paris (France)	Euro 50,000.00	100%
Avio USA Inc.	Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of Newcastle, Delaware 19801 (USA)	USD 1.00	100%
ASPropulsion International B.V.	Herikerbergweg 238, 1101 CM Amsterdam (Netherlands)	Euro 18,000.00	100%
Avio India Aviation Aerospace Private Limited (**)	Pitampura Delhi North West (India)	INR 16,060,000	100% (***)
Jointly controlled companies, measured at equity			
Europulsion S.A.	11, rue Salomon de Rothschild 92150 Suresnes 388 250 797 RCS Nanterre	Euro 1,200,000.00	50%
Associates, measured at equity			
Termica Colleferro S.p.A.	Via degli Agresti, 4 and 6 Bologna	Euro 6,100,000.00	40%
(*)	Holding through ASPropulsion International B.V.		
(**)	The company is in liquidation. No financial commitments are expected for the Group related to the liquidation.		
(***)	Investment held in part directly by Avio S.p.A. (95%) and in part through ASPropulsion International B.V. (5%).		

The non-controlling interest in the equity and results of the subsidiaries consolidated are recorded separately from the Group equity, in the account "Non-controlling interest equity".

2.7. Accounting policies

The accounting policies adopted are in line with the recognition and measurement criteria utilised in the preparation of the consolidated financial statements at December 31, 2021 of the Avio Group, to which reference should be made for further information, with the exception of the following:

- in the first half of 2022, an incentive plan was introduced under which Avio may grant up to 105,460 shares in the Company to top management free of charge, subject to the achievement of predetermined performance targets over the three-year period 2022-2023-2024 (vesting period). The shares allocated will be made available using only treasury shares held by the Company. In this regard, it should be noted that the Board of Directors has not yet assigned the rights to the beneficiaries; therefore, no obligation has been recognised for the period under review.

IFRS 2 – Share-based Payment establishes that, once the rights are granted, the cost associated with these additional benefits granted to senior management by the Group are to be expensed on a straight-line basis throughout the vesting period with the offsetting credit entry going directly to equity. Subsequent changes in the fair value to the assignment date do not have an effect on the initial value;

- new accounting standards since December 31, 2021, are presented in paragraph “2.8. New accounting standards” below.

Revenue based on variable considerations are booked according to IFRS 15 “Revenue from contracts with customers”.

2.8. New accounting standards

IFRS accounting standards, amendments and interpretations applicable from January 1, 2022

The following IFRS accounting standards, amendments and interpretations were applied for the first time by the Group from January 1, 2022:

- On May 14, 2020, the IASB published the following amendments:
 - **Amendments to IFRS 3 Business Combinations:** the purpose of the amendments is to update the reference in IFRS 3 to the revised version of the Conceptual Framework, without changing the provisions of the standard.
 - **Amendments to IAS 16 Property, Plant and Equipment:** the purpose of the amendments is not to allow the amount received from the sale of goods produced during the testing phase of the asset to be deducted from the cost of the asset. These sales revenues and related costs will therefore be recognised to the statement of profit or loss.
 - **Amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets:** the amendment clarifies that in estimating the possible onerousness of a contract, all costs directly attributable to the contract must be considered. Accordingly, the assessment of whether a contract is onerous includes not only incremental costs (such as the cost of direct material used in processing), but also all costs that the enterprise cannot avoid because it has entered into the contract (such as, for example, the share of depreciation of machinery used to perform the contract).
 - **Annual Improvements 2018-2020:** the amendments were made to IFRS 1 First-time Adoption of International Financial Reporting Standards, IFRS 9 Financial Instruments, IAS 41 Agriculture and the Illustrative Examples of IFRS 16 Leases.

The adoptions of these amendments do not have any effects on the Group consolidated financial statements.

IFRS accounting standards, amendments and interpretations approved by the EU, not yet mandatory and not adopted in advance by the Group at June 30, 2022

- On May 18, 2017, the IASB published **IFRS 17 - Insurance Contracts** which replaces IFRS 4 - Insurance Contracts.

The new standard ensures that an entity provides pertinent information which accurately presents the rights and obligations under insurance contracts. The IASB developed the standard in order to eliminate inconsistencies and weaknesses in the existing accounting policies, providing a single principle-based framework to take account of all types of insurance contracts, including reinsurance contracts held by an insurer.

The new standard sets out in addition presentation and disclosure requirements to improve comparability between entities belonging to the same sector.

It measures insurance contracts on the basis of a General Model or a simplified version of such, called the Premium Allocation Approach (“PAA”).

The main features of the General Model are:

- the estimates and assumptions of future cash flows always refer to the current portion;

- the measurement reflects the time value of money;
- the estimates include an extensive use of observable market information;
- a current and clear risk measurement exists;
- the expected profit is deferred and aggregated into groups of insurance contracts on initial recognition; and,
- the expected profit is recognised in the period of contractual coverage, taking account of adjustments from changes in the assumptions on cash flows for each group of contracts.

The PAA approach involves the measuring of the liability for the residual coverage of a group of insurance contracts on the condition that, on initial recognition, the entity expects that this liability reasonably reflects an approximation of the General Model. Contracts with a coverage period of one year or less are automatically considered appropriate for the PAA approach. The simplifications from application of the PAA method do not apply to the valuation of liabilities for existing claims, which are measured with the General Model. However, it is necessary to discount these cash flows where it is expected that the balance will be paid or received within one year from the date on which the claim occurred.

The entity should apply the new standard to insurance contracts issued, including reinsurance contracts issued, reinsurance contracts held and also investment contracts with a discretionary participation feature (DPF).

The standard is effective from January 1, 2023, although advance application is permitted, only for entities applying IFRS 9 – Financial Instruments and IFRS 15 – Revenue from Contracts with Customers. The Directors do not expect this standard to have a significant impact on the Group consolidated financial statements.

- On February 12, 2021, the IASB published two amendments entitled **“Disclosure of Accounting Policies—Amendments to IAS 1 and IFRS Practice Statement 2”** and **“Definition of Accounting Estimates—Amendments to IAS 8”**. The changes are intended to improve disclosure on accounting policies to provide more useful information to investors and other primary users of financial statements and to help companies distinguish between changes in accounting estimates and changes in accounting policies. The amendments will be applicable from January 1, 2023, although advance application is permitted. The Directors do not expect these amendments to have a significant impact on the Group consolidated financial statements.

IFRS Standards, Amendments and Interpretations not yet approved by the European Union

At the reporting date, the relevant bodies of the European Union had not yet concluded the process necessary for the implementation of the amendments and standards described below.

- On January 23, 2020, the IASB published an amendment entitled **“Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-current”**. The purpose of the document is to clarify how to classify payables and other short or long-term liabilities. These amendments shall enter into force on January 1, 2023 and early application is permitted. The Directors do not expect this amendment to have a significant impact on the Group consolidated financial statements.
- On May 7, 2021, the IASB published an amendment called **“Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction”**. The document clarifies how deferred taxes should be accounted for on certain transactions that can generate assets and liabilities of equal amounts, such as leases and decommissioning obligations. The amendments will be applicable from January 1, 2023, although advance application is permitted. The Directors do not expect this amendment to have a significant impact on the Group consolidated financial statements.
- On December 9, 2021, the IASB published an amendment called **“Amendments to IFRS 17 Insurance contracts: Initial Application of IFRS 17 and IFRS 9 – Comparative Information”**. The amendment is a transition option related to comparative information on financial assets presented at the date of initial application of IFRS 17. The amendment is intended to avoid temporary accounting mismatches between financial assets and insurance contract liabilities, and thus improve the usefulness of comparative information for financial statement readers. The amendments will apply from January 1, 2023, together with the application of IFRS 17. The Directors do not expect this amendment to have a significant impact on the Group consolidated financial statements.

- On January 30, 2014 the IASB published **IFRS 14 Regulatory Deferral Accounts** which permits only those adopting IFRS for the first time to continue to recognise amounts concerning Rate Regulation Activities according to the previous accounting standards adopted. As the Company/Group is a first-time adopter, this standard is not applicable.

3. COMPOSITION, COMMENTS AND CHANGES IN THE PRINCIPAL BALANCE SHEET ACCOUNTS AND OTHER DISCLOSURES

NON-CURRENT ASSETS

3.1. PROPERTY, PLANT & EQUIPMENT

The values of Property, plant and equipment at June 30, 2022 are shown net of the accumulated depreciation provisions, as illustrated in the table below (Euro thousands).

The table illustrates the comparison between the balances in Property, plant and equipment of the Avio Group at June 30, 2022 and December 31, 2021.

	30/06/2022			31/12/2021		
	Gross value	Accumulated depreciation	Net book value	Gross value	Accumulated depreciation	Net book value
Land	14,651	-	14,651	14,651	-	14,651
Buildings	62,909	(22,240)	40,668	62,550	(21,257)	41,293
Plant and machinery	80,584	(65,470)	15,114	79,933	(63,719)	16,213
Industrial & commercial equipment	18,618	(17,532)	1,086	18,523	(17,353)	1,170
Other assets	12,443	(9,648)	2,795	12,048	(9,097)	2,951
Assets in progress and advances	51,646	-	51,646	46,893	-	46,893
Total	240,851	(114,891)	125,960	234,597	(111,426)	123,171

The changes between December 31, 2021 and June 30, 2022 in the gross values of property, plant and equipment are illustrated in the table below (Euro thousands):

Gross values	31/12/2021	Increases	Decreases for disposals	Reclassifications and other changes	30/06/2022
Land	14,651	-	-	-	14,651
Buildings	62,550	359	-	-	62,909
Plant and machinery	79,933	652	-	-	80,584
Industrial & commercial equipment	18,523	106	(11)	-	18,618
Other assets	12,048	250	-	145	12,443
Assets in progress and advances	46,893	4,781	-	(28)	51,646
Total	234,597	6,147	(11)	118	240,851

The increases in the first half-year of Euro 6,147 thousand mainly concerns:

- assets in progress and advances for Euro 4,781 thousand. These investments particularly concern the works on the production buildings for the P120 motor and the construction of the new Group offices in Colleferro;
- production machinery for Euro 652 thousand.
- buildings amounting to Euro 359 thousand, mainly relating to extraordinary maintenance;
- other assets amounting to Euro 250 thousand, primarily relating to IT hardware.

Between December 31, 2021 and June 30, 2022, the changes to accumulated depreciation were as follows (in Euro thousands):

Gross values	31/12/2021	Increases	Decreases for disposals	Reclassifications and other changes	30/06/2022
Buildings	(21,257)	(984)	-	-	(22,240)
Plant and machinery	(63,719)	(1,751)	-	-	(65,470)
Industrial & commercial equipment	(17,353)	(184)	5	-	(17,532)
Other assets	(9,097)	(551)	-	-	(9,648)
Total	(111,426)	(3,470)	5	-	(114,891)

The depreciation was calculated in relation to the estimated useful life and the obsolescence incurred by these assets.

3.2. RIGHT-OF-USE

The Group applied, for the preparation of these half-year financial statements, IFRS 16 - Leases, published by the IASB on January 13, 2016 and obligatory from January 1, 2019.

The Group adopted the option provided for in IFRS 16:C3, which permits reference to be made to the conclusions reached in the past regarding the contracts previously identified as leases in application of IAS 17 and IFRIC 4. This option was applied to all contracts, as provided for in IFRS 16:C4.

This standard was applied utilising the modified retrospective approach. In particular, with regard to lease contracts previously classified as operating leases, the Group recognised the following:

- financial assets at the present value of the residual future payments at the transition date, discounted according to the incremental borrowing rate applicable to each contract at the transition date;
- a right of use equal to the value of the financial liability at the transition date, net of any prepayments and accruals associated with the lease carried in the balance sheet at the reporting date of these financial statements.

The values of Right-of-use at June 30, 2022 are shown net of the accumulated depreciation provisions, as illustrated in the table below (Euro thousands).

	30/06/2022			31/12/2021		
	Gross value	Accumulated depreciation	Net book value	Gross value	Accumulated depreciation	Net book value
Land right-of-use	2,570	(357)	2,213	2,570	(286)	2,285
Buildings right-of-use	7,500	(4,246)	3,253	7,687	(3,712)	3,974
Plant and machinery right-of-use	1,632	(534)	1,098	1,632	(447)	1,184
Other assets right-of-use	3,298	(1,604)	1,694	3,580	(1,568)	2,012
Total	15,000	(6,741)	8,259	15,469	(6,013)	9,456

The gross values of these rights at June 30, 2022 (in Euro thousands) are reported below:

Gross values	31/12/2021	Increases	Decreases for contract conclusion	Reclassifications and other changes	30/06/2022
Land right-of-use	2,570	-	-	-	2,570
Buildings right-of-use	7,687	-	(187)	-	7,500
Plant and machinery right-of-use	1,632	-	-	-	1,632
Other assets right-of-use	3,580	291	(573)	-	3,298
Total	15,469	291	(760)	-	15,000

The Increases in the period of Euro 291 thousand concerned the new leased vehicles.

The decreases of Euro 760 thousand concerned:

- with regards to “buildings” of Euro 187 thousand, mainly the conclusion of apartment lease contracts for employees in French Guyana;
- for “other assets” of Euro 573 thousand, the conclusion of vehicle leasing contracts.

The accumulated depreciation of these rights in the first half of 2022 is reported below (in Euro thousands):

Gross values	31/12/2021	Increases	Decreases for contract conclusion	Reclassifications and other changes	30/06/2022
Land right-of-use	(286)	(71)	-	-	(357)
Buildings right-of-use	(3,712)	(619)	85	-	(4,246)
Plant and machinery right-of-use	(447)	(86)	-	-	(534)
Other assets right-of-use	(1,568)	(470)	434	-	(1,604)
Total	(6,013)	(1,247)	520	-	(6,741)

The Right-of-use assets recognised in applying IFRS 16 mainly relate to the present values of the future payments under the following contracts:

- concession of an area located within the Salto di Quirra Inter-force Experimental Facility;
- lease of the electro-duct and relative electrical infrastructure at the combined cycle co-generation thermo-electrical station owned by the associate Termica Colleferro S.p.A.;
- leasing of office and industrial use land and buildings at Airola (Campania) and Villaputzu (Sardinia); leasing of apartments for employees in French Guyana; hiring of company cars.

3.3. INVESTMENT PROPERTY

The values of Investment property at June 30, 2022 are shown net of the accumulated depreciation provisions, as illustrated in the table below (Euro thousands).

The table illustrates the comparison between the balances in Investment property of the Avio Group at June 30, 2022 with December 31, 2021.

	30/06/2022			31/12/2021		
	Gross value	Accumulated depreciation	Net book value	Gross value	Accumulated depreciation	Net book value
Land	1,834	-	1,834	1,834	-	1,834
Buildings & facilities	2,525	(1,186)	1,339	2,525	(1,149)	1,377
Total	4,360	(1,186)	3,174	4,360	(1,149)	3,211

Investment property refers to part of the land, buildings and facilities within the Colleferro industrial complex (Rome) owned by the subsidiary Se.co.sv.im. S.r.l., leased to third parties. This latter undertakes property management activities.

The changes between December 31, 2021 and June 30, 2022 in the gross values of investment property of the Avio Group are illustrated in the table below (Euro thousands):

Gross values	31/12/2021	Increases	Decreases	Reclassifications and other changes	30/06/2022
Land	1,834	-	-	-	1,834
Buildings & facilities	2,525	-	-	-	2,525
Total	4,360	-	-	-	4,360

Between December 31, 2021 and June 30, 2022, the changes to accumulated depreciation were as follows (in Euro thousands):

Accumulated depreciation	31/12/2021	Depreciation	Utilisations	Reclassifications and other changes	30/06/2022
Land	-	-	-	-	-
Buildings & facilities	(1,149)	(38)	-	-	(1,186)
Total	(1,149)	(38)	-	-	(1,186)

The depreciation in the period was calculated in relation to the estimated useful life and the obsolescence incurred by these assets.

3.4. GOODWILL AND IMPAIRMENT TESTS

The goodwill recognised at December 31, 2021 for an amount of Euro 61,005 thousand relates to the Purchase Price Allocation at March 31, 2017 commented upon in the Directors' Report.

As indicated in Note "2.7. Accounting policies", goodwill is not amortised but written down for impairments. The Group assesses the recoverability of goodwill at least annually, or more frequently where specific events and circumstances arise which may result in value reductions, through impairment tests on each of the Cash Generating Units (CGU's). The CGU identified by the Group for the monitoring of goodwill coincides with the level of aggregation required by IFRS 8 - *Operating segments*, which for the Group is identified by the *Space business* alone.

Goodwill allocated to the Space CGU was subject to an impairment test on December 31 2021, on the basis of cash flows from the Space CGU estimated based on forecasts from the 2022-2026 long-term plan approved by the Board of Directors on March 14, 2022. The outcome of the test did not indicate the need for a write-down of the carrying amount of goodwill at December 31, 2021.

In H1 2022 the operating results slowed on H1 2021. This was mainly attributable to the increase in energy costs compared to the same period in the previous year and the Company's development of the new Vega C launcher, which resulted in the successful maiden launch on July 13, 2022, against a backdrop that was also conditioned by the effects of the ongoing conflict between Russia and Ukraine. The concentration in the final phase of development activities for the new Vega C launcher led to the postponement of other development activities originally planned for H1, which related to future Vega C and Vega E launcher evolutions. This in turn led to a reduction in associated revenues and margins.

Energy costs were higher than in H1 2021 as the recent increase began in late 2021. This increase became more acute in July and August 2022.

In H1 2022, the COVID-19 pandemic also continued to generate impacts and slowdowns in some of the Company's activities. Despite this, and in an environment that remained complex, the Company nevertheless managed to maintain continuity in production and development activities.

Forecasts for EBITDA and the net profit for 2022 indicate levels lower than in 2021 (as described also in the half-year report). This is based on an expected improved performance in Q4 2022 and the continuing impact of energy costs, which are in any case difficult to predict, including as a result of elevated volatility, as reported in the revise of the 2022 forecasts⁸.

⁸ See the Annual Results 2021 market presentation dated March 14, 2022 available on the company website at: https://avio-data.teleborsa.it/2022%2f20220315-Avio-FY-2021-results_vDEF_1_20220315_100105.pdf;

That being said, at June 30, 2022 any indicators of impairment were also assessed using both external and internal information sources.

External information sources included assessment of:

- the ongoing conflict in Ukraine.

These assessments have led to the conclusion that no specific medium-term impacts on Vega and Vega C operational continuity are currently expected. The procurement process for the fourth-stage Vega and Vega C motor produced in Ukraine, which has been underway for several years, has provided a "strategic" stock which guarantees Avio's deliveries for launches planned in the medium term. In the long term, the ESA recently decided to dedicate financial resources to initiate technical and industrial actions aimed at mitigating the supply risk in the long term through the development of complementary technological solutions.

These assessments were reported in the press releases dated February 25, 2022, March 25, 2022, and most recently July 17, 2022 and are still accurate.

However, the ongoing Russia-Ukraine conflict is also generating indirect effects on costs generally, and in particular on the price of energy;

- the changes, since the date of the impairment test, in the interest rates considered when estimating the weighted average cost of capital (WACC) used for in the impairment test conducted to December 31, 2021.

Though the impairment test performed to December 31, 2021 reported a positive margin between the recoverable value of the Space CGU and the book value of the net capital employed recorded in the financial statements (which was also confirmed following sensitivity analyses conducted on the weighted average cost of invested capital), H1 2022 saw rising interest rates;

- changes in energy costs.

Energy costs were higher than in H1 2021 as the recent increase began in late 2021. This increase sharpened in July and August 2022;

- cash generation.

Financial management at June 30, 2022 reports a solid cash position of Euro 40.9 million, considering the seasonality effect, up Euro 4.3 million (+12% on June 30, 2021);

- market capitalisation.

At the approval date of the half-year financial report, market capitalisation is substantially higher than the book value of consolidated net equity.

- vega C maiden flight

Finally, as previously reported, on July 13, 2022, the maiden flight of the new Vega C launcher, for which Avio is prime contractor, was carried out with complete success at the European spaceport of Kourou in French Guiana, bringing into its planned orbit the LARES 2 main payload, a scientific mission organised by the Italian Space Agency ASI, and six research CubeSats from France, Italy and Slovenia, which constituted the secondary payload.

The launch marks the crowning achievement of the long-term commitment of the ESA, of Avio as prime contractor, and of the industrial partners from 13 ESA member nations to carry forward the legacy of its predecessor, Vega, and opens the door to new commercial opportunities.

Internal information sources related to the assumptions underlying the projections of future cash flows of the Space CGU of the 2022-2026 long-range plan which include, first of all, the order backlog. Specifically, and as more fully described in the Directors' Report in the section "Group operating performance and financial and equity position", as of June 30, 2022 the order backlog amounted to Euro 848.1 million, substantially in line with December 31, 2021 (Euro 877.0 million), thanks to higher than expected order levels in H1 2022 amounting to Euro 105.4 million, and net revenues of Euro 134.0 million. For further information, see the same section of the Directors' Report.

It is reasonably estimated that such backlog as of June 30, 2022 will result in the recognition of revenue of approximately 25% of such amount in 2022, approximately 45% in 2023 and the remainder primarily in 2024.

In addition, as reported in the section "Subsequent events to the period-end", on August 2, 2022 Avio announced⁹ that it had been awarded new orders from MBDA totalling more than Euro 40 million. The first relates to increased production of boosters for the Aster 30 missile system for a European and NATO member state. The second order was signed for the development, qualification and production of the initial thrust propulsion system of the next-generation Teseo MK2/E anti-ship missile system for the Italian Navy.

In addition to what has been stated above with reference to the order backlog, the cash flow projections of the 2022-2026 multi-year plan are based on the following additional main assumptions, updated to June 30, 2022, corroborated by separate external sources by type of revenue, i.e. on the one hand launcher production activities and on the other research and development activities.

- Globally, we are seeing the value of the space industry grow from the current \$350 billion to about \$650 billion in 2030 (at a CAGR of 6%), according to a Morgan Stanley report¹⁰. The space launch business segment is expected to grow, again according to the same Morgan Stanley report from the current USD 7.8 billion to USD 12.1 billion in 2030, with a CAGR of 5%.
- The growth forecast for total mass demand to be launched into space, based on the study by the company Euroconsult¹¹, for the period 2021-2029 is 3,999 tons compared to 2,448 tons actually launched in the period 2012-2020, with an overall CAGR of +6%.
- Market demand as an average between the estimates of the Morgan Stanley and Euroconsult reports (made in both quantity and value) can therefore be reasonably estimated at between 5% and 6% CAGR on a ten-year basis.
- These expectations are also reflected in the financial flows being invested in the sector by private players such as Venture Capital Funds, Private Equity Funds, business angels and corporate venture capital. According to Space Capital reports, these figures have increased from USD 18.1 billion annually in 2015 to USD 45.3 billion in 2021, with a CAGR of approx. 16%¹².
- There has also been a significant increase in overall resources allocated to space programmes at the government level: according to a recent Euroconsult report¹³, government funding for space economy activities totalled more than \$92 billion in 2021, up 8% from 2020. Also according to the same source, these budgets are forecast to grow to USD 115 billion in 2030, with a CAGR of 2.5% over 9 years.
- As regards the above, with respect to the 2022-2026 plan's R&D revenue projections, the demand for publicly funded new technology development activities is based primarily on expectations for government spending on space activities. In Europe, the budgets of the national space agencies and the European Space Agency (hereinafter also "ESA") have grown by an average of more than 5% per year in the last five years, as can be deduced from the data published by the agencies themselves¹⁴.
- In particular, again with regard to projections of revenues from R&D, the ESA defined - for the space launcher segment - a product roadmap up to 2025 including, among other things, future evolutions of the current Vega launcher, of which Avio is prime contractor, consisting of the Vega C and Vega E, the new Ariane 6 launcher, of which Avio will produce the P120 first-stage motors, and the reusable Space Rider spacecraft, of which Avio is co-prime. Against this development roadmap, Italy has signed up in ESA for public funding of over Euro 400 million at the 2019 Ministerial Conference. These subscriptions, by virtue of the geographic return principle applied in ESA, are transforming into new contracts for Avio (the only operator in the sector in Italy and recognised as prime

⁹ See the press release dated August 2, 2022: <http://syndication.teleborsa.it/Avio/Financial-Announcements/firma-di-nuovi-ordini-per-la-propulsione-tattica/MXxib211bmljYXRpLjE3NzEwMDAwNDcyMDIyMXwxfDIwMjIwODIz;>

¹⁰ "Investment Implications of the Final Frontier," Morgan Stanley Research, published October 12, 2017;

¹¹ "Satellites to be built & launched by 2029," 2020 23rd edition, Euroconsult Report, published December 2020;

¹² Space Capital investment dashboard <https://www.spacecapital.com/quarterly>;

¹³ "Government Space Programs, 21st edition" report, Euroconsult, cited in <https://www.satellitetoday.com/government-military/2022/01/07/euroconsult-reports-record-government-space-investment-in-2021/>;

¹⁴ ESA 2015 budget of Euro 4.4 billion available at: https://www.esa.int/Newsroom/Highlights/ESA_budget_2015; ESA 2021 budget of Euro 6.5 billion available at: https://www.esa.int/Newsroom/ESA_budget_2021;

contractor for launcher activities in ESA), which are regularly announced to the market¹⁵.

- The ESA Council in August 2021 approved the resolution on the deployment ("exploitation") of Ariane 6 and Vega-C launchers. ESA member states agreed on the conditions for Europe's imminent deployment of Ariane 6 and Vega-C and asked ESA to propose a roadmap for new and innovative space transportation solutions for the next decade and a framework for associated short-cycle demonstrations. The resolution, agreed to by ESA member states in August 2021, sets the stage for the first three years of stabilized deployment of the new European launch vehicles, Ariane 6 and Vega-C, and is based on a European institutional launch service demand of four Ariane 6 and two Vega-C per year on average starting in 2025 for two cycles 2025-2027 and 2028-2030. States have also established a basis for maintaining strategic industrial capabilities through options to serve additional institutional launches or increased commercial demand. Corresponding financial allocations from member states are expected at the ESA Ministerial Conference in November 2022.
- National Recovery and Resilience Plan (NRRP) - During 2021, the Italian government launched a number of projects for the NRP, some of which specifically address the evolution of space propulsion technologies and products related to launchers. The execution of these projects has been entrusted to ESA and concerns in particular the realization of a high-thrust methane engine and an in-flight demonstrator of a small liquid propulsion launcher. These projects represent an opportunity for the Company to extend its product portfolio and technological expertise, capitalizing on its ongoing experience with Vega E and the M10 liquid oxygen-methane engine. In parallel, the PNRR has initiated the creation of an Italian satellite constellation for Earth observation, with execution also entrusted to ESA, whose missions will be carried out with Vega launchers.
As reported in the 2021 results presentation to the market¹⁶, the NRRP and complementary funds for 2022-2026 amount to a total of Euro 2.3 billion, of which approximately Euro 1.0 billion is for Earth observation projects, which includes the Italian satellite constellation whose missions will be carried out with Vega launchers, and approximately Euro 300 million for the "Space Factory", which includes the construction of a high-thrust methane engine, a technology already being developed by the Company, and an in-flight demonstrator of a small liquid-propulsion launcher.
On June 29, 2022 Avio announced¹⁷ that it had been awarded the first two contracts within the scope of space-industry initiatives for implementation of Next Gen EU. This involved an Italian government investment of approx. Euro 340 million. The investment seeks to enhance the space access technological capabilities of the Italian industrial sector, with the European Space Agency (ESA) as the Contracting Authority and the supervision of the Prime Minister's Office, the Italian Space Agency (ASI) and the Minister of Technological Innovation and Digital Transition. Specifically, the first contract will begin a program to develop an in-flight demonstrator of new technologies and designs for a two-stage liquid propellant-propelled light-load launcher using liquid-oxygen and methane motors with lower environmental impacts, while the second contract covers the development of a new liquid-oxygen and methane motors with reduced environmental impacts and high thrust.
- The expectation of new funding for Avio's development programs at the next ESA Ministerial Conference in 2022, in terms of subscriptions and therefore subsequent contracts, expected to be substantially in line with what already happened at the previous Ministerial Conference in 2019¹⁸, also based on the above-mentioned resolution approved by the ESA Council in August 2021. These expectations were confirmed by Secretary General Ashbacher and member states at events such as the European Space Summit¹⁹.
- The forecast for growth in production volumes of tactical propulsion systems as well as the development of new evolutions was estimated based on new production and development contracts signed in recent years and

¹⁵ Examples of ESA contracts or budget allocations that were announced by Avio to the market

- Contract for Vega E development activities: <https://www.avio.com/it/comunicati-stampa/vega-firmato-con-esa-contratto-da-118-milioni-di-Euro>
- Space Rider 2021 Development Activity Contract: http://avio-data.teleborsa.it/2020%2f20201209-CS-Space-Rider-Contratto-ESA-ITA_Finale_20201215_104856.pdf;
- ESA 2019 Ministerial Conference budget allocation: http://avio-data.teleborsa.it/2019%2fAvio-Financial-update-December-2019_20191206_094015.pdf

¹⁶ See the following "Investors" section of Avio's website: http://avio-data.teleborsa.it/2022%2f20220215-Avio-FY-2021-results_vDEF_1_20220315_100105.pdf;

¹⁷ See the press release of June 29, 2022 at the link: <https://syndication.teleborsa.it/Avio/Financial-Announcements/firmati-contratti-next-gen-eu-finanziati-con-340-milioni-di-euro-al-completamento-per-nuove-tecnologie-di-lancio/MXxb211bmljYXRpLjE3NzEwMDAwNDMyMDIyMXwxfDIwMjIwODA1>

¹⁸ See http://avio-data.teleborsa.it/2019%2fAvio-Financial-update-December-2019_20191206_094015.pdf;

¹⁹ See the ESA press release: https://www.esa.int/Newsroom/Press_Releases/Decisions_from_the_2022_Space_Summit

announced to the market²⁰, as well as expected.

Based on these overall assessments, the steeper rise in energy costs in July and August 2022 and the ongoing conflict Russia-Ukraine conflict, which is also generating indirect costs generally, were considered trigger events and therefore the goodwill allocated to the Space CGU recorded in the balance sheet at June 30, 2022 was subjected to an impairment test.

Specifically, the recoverability of the amounts recognised at June 30, 2022 was verified by comparing the net capital employed (carrying amount) of the CGU with the relative recoverable value. The recoverable value of goodwill is based on the calculation of the value in use, i.e. the present value of future operating cash flows on the basis of the estimates included in the 2022-2026 long-term plan approved by Avio's Board of Directors on March 14, 2022, considering the factors described above and the performance in 2022 and confirming the medium-/long-term projections with an adjusted terminal value, employed to express a summary estimate of future results over the explicitly considered timeframe. These cash flows were thereafter discounted according to discount rates reflecting the market valuations of the cost of money at the test date, and which took account of the specific risks of Group operations and of the CGU considered at that date.

The estimates and the plan data used in the application of the above indicated parameters are calculated by directors based on past experience and forecasts concerning Group markets. It is therefore highlighted that the current international economic environment and the possible economic-financial repercussions, also on spending levels by national governments and supranational institutions on space access policies, may create uncertainties around the achievement of objectives and the level of activities considered in the plan. However, the estimate of the recoverable value of goodwill requires subjectivity and the use of estimates by the directors and, although considering that the production and commercialisation cycles for products cover extensive timeframes which therefore permit the recovery of any delays on plan objectives, it should be considered that goodwill may be impaired in future periods due to changes in the general environment which are currently unforeseeable. The circumstances and events which may result in further impairments are constantly monitored by the directors.

For the calculation of the terminal value, the expected cash flows for the final year of the plan were normalised according to the perpetuity method, assuming 1.5% growth (1.5% at December 31, 2021) for forecast cash flows (in line with forecast Italian medium/long-term inflation)²¹.

For the purposes of preparing the impairment test, cash flows were discounted at a weighted average cost of capital ("WACC") of 8.5% (8.2% at December 31, 2021), estimated in accordance with the Capital Asset Pricing Model approach.

On the basis of that stated above, the recoverable value of the Space CGU is Euro 50 million higher than the carrying amount of the net capital employed (56 million at December 31, 2021).

In view of the above, a sensitivity analysis was conducted on the discount rate for cash flows. This assumed an increase of 50 basis points and resulted in a change in recoverable amount, which is nonetheless in excess of the carrying amount of net invested capital by Euro 33 million (37 million at December 31, 2021); a further sensitivity analysis was carried out by assuming, in order to determine the terminal value, a reduction in the g-rate of 50 basis points, resulting in a recoverable value that is in any case higher than the book value of net capital employed by Euro 37 million (Euro 41 million at December 31, 2021).

In order to further support the analysis carried out, in view of the steeper rise in energy costs in July and August 2022, the persistence of the COVID-19 epidemic and the uncertainty of the geo-political situation and of the international markets, two additional execution risks were introduced:

- the first, by increasing the average discount rate (average weighted cost of capital) by 100 basis points;
- the second, considering the effect of the increase in energy costs in line with current forecasts for 2023 in the multi-year plan.

²⁰ See examples of contract posting for Aster 30 referenced in the following links:

- August 2022: <https://syndication.teleborsa.it/Avio/Financial-Announcements/firma-di-nuovi-ordini-per-la-propulsione-tattica/MXxb211bmIjYXRpLjE3NzEwMDAwNDcyMDIyMXwxfDIwMjIwODA1>
- July 2021: http://avio-data.teleborsa.it/2021%2fCS-Avio-contratto-Aster-2021-def_v1_20210707_023145.pdf
- May 2020: http://avio-data.teleborsa.it/2020%2fCS-Avio-contratto-Aster_vdef_20200526_055413.pdf

²¹ Source: Economist Intelligence Unit database

Also on the basis of this additional stress test, the recoverable value of the Space CGU was comfortably greater than the carrying amount of the net capital employed recorded in the financial statements.

It should also be noted that the discount rate (weighted average cost of capital) that would make the recoverable value of the Space CGU equal to the book value of the net capital employed recognised to the financial statements is 10.3%.

The impairment test was conducted by the Company with the external support of a leading consulting firm.

3.5. INTANGIBLE ASSETS WITH DEFINITE LIFE

The values of Intangible assets with definite life at June 30, 2022 are shown net of the accumulated amortisation provisions, as illustrated in the table below (Euro thousands).

The table illustrates the comparison between the balances in Intangible assets with definite life of the Avio Group at June 30, 2022 with December 31, 2021.

	30/06/2022			31/12/2021		
	Gross values	Accumulated amortisation	Net book value	Gross values	Accumulated amortisation	Net book value
Development costs - amortisable	135,420	(66,575)	68,845	123,000	(64,507)	58,493
Development costs - in progress	23,028	-	23,028	32,967	-	32,967
Total development costs	158,448	(66,575)	91,873	155,968	(64,507)	91,460
Assets from PPA 2017 - Programmes	44,785	(15,675)	29,110	44,785	(14,182)	30,603
Concessions, licenses, trademarks and similar rights	12,989	(9,904)	3,085	12,361	(8,977)	3,384
Other	6,064	(3,567)	2,497	6,064	(3,434)	2,630
Assets in progress and advances	2,295	-	2,295	1,274	-	1,274
Total	224,581	(95,721)	128,860	220,452	(91,100)	129,352

The development costs being amortised primarily refer to design and testing costs relating to the P80, Z40 and P120 motors. Most development costs under completion refer to projects relating to the new liquid oxygen and methane motors.

The amortisation of these costs begins from the commencement of the commercial production of each individual programme, on a straight-line basis over their useful life, initially estimated based on the duration of the programmes to which they refer.

With reference to development costs in course of completion, which are not subject to amortisation as referring to programmes which have not yet commenced commercial production, recognition under intangible assets with definite useful lives (with prior verification of the absence of impairment) is supported by the profitability forecasts of the programmes.

Following the purchase price allocation process of the Avio Group by Space2 in March 2017, two intangible assets were identified relating to the Ariane and Vega aerospace programmes for a total of Euro 44,785 thousand.

The assets deriving from this allocation were measured at fair value based on the present value of the expected future benefits of the above aerospace programmes and amortised over a period of 15 years on the basis of the average useful life of the programmes.

Concessions, licenses, trademarks, patents and similar rights mainly include costs for the acquisition of software licenses and land rights costs.

The changes between December 31, 2021 and June 30, 2022 in the gross values of Intangible assets with definite life of the Avio Group are illustrated in the table below (Euro thousands):

Gross values	31/12/2021	Increases	Decreases	Reclassifications and other changes	30/06/2022
Development costs - amortisable	123,000	-	-	12,420	135,420
Development costs - in progress	32,967	2,481	-	(12,420)	23,028
Total development costs	155,968	2,481	-	-	158,448
Assets from PPA 2017 - Programmes	44,785	-	-	-	44,785
Concessions, licenses, trademarks and similar rights	12,361	628	-	-	12,989
Other	6,064	-	-	-	6,064
Assets in progress and advances	1,274	1,138	-	(118)	2,295
Total	220,452	4,247	-	(118)	224,581

The increases in H1 2022 of "Intangible Assets with definite life" of Euro 4,247 thousand, of which principally:

- Euro 2,481 thousand, principally for design and testing costs for the construction of the new liquid oxygen and methane motors;
- Euro 628 thousand concerning software licenses and introduction projects;
- Euro 1,138 thousand, mainly related to the review of permanent production procedures in application of IEC recommendations following the failures of Vega and industry 4.0 projects.

Between December 31, 2021 and June 30, 2022, the changes to accumulated depreciation were as follows (in Euro thousands):

Accumulated amortisation	31/12/2021	Increases	Decreases	Reclassifications and other changes	30/06/2022
Development costs - amortisable	(64,507)	(2,068)	-	-	(66,575)
Development costs - in progress	-	-	-	-	-
Total development costs	(64,507)	(2,068)	-	-	(66,575)
Assets from PPA 2017 - Programmes	(14,182)	(1,493)	-	-	(15,675)
Concessions, licenses, trademarks and similar rights	(8,977)	(927)	-	-	(9,904)
Other	(3,434)	(132)	-	-	(3,567)
Total	(91,100)	(4,620)	-	-	(95,721)

As also reported in paragraph "3.36. Depreciation and amortisation", during the period, the useful lives of certain development costs capitalised in relation to the VEGA launcher were revised as it was deemed that the related long-term benefits will also be realised within the scope of production of the new VEGA-C launcher, the maiden flight of which was successfully completed on July 13 of this year.

3.6. INVESTMENTS

The investments held by the Avio Group at June 30, 2022 and December 31, 2021 follows (in Euro thousands).

	30/06/2022		31/12/2021		Change
	Group share	Total	Group share	Total	
<u>Subsidiaries</u>					
- Servizi Colleferro – Consortium	52.00%	63	52.00%	63	0
Total non-consolidated subsidiaries		63		63	0
<u>Companies under joint control</u>					
- Europropulsion S.A.	50.00%	5,480	50.00%	7,368	(1,888)
Total companies under joint control		5,480		7,368	(1,888)
<u>Associates</u>					
- Termica Colleferro S.p.A.	40.00%	3,635	40.00%	3,635	0
- Other consortiums		5		5	0
Total associates		3,640		3,640	0
<u>Other companies</u>					
- Other companies		524		524	0
Total other companies		524		524	0
Total		9,707		11,595	(1,887)

The changes between December 31, 2021 and June 30, 2022 in the investments are shown below (Euro thousands):

	31/12/2021	Increases	Decreases	Other changes	30/06/2022
Subsidiaries	63	-	-	-	63
Companies under joint control	7,368	-	(1,888)	-	5,480
Associated companies	3,640	-	-	-	3,640
Other companies	524	-	-	-	524
Total	11,595	-	(1,888)	-	9,707

As set out in the “H1 significant events” section of the Directors’ Report, the consolidation scope changed in H1 2022 following the incorporation of Avio USA Inc. The total number of shares that can be issued by Avio USA Inc. is 1,000, with a par value per share of USD 0.01, for a total value of USD 10.00. On April 25, 2022, Avio S.p.A. subscribed for 100 shares with a par value per share of USD 0.01, for a total of USD 1.

The interest in Europropulsion S.A. has been classified among “Companies under joint control”. The movement in the period regarding this investment concerns its valuation at equity, which resulted in a net decrease of Euro 1,888 thousand. This net decrease is due to the reduction in the company’s share of equity, in view of the fact that it paid dividends to Avio for Euro 2,400 thousand and reported a profit, with this shareholder’s portion amounting to Euro 512 thousand.

The investment in associates (including a number of consortiums) are measured at equity.

The investments in other companies are valued at cost.

3.7. NON-CURRENT FINANCIAL ASSETS

The table below illustrates the non-current financial assets of the Avio Group at June 30, 2022 and at December 31, 2021 (in Euro thousands).

	30/06/2022	31/12/2021	Change
Shareholder loan to Termica Colleferro S.p.A.	6,495	6,415	80
	6,495	6,415	80

The account, amounting to Euro 6,495 thousand (Euro 7,440 thousand at nominal values), comprises the shareholder loan granted to the associated company Termica Colleferro S.p.A. together with the other shareholder Cogenio S.r.l., paid in order to ensure the long-term operational viability of this company in proportion to the share capital held; a similar contribution was made by the above-mentioned majority shareholder. This loan is non-interest bearing and repayment is subordinate to the total settlement of the bank loans of the associate, maturing in 2027.

The increase in the period is due to measurement at amortised cost.

For additional information regarding Termica Colleferro S.p.A., see the specific paragraph “Other commitments” of section 5. “Commitments and risks”.

3.8. DEFERRED TAX ASSETS

The Avio Group's recognised deferred tax assets amount to Euro 79,695 thousand (Euro 79,436 thousand at December 31, 2021).

The amount recorded in the accounts represents the net balance of the deferred tax assets and liabilities calculated on the temporary differences between the value of assets and liabilities assumed for the purposes of the preparation of the financial statements and the respective values for fiscal purposes and the tax losses carried forward.

Deferred taxes are determined applying the tax rates which are expected to be applied in the period when the temporary differences will be reversed, or the benefits related to the tax losses will be utilised.

The summary of the temporary differences (deductible and assessable) and of the tax losses which resulted in the recognition of deferred tax assets and liabilities is illustrated in the table below with reference to the reporting date (Euro thousands):

	30/06/2022
Gross deferred tax assets on temporary differences	
<i>Temporary differences deriving from previous corporate operations</i>	
Fiscal amortisation on previous goodwill whose tax benefits remain in the Company.	4,085
Financial charges exceeding 30% of EBITDA	36,694
<i>Temporary differences deriving from current corporate operations</i>	
Provision for staff charges	1,823
Other deductible temporary differences	3,711
Provision for staff charges	0
Provisions for risks and charges	9
Tax liabilities	18
Provisions for risks and legal charges	5,191
Doubtful debt provision - trade and other receivables	96
Total gross deferred tax assets	51,627
Deferred tax liability on temporary differences	
<i>Temporary differences deriving from previous corporate operations</i>	
Amortisation intangible assets from PPA 2017 - Customer accreditation	(8,419)
Tax effect R&D expenses First-Time Adoption	(171)
<i>Temporary differences deriving from current corporate operations</i>	
Other temporary assessable differences	(807)
Total gross deferred tax liabilities	(9,397)
Net deferred tax assets/(liabilities)	42,230
Deferred tax assets on tax losses	69,764
Gross deferred taxes	111,994
Deferred tax assets not recorded	(32,299)
Net deferred tax assets (liabilities) recorded	79,695

Deferred tax assets on temporary differences and on tax losses were recorded in the accounts for the amounts whose future recovery was considered probable, on the basis of forecast assessable income, as well as based on a projection of these forecasts over a subsequent time horizon considered representative of the life cycle of the business equal to 15 years.

This time period considered representative of the life cycle of the business was estimated also taking into account the meeting with the Ministers of the Member Countries of ESA held in December 2014, which resulted in the signing in August 2015 of agreements with ESA relating to the development of the new Ariane 6 launcher and the evolution of the VEGA launcher within the VEGA C programme which provides for the development and construction of the new "P120" motor, and the meeting of the Ministers of the Member Countries of ESA held on December 1, 2016 and on December 2, 2016 which confirmed the above-mentioned development programmes and gave the go ahead for the long-term development programme of the motor and of the Upper Stage of the Vega E, or rather the next step in the evolution of the Vega launcher.

Deferred tax assets recognised to the financial statements mainly concern the future tax deductibility of the goodwill amortisation relating to the "Aviation" business unit (sold in 2013), the financial charges exceeding 30% of gross operating profit and the intangible assets for client accreditation redefined as part of the purchase price allocation of 2017, as commented upon previously, in addition to prior tax losses.

3.9. OTHER NON-CURRENT ASSETS

The table below illustrates other non-current assets at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Other non-current assets	67,767	70,926	(3,159)
	67,767	70,926	(3,159)

The breakdown of the account at the reporting date was as follows (Euro thousands):

	30/06/2022	31/12/2021	Change
Receivables from the General Electric Group	58,220	58,220	-
Receivables from FCA Partecipazioni	5,002	7,109	(2,107)
Receivables from the Economic Development Ministry for disbursements pursuant to Law 808/85 - non-current portion	3,836	4,888	(1,052)
Guarantee deposits	573	568	4
Other non-current receivables	137	142	(5)
Total	67,767	70,926	(3,159)

"Receivables from the General Electric Group", amounting to Euro 58,220 thousand, refers to the recharge to the General Electric Group of the charges arising from the settlement notice relating to registration, mortgage and cadastral taxes notified to the Company in July 2016 by the Tax Agency, in connection with the corporate transactions that led to the transfer of the AeroEngine business by the Avio Group to the General Electric Group in 2013. This receivable is recognised against an amount payable to the Treasury of like amount among non-current liabilities.

The recognition of the above-mentioned receivable from the General Electric Group is based on specific contractual provisions, according to which the latter is required to indemnify the Avio Group from any liability arising in connection with the AeroEngine business pertaining to the General Electric Group, including liabilities related to indirect taxes referable to the above-mentioned extraordinary transactions of 2013.

We note that the aforementioned tax settlement notice is the subject of a dispute with the tax authorities, which in 2020 appealed to the Supreme Court of Cassation against the sentence with which, at the end of 2018, the Piedmont Regional Tax Commission fully accepted the appeal lodged by the Company. The Company appeared promptly in the proceedings with its own counter-appeal and simultaneous cross-appeal, reaffirming the soundness of its arguments. At the date of this report, the Court of Cassation has not yet set a date for the hearing.

With regard to the litigation in question, and in particular the subject-matter of the dispute, relating to the anti-avoidance provision of Article 20, headed “Interpretation of acts”, of Presidential Decree No. 131/1986 (“Consolidated Registration Tax Act”), mention should be made of some circumstances post-dating the service of the payment notice. Specifically:

- the 2018 Budget Law (see Article 1, paragraph 87, letter a), of Law 205 of December 27, 2017) amended, with effect from January 1, 2018, Article 20 of the Consolidated Registration Tax Act, limiting the ability of the revenue authorities to reclassify acts subject to registration;
- the 2019 Budget Law (see Article 1, paragraph 1084, of Law 145 of December 30, 2018) attributed retroactive effect to the provision introduced by the 2018 Budget Law, which therefore should apply to payment notices – including that served on the Company – served in years prior to 2017;
- on July 21, 2020 Italy’s Constitutional Court (see judgment no. 158) ruled that there was no basis for the challenges of the constitutionality of Article 20 of the Consolidated Registration Tax Act, holding that the statute is intended to reaffirm the “transaction tax” nature of registration tax, and clarifying the object of taxation in accordance with the structure of a levy on the legal effects of the legal transaction presented for registration, without the revenue authorities being able to attach relevance to extratextual elements and linked legal transactions devoid of any textual connection with the transaction in question;
- on September 17, 2020 the Central Directorate of the Tax Agency published official clarification (see reply no. 371) in which, acknowledging the above ruling by the Constitutional Court, it clarified that *“the sale of company quotas preceded by the contribution of a business line cannot be taxed on a par with the sale of a company as a whole on the basis of the provisions of Article 20 of the Consolidated Income Tax Act.”*

For further information, reference should be made to Note “3.24. Other non-current liabilities” and to the section “Legal and tax disputes and contingent liabilities” in the Explanatory Notes.

The account “Receivables from FCA Partecipazioni” refers to the settlement dated August 2, 2019 between the Avio Group and FCA Partecipazioni S.p.A. regarding environmental charges. Based on this agreement FCA Partecipazioni committed to recognise to the Avio Group a total amount of Euro 19.9 million, of which Euro 11.3 million for reclamation activities and environmental restoration to be paid in the 2019-2023 period and Euro 8.6 million for post-operative management and maintenance to be paid in the 2019-2048 period, against the lapsing of the contractual guarantees which the company provided in the past to the Avio Group.

This agreement therefore entailed the recognition, on the transaction date (2019), of a discounted receivable from FCA Partecipazioni of Euro 16.5 million, divided into within and beyond 12 months according to the due dates of the expected collections, and a corresponding charges provision of Euro 16.9 million.

The decrease of Euro 2,107 thousand is due to the reclassification to short-term of the portion of the receivable due within 12 months.

“Receivables from the Economic Development Ministry for disbursements pursuant to Law 808/85 - non-current portion”, amounting to Euro 3,836 thousand, refer to the discounted value of the non-current portion of the concessions granted by the Ministry for Economic Development under the rules of Law 808/85.

These receivables are recorded in the accounts at the value resulting from the application of the amortised cost method, calculated utilising the effective interest rate, and are increased due to the effect of the accumulated amortisation of the difference between the initial value and the actual cash amounts and booked in the accounts under “Financial income”.

The amounts to be received within 12 months are classified under “Other current assets” (Note 3.15).

CURRENT ASSETS

3.10. INVENTORIES AND ADVANCES TO SUPPLIERS

The table below illustrates inventories and advances to suppliers at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Inventories and Advances to suppliers	181,681	154,732	26,948
	181,681	154,732	26,948

The movements in the year are shown below (in Euro thousands):

	30/06/2022	Change	31/12/2021
Raw materials, ancillaries and consumables	61,121	8,080	53,041
Raw material, ancillary and consumables obsolescence provision	(2,866)	(252)	(2,614)
Raw material, ancillary and consumables - net value	58,256	7,828	50,427
Products in work-in-progress	8,038	2,484	5,553
Provision for the write-down of work in progress	0	0	0
Products in work-in-progress - net value	8,038	2,484	5,553
Finished products and other inventories	3,104	0	3,104
Finished products and other inventories obsolescence provision	(1,985)	0	(1,985)
Finished products and other inventories - net value	1,119	0	1,119
Advances to suppliers	114,268	16,636	97,632
	181,681	26,948	154,732

The increase in inventories relates to provisioning needed in order to support expected future production levels.

Advances to suppliers refers to payments to subcontractors made on the basis of interim progress reports. This item also includes advances paid on the signing of contracts. The change during the year reflects ordinary business cycle dynamics.

3.11. CONTRACT WORK-IN-PROGRESS

Production and research and development on orders are presented in the financial statements in two separate accounts: “Contract work-in-progress” and “Advances from clients for contract work-in-progress”.

“Contract work-in-progress”, recognised to the assets section of the Balance Sheet, includes the net balance of production orders and research and development for which, on the basis of analysis carried out by individual order, the gross value of contract work-in-progress is higher at the reporting date than the amount of advances received from clients.

“Advances from clients for contract work-in-progress”, recognised to the liabilities section of the Balance Sheet, includes the net balance of production orders and research and development for which, on the basis of analysis carried out by individual order, the value of the advances received from clients is higher at the reporting date than the gross value of contract work-in-progress.

Contract work-in-progress is measured on the advancement of the production orders and research and development in accordance with the percentage of completion method based on the ratio between the costs incurred and the total estimated costs for the entire project.

The gross value of contract work-in-progress and advances received from clients is as follows (in Euro thousands):

	30/06/2022	31/12/2021	Change
Contract work-in-progress	402,711	453,808	(51,097)
Advances for contract work-in-progress	(601,980)	(609,635)	7,655
Net total	(199,270)	(155,827)	(43,443)

The table below summarises the contract work-in-progress relating to the projects where the gross value is higher than the advances collected; these works are therefore recorded for the net value under assets in the Consolidated Balance Sheet (Euro thousands):

	30/06/2022	31/12/2021	Change
Contract work-in-progress (gross)	837,308	989,609	(152,301)
Advances for contract work-in-progress (gross)	(434,597)	(535,801)	101,204
Contract work-in-progress (net)	402,711	453,808	(51,097)

The table below summarises the contract work-in-progress relating to the projects where the gross value is lower than the advances collected; these works are therefore recorded for the net value under liabilities in the Consolidated Balance Sheet (Euro thousands):

	30/06/2022	31/12/2021	Change
Contract work-in-progress (gross)	983,554	699,128	284,426
Advances for contract work-in-progress (gross)	(1,585,534)	(1,308,762)	(276,772)
Advances for contract work-in-progress (net)	(601,980)	(609,635)	7,654

The Avio Group is entitled to the research and development tax credits provided for in Decree-Law No. 145 of December 23, 2013, converted, with modifications, by Law No. 9 of February 21, 2014, as amended by Law No. 232 of December 11, 2016 (the “2017 Finance Act”) and by the 2019 Finance Act (Art. 1, paragraphs 70-72, of Law No. 145 of December 30, 2018), on the basis of research and development services commissioned by the European Space Agency. These benefits are recognised to the income statement based on the advancement of the research and development on long-term orders which are part of the contract work-in-progress.

The multi-year projects mainly concern those relating to the Vega C and Vega E future generation launchers and the recognition of the economic benefits shall be made over the duration of the orders and from the effective advancement of the orders, calculated on the basis of the relative costs incurred.

3.12. TRADE RECEIVABLES

The table below illustrates trade receivables at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Trade receivables	2,337	3,696	(1,359)
	2,337	3,696	(1,359)

The breakdown of trade receivables at the reporting date is shown below (Euro thousands):

	30/06/2022	31/12/2021	Change
Receivables from third parties	772	2,571	(1,798)
Receivables from associates and jointly controlled companies	972	569	404
	1,744	3,139	(1,395)
Receivables from associates and jointly controlled companies beyond one year	593	557	36
	593	557	36
Total	2,337	3,696	(1,359)

The nominal value of receivables from third parties was adjusted by a doubtful debt provision of Euro 483 thousand in order to reflect their fair value.

Receivables from third parties

The breakdown of the account is shown below (Euro thousands):

	30/06/2022	31/12/2021	Change
Gross value	1,255	3,054	(1,798)
less: doubtful debt provision	(483)	(483)	0
Total	772	2,571	(1,798)

The principal receivables are due from ArianeGroup and the European Space Agency (ESA).

Receivables from associates, jointly controlled companies and non-consolidated subsidiaries

The breakdown of the account is shown below (Euro thousands):

	30/06/2022	31/12/2021	Change
Europropulsion S.A.	592	268	324
Servizi Colleferro S.C.p.A.	28	15	13
Potable Water Services Consortium	144	99	45
Termica Colleferro S.p.A. due within one year	208	187	22
	972	569	404
Termica Colleferro S.p.A. due beyond one year	593	557	36
	593	557	36
Total	1,565	1,126	439

3.13. CASH AND CASH EQUIVALENTS

The table below illustrates cash and cash equivalents at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Cash and cash equivalents	77,085	104,614	(27,529)
Total	77,085	104,614	(27,529)

Cash and cash equivalents mainly concerning balances on bank current accounts.

Reference should be made to the Cash flow statement with regards to the movements in the period.

3.14. CURRENT TAX RECEIVABLES

The table below illustrates tax receivables at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Tax receivables	11,628	17,656	(6,028)
Total	11,628	17,656	(6,028)

The following table shows the net changes by type of tax credit and tax (amounts in thousands of euro):

	30/06/2022	31/12/2021	Change
VAT	3,805	10,763	(6,958)
Research and development tax credits	1,701	1,285	416
Tax credits for simple and 4.0 technological innovation	1,304	1,103	201
Tax credits for the purchase of simple new capital goods and 4.0	1,077	960	117
Receivables from tax authorities	3,505	3,309	196
EU VAT receivables	237	237	-
Total	11,628	17,656	(6,028)

The decrease in the account on the previous year totalled Euro 6,028 thousand; this was due to the following factors:

- decrease of Euro 6,958 thousand of the VAT receivables, following the collection of the VAT reimbursement previously requested for Euro 5,195 thousand and compensation for Euro 2,785 thousand, net of the VAT receivables maturing in the period for Euro 1,022 thousand;
- increase of Euro 734 thousand of tax credits for research and development, for simple and 4.0 technological innovation, and for the purchase of new simple and 4.0 capital goods;
- increase in other tax receivables of Euro 161 thousand.

VAT receivables

VAT receivables of Euro 3,805 thousand (Euro 10,763 thousand at December 31, 2021), include:

- Euro 2,260 thousand, relating to VAT reimbursement requests to the Tax Authorities (Euro 6,961 thousand at December 31, 2021);
- Euro 1,545 thousand, relating to VAT reimbursements to date not requested for repayment (Euro 3,802 thousand at December 31, 2021).

During the period, as reported above, Euro 5,195 thousand was collected, in addition to interest concerning the Euro 40 thousand, concerning the VAT receivable of Avio S.p.A. in the 2020 tax year.

The Group in the period used offsetting VAT credits of Euro 2,785 thousand and accrued receivables of Euro 1,022 thousand. The maturation of the VAT relates to the fact that the parent company's Avio S.p.A. main clients are non-resident, such as the European Space Agency (ESA) for the development of launchers and Ariane Group for their production/distribution, in addition to the jointly-controlled company Europropulsion for both of these phases. In particular, for the transactions carried out with these parties, Avio S.p.A. acts as a habitual exporter for VAT purposes, as the VAT exempt system for exports and the exemption for transactions treated as exports and the intra-EU supplies of goods are applicable to these transactions. This circumstance entails the quasi-absence of VAT payables on the sales transactions undertaken by the Company. On the other hand, the Company however has Italian suppliers whose supplies - further to the amounts for which declarations of intent are issued due to the fact that Avio S.p.A. is a habitual exporter - result in the recognition of VAT receivables.

Research and development tax credit

Regulatory framework

The 2020 Budget Law (see Law No. 160 of December 27, 2019), as amended by the 2021 Budget Law (see Law No. 178 of December 30, 2020) and the 2022 Budget Law (see Law No. 234 of December 30, 2021), significantly modified the tax benefits for research and development activities by providing the following:

- 1) the previous tax credit provided for in Decree-Law No. 145/2013, with a maximum nominal amount of Euro 10 million (previously Euro 20 million), was confirmed for the 2019 tax period only;
- 2) in replacing the previous R&D credit, it established:
 - a) a tax credit for fundamental research, industrial research and experimental development in scientific or technological fields, as defined in the "Frascati Manual". This tax credit is granted for 20% of the costs incurred in 2021, with a maximum of Euro 4 million;
 - b) a tax credit for technological innovation activities, other than those set out in point a), for the development of new or substantially improved products or production processes. This tax credit is granted – separately from that set out in paragraph a), and thus cumulatively – for 10% of the costs incurred in 2021 for such activities, with a maximum of Euro 2 million. The relief is increased (15% of the costs incurred in 2021 for such activities, up to a maximum of Euro 2 million), where the technological innovation activity is intended to achieve an environmental transition or digital innovation 4.0 objective;
 - c) a tax credit for the design and styling activities carried out by companies active in textiles, fashion, footwear, eyewear, jewellery, furniture and furnishings and ceramics to create and implement new products and samples.

In addition, a tax credit was arranged for the purchase of new capital goods and other property, plant, equipment and intangible assets, both generic and functional for the Industry 4.0 project, as confirmed by the 2021 Budget Law.

In contrast to the previous R&D tax credit, for the new relief introduced by the 2020 Budget Law:

1. the system for calculating eligible costs is not incremental, but proportional, with various rates (20%, 10% or 15%) to the costs incurred in the maturation year of the credit;
2. the receivables are used as offsets over three equal annual portions from the tax period subsequent to maturation, subject to satisfaction of the certification obligations;
3. the rule in paragraph 1-*bis* of Decree-Law No. 145/2013, which allowed resident companies to benefit from an R&D tax credit for activities carried out on behalf of non-resident principals, was not renewed.

Recognition in the Financial Statements

a) R&D tax credits accrued until 2019 under Decree-Law 145/2013

The H1 2022 income statement includes amounts of Euro 1,182 thousand relating to the effects on the income statement of the tax credits accrued in 2017, 2018 and 2019 according to the provisions of Article 3 of Decree-Law 145/2013, in effect until December 31, 2019.

In particular, the recognition of these accruals was due to the fact that the receivables in question were initially recorded in the account "Research and development tax credit" and recognised to the income statement in each period on an accruals basis, according to the differing types of costs supported, and on the basis of the percentage of completion of the contract work-in-progress giving rise to the costs against which the due receivable was calculated in the Income Statement accounts "Service costs" and "Change in contract work-in-progress".

The cited long-term orders are those concerning research and development projects which principally include the future generation Vega C and Vega E launchers, which are part of the wider Vega launchers family.

This benefit, as matured against such research and development, was recognised to the income statement on the basis of the advancement of these activities, proportionate to the advancement of the costs incurred for the long-term orders to which the benefit refers.

b) R&D tax credits accrued in 2020, 2021 and H1 2022 pursuant to the 2020 Budget Law as amended

The Avio Group recognised R&D tax credits of Euro 4,082 thousand for the period under review, attributable entirely to the parent company, Avio S.p.A., and accrued in 2020 and 2021 (for Euro 3,348 thousand) and in H1 2022 (for Euro 734 thousand).

The receivables under review refer mainly to internal research and development projects and to some technological innovation projects, both simple and 4.0 projects. As these subsidies are intended to cover operating costs and are not dependent on the creation of a specific fixed asset, and as they accrue in the financial year in which the eligible costs are incurred, regardless of the way in which these costs are accounted for, the subsidies in question have been treated as operating grants and, for this reason, the related economic benefit has been recorded in full in the same financial year in which the eligible costs from which the subsidies in question accrue were accounted for.

Tax receivables

Tax receivables of Euro 3,505 thousand (Euro 3,309 thousand at December 31, 2021), principally concerned:

- Euro 1,252 thousand for the tax receivable recognised by the Parent Company in relation to the circumstance that the subsidiary Se.Co.Sv.Im. can legitimately bill as recovery of the VAT paid by the subsidiary as the expedited settlement carried out in 2019 and finalised in 2021 (see Article 6 of Law Decree No. 119 of October 23, 2018). In particular, this settlement:
 - a) concerned the challenge for the failure to apply VAT on the restoration costs recharged to Avio S.p.A. in 2010, 2011 and 2012;
 - b) entailed payment to the Tax Agency of only the tax to be settled, by Se.Co.Sv.Im., in 20 quarterly instalments; the first was paid on May 31, 2019, while the last shall be settled by February 28, 2024.

Avio S.p.A. presents the entire expedited settlement amount as tax receivables, which shall gradually become deductible VAT, according to the payment of the instalments of the above-mentioned expedited settlement by Se.Co.Sv.Im.;

- receivables for withholding taxes on interest for Euro 545 thousand;
- tax receivables of the overseas subsidiaries Regulus and Avio France for Euro 702 thousand;
- IRAP receivables of Euro 93 thousand;
- other tax receivables of Euro 913 thousand.

EU VAT receivables

The EU VAT receivables relate to inter-EU transactions and amount to Euro 237 thousand (Euro 237 thousand at December 31, 2021).

3.15. OTHER CURRENT ASSETS

The table below illustrates other current assets at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Other current assets	11,285	7,376	3,909
Total	11,285	7,376	3,909

The breakdown of the account is shown in the table below (Euro thousands):

	30/06/2022	31/12/2021	Change
Economic Development Ministry for disbursements pursuant to Law 808/85	2,291	1,227	1,064
Receivables from FCA Partecipazioni	2,168	2,168	-
Employee receivables	1,420	1,098	321
Grants/subsidies receivable	1,906	1,488	418
Prepayments and accrued income	2,464	938	1,526
Other debtors	600	436	164
Social security institutions	418	16	401
Receivables from associated company Consorzio Servizi Acqua Potabile	19	4	15
Total	11,285	7,376	3,909

Receivables from the "Economic Development Ministry for disbursements pursuant to Law 808/85", amounting to Euro 2,291 thousand, refer to the discounted value of the sums to be disbursed by the Ministry for Economic Development for projects qualifying as functional to national security or projects with common European interest, subsequent to the approval by the Interministerial Committee for the Economic Programming of Resolution No. 28 of March 22, 2006 enacting directives for the aerospace sector, which will be received in the next year.

The portion which will be received beyond 12 months is classified in the account "Other non-current assets" (Note 3.9).

Regarding the "Receivables from FCA Shares", reference should be made to the comments at paragraph "3.9 Other non-current assets" in these notes. During the period, the instalment recognised as short-term at December 31, 2021 was received and the receivable for the new instalment due within 12 months recognised to this account, which is of an equal amount as the previous instalment.

Employee receivables of Euro 1,420 thousand concern the Group cash advances for the coverage of mission and travel expenses.

Receivables for grants and subsidies of Euro 1,906 thousand concerning various subsidised research projects. Reference should also be made to section "9. Disclosure on public grants as per Article 1, paragraphs 125-129 of Law No. 124/2017".

With regards to the increase of Prepayments and accrued income of Euro 1,526 thousand on December 31, 2021, this mainly concerns prepayments, as the differing types of costs, such as for example software licenses, are invoiced at the beginning of the year and have one-year validity. Due to this fact, the prepayments made in the first half of the year are significant.

Other receivables of Euro 600 thousand mainly concern certain recharges, including of a tax nature, to a number of counterparties.

EQUITY

The breakdown of the Shareholders' equity at June 30, 2022 follows (in Euro thousands):

Share capital	Share premium reserve	Treasury shares	Unavailable reserve for treasury shares in portfolio	Legal reserve	Actuarial gains/(losses) reserve	Retained earnings	Group result	Total Group equity	Non-controlling interest equity	Total Shareholders' Equity
90,964	130,583	(13,672)	13,672	18,193	(4,120)	58,244	(9,454)	284,410	9,673	294,083
90,964	130,583	(13,672)	13,672	18,193	(4,120)	58,244	(9,454)	284,410	9,673	294,083

3.16. SHARE CAPITAL

The share capital of the parent company Avio S.p.A. amounts to Euro 90,964,212 at June 30, 2022; the share capital is entirely subscribed and paid-in.

This share capital derives from the aggregation:

- of Euro 15,422,500, equal to the share capital of the SPAC (Special Purpose Acquisition Company) Space2 S.p.A., following the partial proportional spin-off effective as of April 5, 2017, with the beneficiary being the new SPAC Space3 S.p.A. (this latter company therefore not part of the Avio Group). The company Space2, following the acquisition of the Avio Group on March 31, 2017, then merged by incorporation the parent Avio S.p.A., effective as of April 10, 2017, and was newly renamed "Avio S.p.A.";
- of Euro 75,339,170, equal to the share capital increase to service the share swap of the above-mentioned merger, following which shares were assigned of the incorporating company Space2 to Leonardo S.p.A. and In Orbit S.p.A.
- of which Euro 202,542 thousand as the increase due to the exercise, in the second half of 2017, of market warrants (see the "Shareholders" paragraph of the Directors' Report).

The share capital at June 30, 2022 comprised 26,359,346 ordinary shares.

3.17. SHARE PREMIUM RESERVE

The share premium reserve, originally totalling Euro 144,256 thousand, is restricted for the value of the treasury shares acquired. At June 30, 2022, the available portion of the share premium reserve was Euro 130,583 thousand, with Avio S.p.A. reporting treasury shares for a value of Euro 13,672 thousand. At December 31, 2021, the available portion of the reserve was Euro 135,176 thousand, decreasing by Euro 4,592 thousand as a result of the purchase of treasury shares during the period for the same amount.

3.18. OTHER RESERVES

The breakdown of other reserves is as follows (Euro thousands):

	30/06/2022	31/12/2021	Change
Actuarial gains/(losses) reserve	(4,120)	(4,596)	476
Legal reserve	18,193	18,193	-
Treasury shares acquired	(13,672)	(9,080)	(4,592)
Unavailable treasury shares purchase reserve	13,672	9,080	4,592
Total	14,073	13,597	476

Treasury shares

At June 30, 2022, following further purchases of treasury shares in the period for Euro 4,592 thousand, Avio S.p.A. held 1,103,233 treasury shares, equal to 4.1854% of the share capital. The total value of the treasury shares acquired amounts to Euro 13,672 thousand.

3.19. NON-CONTROLLING INTERESTS

Non-controlling interests relate to the share of the equity in Spacelab S.p.A and Regulus S.A consolidated under the line-by-line method, as illustrated below (in Euro thousands):

30/06/2022				
Consolidated companies	% Non-controlling interests	Capital and Reserves	Profit/(loss)	Equity non-controlling Interests
Spacelab S.p.A.	30.00%	1,244	(34)	1,210
Regulus S.A.	40.00%	6,606	1,857	8,463
		7,850	1,823	9,673

NON-CURRENT LIABILITIES

3.20. NON-CURRENT FINANCIAL LIABILITIES

The movement in the account between December 31, 2021 and June 30, 2022 is reported below (in Euro thousands):

	30/06/2022	31/12/2021	Change
Non-current financial liabilities	17,000	22,000	(5,000)
Total	17,000	22,000	(5,000)

The account concerns two loans agreed with the European Investment Bank (EIB):

- loan of an original Euro 10,000 thousand subscribed in January 2019: this loan has a fixed interest rate and is of 7-years duration, of which 2 constituting a grace period and repayment in ten equal half-yearly instalments of Euro 1,000 thousand from the third to the seventh years, of which the first maturing on April 30, 2021 and the final maturing on October 31, 2025;
- loan of Euro 40,000 thousand subscribed in October 2017: this loan has a fixed interest rate and is of 7-years duration, of which 2 constituting a grace period and repayment in ten equal half-yearly instalments of Euro 4,000 thousand from the third to the seventh years, of which the first payment on April 30, 2020 and the final maturing on October 31, 2024.

The two loans will support the planned development of new technologies in the field of space propulsion systems in view of the offering of the new products for the Ariane 6 and Vega-C programs and the expansion of industrial capacity at the Colleferro facility required to meet the Company's production volume targets for the coming years.

The decrease of Euro 5,000 thousand relates to the short-term reclassification:

- of the instalment of Euro 4,000 thousand, relating to the loan of Euro 40,000 thousand, falling due on April 30, 2023;
- of the instalment of Euro 1,000 thousand, relating to the loan of Euro 10,000 thousand, also falling due on April 30, 2023.

The short-term portion of the loan, totalling Euro 10,000 thousand (including over Euro 41 thousand for interest accrued in the period), is therefore recognised under item "3.27. Current portion of non-current financial payables".

These two loans are not supported by guarantees and stipulate the application of covenants (Gross Financial Debt/EBITDA, Gross Financial Debt/Equity, EBITDA/net financial charges), among other covenants. These covenants have been complied with to date.

Hedging derivatives have not been agreed on these loans.

3.21. NON-CURRENT FINANCIAL LIABILITIES FOR LEASING

Following the application of IFRS 16, the breakdown of the related non-current financial liabilities is shown below (in Euro thousands):

	30/06/2022	31/12/2021	Change
Non-current financial payables for leasing	4,633	4,751	(118)
Total	4,633	4,751	(118)

The breakdown of these financial liabilities is as follows (Euro thousands):

	30/06/2022	31/12/2021	Change
Non-current financial liabilities to the associate Termica Colleferro S.p.A. as per IFRS 16	905	974	(68)
Non-current financial liabilities to third parties as per IFRS 16	3,728	3,777	(49)
Total	4,633	4,751	(118)

The financial liabilities to the associate Termica Colleferro S.p.A. relate to the lease of the electro-duct and relative electrical infrastructure at the combined cycle co-generation thermo-electrical station owned by the said associate.

With regards to the financial liabilities to third parties, these essentially concern:

- the concession of a specific area within the Salto di Quirra Inter-force Experimental Facility, where there are plans for a Space Propulsion Test Facility project for the construction of a Liquid Rocket Engine test bench and the production of carbon-carbon components;
- the leasing of office and industrial use land and buildings at Airola (Campania) and Villaputzu (Sardinia);
- the lease of apartments for employees in Guyana;
- the lease of company cars.

3.22. EMPLOYEE BENEFIT PROVISIONS

The account relates to post-employment benefits and other long-term benefits.

The means for accruing these benefits varies according to the legal, fiscal and economic conditions of each State in which the Group operates. These benefits are generally based on remuneration and years of employee service. The obligations refer to employees in service.

Post-employment benefits

Group companies guarantee post-employment benefits for employees both through contributions to external funds and through defined benefit plans.

Defined contribution plans

In the case of defined contribution plans, the Group pays the contributions to public or private insurance institutions based on legal or contractual obligations. With the payment of contributions the companies fulfil their obligations. The payables for contributions to be paid at the reporting date are included in the account "Other current liabilities" and the cost for the period matures based on the service period of the employee and recorded in the income statement account "Personnel expenses".

Defined benefit plans

Defined benefit plans are represented by unfunded plans, principally provided by third party funds, present in the Italian companies of the Group, of the leaving indemnity provision and of the special loyalty bonus indemnity, payable on departure to the employees which have matured the required number of years' service. The value of the liabilities recorded in the accounts for these institutions is calculated on an actuarial basis, utilising the projected unit credit method.

The leaving indemnity provision relates to the obligation for the amount to be paid to employees on the termination of employment, pursuant to the provisions of Article 2120 of the Civil Code. The regulations of this provision were modified by the 2007 Finance Act and subsequent Decrees and Regulations. Specifically, for the companies with an average number of employees not lower than fifty, the portion of leaving indemnity matured subsequent to January 1, 2007 is, on the choice of the employee, either transferred to a complementary pension fund or to the INPS treasury fund. Consequently, for the companies of the Group with a number of employees not below fifty, the portion of the employee leaving indemnity matured subsequent to this date is treated as a defined contribution plan, as the obligation of the Group is represented exclusively by the payment to the complimentary pension fund or to INPS, while the liability existing at December 31, 2006 continues to be treated as a defined benefit plan to be valued in accordance with actuarial methods. For the companies of the Group with a number of employees below fifty, the portion matured in the year continues to be accrued to the company leaving indemnity provision, unless specific choices are made voluntary by the individual employees.

Other long-term employee benefits

The Group also recognises to employees other long-term benefits issued on the reaching of a fixed number of years of service. In this instance, the value of the obligation recognised to the financial statements reflects the probability that the payment will be issued and the duration for which payment will be made. The value of these liabilities recorded in the accounts are calculated on an actuarial basis, utilising the "projected unit credit" method.

The Group mainly has "unfunded" defined benefit plans, principally comprising the leaving indemnity provision of the Italian companies.

The provisions are broken down as follows (in Euro thousands):

	30/06/2022	31/12/2021	Change
- Defined benefit plans:			
Post-employment benefits	3,490	3,646	(155)
Other defined benefit plans	2,443	3,005	(562)
	5,934	6,651	(717)
- Other long-term benefits	3,384	3,693	(309)
Total employee benefit provisions	9,318	10,344	(1,026)
of which:			
- Italy	8,050	8,742	(693)
- Other Countries	1,269	1,602	(333)
	9,318	10,344	(1,026)

The following table presents the principal changes in the employee benefit provisions during the period (in Euro thousands):

	Defined benefit plans	Other long-term employee benefits	Total employee benefit provisions
At 31/12/2021	6,651	3,693	10,344
Financial charges/(income)	(14)	(4)	(18)
Actuarial (gains)/losses in income statement	-	-	-
Actuarial (gains)/losses in comprehensive income statement	(620)	-	(620)
Pension cost current employees	54	78	132
Other changes	-	(333)	(333)
Benefits paid	(137)	(50)	(187)
Values at 30.06.2022	5,934	3,384	9,318

The table below illustrates the principal assumptions utilised for the actuarial calculation:

	30/06/2022	31/12/2021
Discount rate	0.15%	0.15%
Expected salary increases	2.15%	2.15%
Inflation rate	European zero-coupon inflation-indexed curve Swap at 30.06.2022	European zero-coupon inflation-indexed curve Swap at 31.12.2021
Average employee turnover rate	4.75%	4.75%

Securities issued by corporate issuers with “AA” ratings were utilised for the calculation of the present value, with the presumption that this class identifies a high rating level within a range of “Investment Grade” securities and therefore excluding more risky securities. The market curve utilised was a “Composite” curve which reflects the market conditions at the valuation date for securities issued by companies belonging to various sectors (including Utility, Telephone, Financial, Bank and Industrial). In relation to the geographical area, reference was made to the Eurozone.

3.23. PROVISIONS FOR RISKS AND CHARGES

The table below illustrates provisions for risks and charges at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Provisions for risks and charges	24,239	28,229	(3,990)
Total	24,239	28,229	(3,990)

The breakdown of the provisions for risks and charges at June 30, 2022 is presented below (Euro thousands):

	30/06/2022		
	Current portion	Non-current portion	Total
Provision for variable remuneration	2,720	981	3,701
Provision for legal and environmental risks and charges	6,002	12,047	18,049
Provision for contractual and commercial risks and charges	311	2,177	2,489
Total	9,034	15,205	24,239

These provisions include:

- provisions for variable remuneration for Euro 3,701 thousand, mainly comprising employee remuneration on the achievement of individual and corporate objectives;
- provisions for legal and environmental risks and charges, against litigation and trade union disputes in course, amount to Euro 18,049 thousand;
- provisions for contractual and commercial risks and charges for Euro 2,489 thousand, mainly related to the provisions to cover potential commercial charges, penalties, charges and losses deriving from the conclusion of contracts in course, in addition to charges for rights pursuant to the provisions of Law 808/85 (regulation post 2006) and for the recovery of a concession area.

The movements in current and non-current provisions in H1 2022 are shown below (amounts in Euro thousands):

	31/12/2021	Provisions	Other changes	Utilisations	Releases	30/06/2022
Provision for variable remuneration	7,399	1,948	-	(4,002)	(1,643)	3,701
Provision for legal and environmental risks and charges	18,431	-	104	(486)	-	18,049
Provision for contractual and commercial risks and charges	2,399	90	-	-	-	2,489
Total	28,229	2,038	104	(4,488)	(1,643)	24,239

The main changes in the first half of the year were:

- the provisions for variable remuneration were utilised for Euro 4,002 thousand, in consideration of the bonuses paid to employees for the achievement of individual and company objectives. This account mainly concerned thousand the payment of ordinary annual result bonuses.
The provision of Euro 1,948 thousand mainly relates to variable remuneration which will be paid in the first half of 2023, on the basis of the achievement of individual and company objectives for the year 2022.
Proceeds of Euro 1,643 thousand resulted from the cancellation of the 2020-22 and 2021-23 cycles of the existing 2020-24 Monetary Long-Term Incentive Plan, as set out in the Directors' Report.
- the risks and legal and environmental charge provisions were utilised for Euro 486 thousand, mainly concerning environmental charges.

3.24. OTHER NON-CURRENT LIABILITIES

The table below illustrates the account at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Non-current liabilities	118,473	119,830	(1,357)
Total	118,473	119,830	(1,357)

In detail, the changes in the item were as follows:

	30/06/2022	31/12/2021	Change
<i>Tax liabilities</i>			
Payables to the Tax Authorities for registration, mortgage and land tax relating to the corporate operations which in 2013 resulted in the sale of the company GE Avio S.r.l. (containing the assets of the AeroEngine sector of the Avio Group) to the General Electric Group.	58,220	58,220	-
Other tax payables	-	407	(407)
	58,220	58,626	(407)
<i>Liabilities relating to Law 808/85</i>			
Payables to the Economic Development Ministry (MiSE) for disbursements pursuant to Law 808/85 (rules pre-2007) - portion beyond one year	42,051	42,051	-
Deferred income on disbursements pursuant to Law 808/85 (post 2007) - beyond one year	15,483	16,556	(1,073)
Payables to MiSE for disbursements pursuant to Law 808/85 (rules as per MiSE Decree 3/07/2015) - portion beyond one year	1,329	1,320	9
Deferred income on disbursements pursuant to Law 808/85 (rules as per MiSE Decree 3/07/2015) - portion beyond one year	483	483	-
	59,346	60,410	(1,064)
Payables due to MiSE for other subsidies	539	388	151
Deferred income	369	406	(37)
Total	118,473	119,830	(1,357)

Tax liabilities

Payables to the Tax Authorities for registration, mortgage and land tax relating to the corporate transaction which in 2013 resulted in the sale of the company GE Avio S.r.l. (containing the assets of the AeroEngine sector of the Avio Group) to the General Electric Group.

The account, amounting to Euro 58,220 thousand, refers to the settlement notice received in July 2016 from the Tax Agency relating to registration, mortgage and land tax for the above-mentioned amount, relating to the corporate operations which in 2013 resulted in the sale of the company GE Avio S.r.l. (containing the assets of the AeroEngine sector of the Avio Group) to the General Electric Group. Simultaneously a receivable was recorded from the General Electric Group for a similar amount. The recognition of the above-mentioned receivable from the General Electric Group is based on specific contractual clauses in which this latter must indemnify Avio with reference to any liabilities which should arise in relation to indirect taxes concerning the above-mentioned operations, providing Avio the sums requested by the Tax Office within the time period for the payments.

It should be noted that the afore-mentioned tax settlement notice is the subject of a dispute with the tax authorities, which in 2020 appealed to the Supreme Court of Cassation against the sentence with which, at the end of 2018, the Piedmont

Regional Tax Commission fully accepted the appeal lodged by the Company. The Company appeared promptly in the proceedings with its own counter-appeal and simultaneous cross-appeal, reaffirming the soundness of its arguments. At the date of this report, the Court of Cassation has not yet set a date for the hearing.

With regard to the litigation in question, and in particular the subject-matter of the dispute, relating to the anti-avoidance provision of Article 20, headed “Interpretation of acts”, of Presidential Decree No. 131/1986 (“Consolidated Registration Tax Act”), mention should be made of some circumstances post-dating the service of the payment notice. Specifically:

- the 2018 Budget Law (see Article 1, paragraph 87, letter a), of Law 205 of December 27, 2017) amended, with effect from January 1, 2018, Article 20 of the Consolidated Registration Tax Act, limiting the ability of the revenue authorities to reclassify acts subject to registration;
- the 2019 Budget Law (see Article 1, paragraph 1084, of Law 145 of December 30, 2018) attributed retroactive effect to the provision introduced by the 2018 Budget Law, which therefore should apply to payment notices – including that served on the Company – served in years prior to 2017;
- on July 21, 2020 Italy’s Constitutional Court (see judgment no. 158) ruled that there was no basis for the challenges of the constitutionality of Article 20 of the Consolidated Registration Tax Act, holding that the statute is intended to reaffirm the “transaction tax” nature of registration tax, and clarifying the object of taxation in accordance with the structure of a levy on the legal effects of the legal transaction presented for registration, without the revenue authorities being able to attach relevance to extratextual elements and linked legal transactions devoid of any textual connection with the transaction in question;
- on September 17, 2020 the Central Directorate of the Tax Agency published official clarification (see reply no. 371) in which, acknowledging the above ruling by the Constitutional Court, it clarified that *“the sale of company quotas preceded by the contribution of a business line cannot be taxed on a par with the sale of a company as a whole on the basis of the provisions of Article 20 of the Consolidated Income Tax Act.”*

For further information, reference should be made to Note “3.9. Other non-current liabilities” and to the section “Legal and tax disputes and contingent liabilities” in the Explanatory Notes.

Other tax payables

This item has a zero balance at June 30, 2022, as the balance of Euro 406 thousand at December 31, 2021, has been reclassified as short-term.

This amount related to the long-term portion of the Tax payable of the subsidiary Se.co.sv.im. S.r.l. concerning the expedited settlement, following the application presented in 2019, regarding the tax dispute relating to the alleged failure to apply the tax on the reclamation costs subject to recharge to the consolidating company Avio S.p.A. for the years 2010, 2011 and 2012.

This settlement stipulates the payment in 20 quarterly instalments of the taxes only, without penalties and interest.

Liabilities relating to Law 808/85

Payables to the Economic Development Ministry for disbursements pursuant to Law 808/85 (rules pre-2007) - portion beyond one year

This account (Euro 42,051 thousand) comprises the payables to the Economic Development Ministry relating to the disbursements, received pursuant to Law 808/85 and subsequent modifications and supplementations, undertaken for the promotion of research and development activities, including studies, tests and design relating to new programmes and other activities, in the aerospace industry. These sums are non-interest bearing and must be reimbursed in the period in which the revenues are generated from the programmes to which they refer. The payables are recorded at their nominal value.

This payable concerning the grants as per Law 808/85 is subject to the relative provisions valid up to 2006.

In 2006 the enacting regulations of Law 808/85 were modified. In particular, a specific regulation was defined for the programmes subject to intervention by Law 808/85 considered as functional to national security or projects of common

European interest, which provide for, in place of the restitution of the disbursements granted, the payment of rights relating to the sale of the products developed within the programmes. For the programmes not within the above-mentioned category, the obligation remains for the restitution without payment of interest.

It is considered, following detailed analysis undertaken also with the assistance of primary legal firms and as communicated to the Economic Development Ministry in previous years, that this new regulation is not applicable to the interventions undertaken prior to the adoption of Resolution No. 28/2006 of the Interministerial Committee for Economic Programming, in relation to the specific situation of the programmes subject to the interventions, and therefore, as during 2022 there were no mandatory changes to the regulations in force, there were no changes in the criteria utilised to-date in the recognition in the accounts of the disbursements in question.

During the first half of the year, as part of a regulation that introduced urgent measures to contain electricity and natural gas costs, develop renewable energies and revitalise industrial policies, a regulation was also introduced concerning royalties arising from the sale of products using the technologies developed within the scope of the projects already receiving funding under Article 3, paragraph 1, letter a) of Law No. 808 of December 24, 1985. The regulation was designed to ensure the continuity of investments in research and development within the aerospace sector, including those targeting ecological and digital transition, in the area of national security, by requiring the beneficiaries to make a special declaration regarding royalties.

The Company sent the declaration required by the new provision, and discussions and verifications are currently underway with the Ministry for Economic Development.

Deferred income on disbursements pursuant to Law 808/85 (post 2007) - beyond one year

The account, amounting to Euro 15,483 thousand, represents the initial counter-entry of the receivable from the Ministry for Economic Development against the grants pursuant to Law 808/85, relating to the projects qualifying as functional to national security or projects with common European interest, for the amount to be allocated to the income statement in future years, beyond one year, in correlation to the allocation of the costs against which the disbursements were granted.

Payables to Economic Development Ministry for disbursements pursuant to Law 808/85 (rules as per MiSE Decree 3/07/2015) - portion beyond one year

Disclosure upon the payable to MiSE for disbursements as per Law 808/85 according to the ex MiSE Decree of 3/07/2015 of Euro 1,329 thousand is presented below.

With Economic Development Ministry Decree of July 3, 2015, the criteria and means for funding to promote and support aerospace research and development projects to consolidate and grow Italian technology and the sector's competitiveness were defined.

The measures under the Decree concern zero-rate subsidised loans granted within the limits established by EU rules upon research, development and innovation.

The loans are repaid for 90% of the settlement amount through annual equal instalments over the issue duration and however for a period of not less than ten years, beginning from the year subsequent to the final disbursement. The remaining 10% is an outright grant.

On February 19, 2018, the parent Avio was recognised the Settlement Decree by the Economic Development Ministry with regards to expenses incurred as part of a research and development project which falls within the scope of the above-mentioned July 3, 2015 Decree.

The final disbursement under the plan reported in the Decree of February 19, 2018 is in 2029, with repayment therefore from the subsequent year (2030) until 2045.

Both the grants receivable from the Ministry for Economic Development and the subsequent reimbursements payable to the Ministry have been accounted for at amortized cost.

The difference between the nominal and present values of the amount receivable and payable is recognized over the course of the benefit.

Deferred income on disbursements pursuant to Law 808/85 (rules as per MiSE Decree 3/07/2015) - portion beyond one year

See above for an account of the rules for grants pursuant to Law 808/85 set out in the Decree of the Ministry for Economic Development of July 3, 2015.

The caption, which amounted to Euro 483 thousand, represents the difference between the nominal values and present values of the amount receivable and payable in respect of the aforementioned liquidation decree dated February 19, 2018.

Payables due to MiSE for other subsidies

This item, amounting to Euro 539 thousand, consists of payables due beyond one year to the Ministry for Economic Development relating to the disbursements provided for in Article 6 of the Decree of June 1, 2016, in accordance with Axis 1, action 1.1.3. of the National Operational Program "Enterprise and Competitiveness" 2014-2020 ERDF, received for the undertaking of the joint research and development projects concerning the projects:

- "Additive Manufacturing by Mixing Elemental Powders" (amounting to Euro 216 thousand), and
- "Innovative composite materials for space, aeronautics and automotive I.S.A.C." (amounting to Euro 323 thousand).

The payables are recorded at their discounted value.

CURRENT LIABILITIES

3.25. CURRENT FINANCIAL LIABILITIES

The table below illustrates current financial liabilities at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Current financial liabilities	2,749	7,749	(5,000)
Total	2,749	7,749	(5,000)

The account comprises financial payables to the jointly-controlled company Europropulsion, relating to the mechanism of distributing to its shareholders the financial resources available to the joint venture, in accordance with a specific treasury management contract. This contract provides for application of the 3-month Euribor as the reference rate, with an additional lending rate of -0.05% and a borrowing rate of 0.20%.

3.26. CURRENT FINANCIAL LIABILITIES FOR LEASING

Following the application of IFRS 16, the breakdown of the related non-current financial liabilities is shown below (in Euro thousands):

	30/06/2022	31/12/2021	Change
Current financial liabilities for leasing	1,767	2,906	(1,139)
Total	1,767	2,906	(1,139)

The breakdown of these financial liabilities is as follows (Euro thousands):

	30/06/2022	31/12/2021	Change
Current financial liabilities to the associate Termica Colferro S.p.A. as per IFRS 16	156	146	10
Current financial liabilities to third parties as per IFRS 16	1,611	2,760	(1,148)
	1,767	2,906	(1,139)

The financial liabilities to the associate Termica Colferro S.p.A. relate to the lease of the electro-duct and relative electrical infrastructure at the combined cycle co-generation thermo-electrical station owned by the said associate.

With regards to the financial liabilities to third parties, these essentially concern:

- the concession of a specific area within the Salto di Quirra Inter-force Experimental Facility, where there are plans for a Space Propulsion Test Facility project for the construction of a Liquid Rocket Engine test bench and the production of carbon-carbon components;
- the leasing of office and industrial use land and buildings at Airola (Campania) and Villaputzu (Sardinia);
- the lease of apartments for employees in Guyana;
- the lease of company cars.

3.27. CURRENT PORTION OF NON-CURRENT FINANCIAL PAYABLES

The table below illustrates this account at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Current portion of non-current financial payables	10,041	10,048	(8)
Total	10,041	10,048	(8)

The account, which amounted to Euro 10,041 thousand, consists of:

- the two instalments of the initial EIB loan of Euro 40 million, amounting to Euro 8 million (of which Euro 4 million due on October 31, 2022 and Euro 4 million due on April 30, 2023);
- two instalments of the EIB loan of Euro 10 million, amounting to Euro 2 million (of which Euro 1 million due on October 31, 2022 and Euro 1 million due on April 30, 2023);
- the accrued interest at June 30, 2022 amounting to Euro 41 thousand.

3.28. TRADE PAYABLES

The table below illustrates trade payables at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Trade payables	58,126	76,927	(18,801)
Total	58,126	76,927	(18,801)

Trade payables of the Avio Group at June 30, 2022 amount to Euro 58,126 thousand; this amount includes, for Euro 9,622 thousand, trade payables to associated companies, jointly controlled companies and non-consolidated subsidiaries as follows (Euro thousands):

	30/06/2022	31/12/2021	Change
Europropulsion S.A.	4,004	1,670	2,334
Termica Colleferro S.p.A.	5,744	6,588	(843)
Potable Water Services Consortium	20	(227)	247
Servizi Colleferro S.C.p.A.	129	173	(43)
Total	9,898	8,204	1,694

3.29. CURRENT TAX PAYABLES

The table below illustrates current tax payables at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Tax payables	7,144	7,322	(178)
Total	7,144	7,322	(178)

The breakdown of current income taxes is shown below (in Euro thousands):

	30/06/2022	31/12/2021	Change
IRES payables	719	705	14
IRAP payables	99	72	27
Payables for withholding taxes	1,449	1,203	246
Other tax payables	2,991	5,004	(2,012)
Foreign income taxes	1,885	338	1,547
Total	7,144	7,322	(178)

IRES payables from tax consolidation amount to Euro 719 thousand, while IRAP payables total Euro 99 thousand.

Payables for withholding taxes, amounting to Euro 1,449 thousand, refer to employee and consultant withholding taxes. This liability is in line with December 31, 2021.

Other Tax payables of Euro 2,991 thousand comprise the following items:

- for Euro 2,125 thousand, the short-term portion of the amount payable to the Italian Treasury as a refund of a part of the research and development tax credit and related interest, pursuant to Decree-Law No. 145/2013, relating to the 2017 tax period and already used for offsetting in 2018;
- for Euro 581 thousand the short-term portion of the Tax payable of the subsidiary Se.Co.Sv.Im. S.r.l. concerning the expedited settlement, following the application presented on May 31, 2019, regarding the tax dispute relating to the alleged failure to apply the tax on the reclamation costs subject to recharge to the consolidating company Avio S.p.A. for the years 2010, 2011 and 2012.

This settlement stipulates the payment in 20 quarterly instalments of the taxes only, without penalties and interest;

- for Euro 286 thousand, tax liabilities in respect of ongoing tax disputes.

The decrease from December 31, 2021, is due to the instalment paid in H1 2022 related to both the repayment of a portion of the 2017 R&D tax credit and the expedited settlement of VAT by Se.Co.Sv.Im.

Payables for foreign taxes totalling Euro 1,885 thousand relate to the tax liabilities of the subsidiaries Regulus S.A., Avio Guyane S.A.S and Avio France S.A.S., operating in Kourou in French Guyana, a French overseas region and department in South America.

3.30. OTHER CURRENT LIABILITIES

The table below illustrates other current liabilities at June 30, 2022 and December 31, 2021 (Euro thousands).

	30/06/2022	31/12/2021	Change
Other current liabilities	28,095	26,383	1,711
Total	28,095	26,383	1,711

The breakdown of the account at June 30, 2022 is shown in the table below (Euro thousands):

	30/06/2022	31/12/2021	Change
Other accrued liabilities and deferred income	5,816	7,409	(1,593)
Employee payables	11,266	7,238	4,028
Other payables to third parties	4,706	5,214	(509)
Payables due to social security institutions	4,160	4,376	(215)
Deferred income on disbursements pursuant to Law 808/85 - current portion	2,147	2,147	-
Total	28,095	26,383	1,711

Accrued expenses and deferred income

This account, amounting to Euro 5,816 thousand (Euro 7,409 thousand at December 31, 2021), mainly refers to the deferment of commercial costs and grants to the following year.

Employee payables

Employee payables amount to Euro 11,266 thousand and include remuneration to be settled, in addition to vacations and other rights matured and not utilised.

Other payables to third parties

This account, totalled Euro 4,706 thousand, concerns:

- liabilities towards the Italian Space Agency (ASI), minority shareholder of the subsidiary Spacelab S.p.A., for Euro 3,132 thousand, for dividends and the reimbursement of a portion of the capital subscribed.

By private agreement on June 29, 2021 between the parent company and buyer, Avio S.p.A., and the seller, the subsidiary Spacelab S.p.A., the price for the sale of the launchers business unit in March 2018 was established.

The contractual agreement pertaining to this transaction, signed on March 1, 2018, included a consideration adjustment clause to take account of the fact that, at the date of sale of the business unit, the amount of the research and development tax credit relating to the activities attributable to the unit subject to sale could not be definitively determined.

The parties have defined the price adjustment as Euro 8,529 thousand in June 2021.

The Board of Directors' meeting of June 28, 2021 proposed to the Extraordinary Shareholders' Meeting of July 19, 2021, which resolved the distribution of dividends for Euro 18,000 thousand to the shareholders Avio and ASI. These dividends are inclusive of Euro 10,000 thousand already resolved by it on April 17, 2019, but not yet paid pending the above-mentioned price adjustment; Euro 12,600 thousand is due to the shareholder Avio and Euro 5,400 thousand to the shareholder ASI.

During the above-mentioned Extraordinary Shareholders' Meeting of July 19, a resolution was passed to reduce Spacelab S.p.A.'s share capital by Euro 2,877 thousand due to its surplus compared to the Company's current needs, with a reimbursement to the shareholder Avio of Euro 2,014 thousand and to the shareholder ASI of Euro 863 thousand.

Eligibility to the two partners was 50% paid in November 2021 and 50% will be paid by July 31, 2022;

- liabilities for urban development charges due to the municipalities in which the Group operates for Euro 465 thousand;
- other liabilities to third parties for Euro 1,109 thousand.

Amounts due to social security institutions

The account concerns amounts to be paid, amounting to Euro 4,160 thousand (Euro 4,376 thousand at December 31, 2021), relating to company and employee contributions, in accordance with regulations in force.

Deferred income on disbursements pursuant to Law 808/85 (post 2007) - current portion

The account, amounting to Euro 2,147 thousand (same amount at December 31, 2021 as the amount to be released over the 12 subsequent months does not differ), concerns the accrual of the contribution, with regards to the portion expected to be recognised as income to the income statement within the next 12 months.

INCOME STATEMENT

3.31. REVENUES

Total revenues, comprising the change in contract work-in-progress and revenues from product sales and the provision of services, amounted to Euro 133,516 thousand. They amounted Euro 132,879 thousand in the first half of 2021.

The following table compares the two periods (in Euro thousands):

	H1 2022	H1 2021	Change
Revenues from sales	28	105,317	(105,289)
Revenues from services	1,997	4,055	(2,058)
	2,025	109,372	(107,347)
Changes in contract work in progress	131,492	23,507	107,985
Total	133,516	132,879	637

For information on revenues as compared to the previous period, reference should be made to the "Group operating performance and financial and equity position" paragraph of the Directors' Report.

In terms of the recognition of revenues, in order to present a breakdown and comparison of revenues in the clearest manner possible, it should be noted that contracts totalling Euro 105,014 thousand were completed during the comparison period, the effects of which are shown under "Revenues from sales" for the proceeds from the related advances received and under "Changes in contract work in progress" for the closure of the contracts from work in progress. Given that no contracts were completed in H1 2022, "Revenues from sales" is necessarily lower than the comparison period, while "Changes in contract work in progress" is higher.

The revenues from advancement include the effect from the recognition of research and development credits for the years 2017, 2018 and 2019 under Article 3 of Legislative Decree No. 145/2013 and subsequent amendments in force until December 2019. This income amounted to Euro 1,182 thousand, while in the first half of 2021 totalled Euro 1,124 thousand. These credits, recognised to the extent they are considered recoverable and usable, are initially recorded in the account "Current tax receivables", with counter-entry to the income statement under "Service costs", and rediscounted to reflect their recognition to the Income Statement in each period on an accruals basis, according to the differing types of costs supported, in relation to the percentage of completion of the contract work-in-progress giving rise to the costs against which the credit was calculated. The accrual has been recognised on the balance sheet under "Contract work in progress" and its release has been recognised on the income statement as "Changes in contract work in progress".

As reported in the section "Subsequent events to the period-end" of the Directors' Report, the maiden flight of the new Vega C launcher was carried out with complete success on July 13. The launcher is the first to be equipped with the new P120 motor, which will also be used on the new Ariane 6 launcher. Two new launchers VEGA C and Ariane 6 to are therefore currently being brought to market, while the Ariane 5 launcher is being phased out. This transition phase includes the contractual provision of ramp-down/ramp-up ESA contributions for industrial fixed cost absorption effects. As regards the ESA, contributions for the effects of COVID-19 are also planned. In the first half of the year, the Group recognised variable considerations in these cases to the extent that they are likely to be recognised by customers and in accordance with IFRS 15. Currently, the portion of these considerations accounted is approx. 13% of total revenues.

3.32. OTHER OPERATING REVENUES

“Other operating revenues” for the two periods are compared below (in Euro thousands):

	H1 2022	H1 2021	Change
Dividends received from Europropulsion	2,400		2,400
Income from the release of provisions	1,977	218	1,759
Other income and operating grants	1,314	1,112	202
Income for the portion recognised to the income statement of the disbursements as per Law 808/85	1,073	1,108	(35)
Other prior year income	98	478	(381)
Total	6,861	2,917	3,945

In the first half of 2022, the account comprised:

- dividends collected from the jointly-controlled company Europropulsion for Euro 2,400 thousand. In the comparative period 2021, this company did not issue dividends;
- income from the release of provisions of Euro 1,977 thousand, of which:
 - Euro 1,643 thousand resulting from the cancellation of the 2020-22 and 2021-23 cycles of the existing 2020-24 Monetary Long-Term Incentive Plan, as set out in the Directors’ Report;
 - Euro 333 thousand relating to the subsidiary Regulus S.A. (Euro 218 thousand in H1 2021);
- other income and operating grants of Euro 1,314 thousand (Euro 1,112 thousand in H1 2021), including primarily:
 - grants of Euro 449 thousand (Euro 387 thousand in the comparative period);
 - recovery of charges for Euro 865 thousand (Euro 725 thousand in the comparative period);
- income for the portion recognised to the income statement of the disbursements as per Law 808/85 for Euro 1,073 thousand (Euro 1,108 thousand in H1 2021);
- prior year income of Euro 98 thousand (Euro 478 thousand in H1 2021);

3.33. CONSUMPTION OF RAW MATERIALS

The breakdown of the account is as follows (Euro thousands):

	H1 2022	H1 2021	Change
Purchase of raw materials	47,599	42,384	5,216
Change in inventories of raw materials	(7,881)	(4,830)	(3,051)
Total	39,718	37,553	2,165

3.34. SERVICE COSTS

The breakdown of the account is as follows (in Euro thousands):

	H1 2022	H1 2021	Change
Service costs	60,522	58,894	1,628
Use of third party assets	245	300	(55)
Total	60,767	59,194	1,573

Service costs, amounting to Euro 60,767 thousand, in particular, include costs for activities carried out by co-producers, for consultancy and technical and professional services, for outsourcing, for maintenance and for temporary personnel.

The item also includes the amount of the emoluments due to the Avio Group's corporate boards, relating to:

- directors' fees of Euro 290 thousand (Euro 249 thousand in H1 2021) and specific committee fees of Euro 90 thousand (Euro 85 thousand in H1 2021);
- Supervisory Board fees of Euro 87 thousand (Euro 94 thousand in H1 2021);
- Board of Statutory Auditors' fees of Euro 84 thousand (Euro 92 thousand in H1 2021);
- Auditing Firm fees of Euro 88 thousand (Euro 86 thousand in H1 2021).

3.35. PERSONNEL EXPENSES

The breakdown of the account is as follows (in Euro thousands):

	H1 2022	H1 2021	Change
Wages and salaries	29,976	28,151	1,825
Social security charges	6,984	6,663	321
Provision for variable remuneration	1,947	2,472	(524)
Provision for "Other defined benefit plans"	1,704	1,973	(269)
Other long-term benefits - current employees	53	61	(9)
Actuarial (gains)/losses recorded in P&L relating to other long-term benefits		(162)	162
Total	40,664	39,157	1,506

The increase of Euro 1,506 thousand compared to the previous period is due to the net increase in number of employees of the Group, which went from 944 at June 30, 2021, to 1,047 at June 30, 2022.

The table below illustrates, at Group level and divided by category, the average number of employees of the companies included in the consolidation scope:

	H1 2022	H1 2021	Change
Blue-collar	384	384	-
White-collar	627	517	110
Executives	27	25	2
Total	1,038	926	112

3.36. AMORTISATION & DEPRECIATION

The breakdown of the account is as follows (in Euro thousands):

	H1 2022	H1 2021	Change
Property, plant and equipment	3,470	3,559	(88)
Right-of-use	1,247	1,156	90
Investment property	38	36	2
Intangible assets with definite life	4,620	5,727	(1,106)
Total	9,375	10,477	(1,102)

Amortization of Intangible assets with a definite life primarily includes:

- amortisation of capitalised development costs of Euro 2,068 thousand (Euro 3,393 thousand in H1 2021);
- Euro 1,493 thousand for the amortisation of development costs capitalised and for the amortisation of intangible assets regarding the Ariane and Vega programmes, identified following the purchase price allocation process regarding the Group by Space2 in 2017 (same amount in H1 2021).

3.37. OTHER OPERATING COSTS

This aggregate amounts to Euro 1,973 thousand (Euro 2,332 thousand in H1 2021) and mainly comprises the following items:

- indirect taxes of Euro 807 thousand (same as in H1 2021);
- other operating costs of Euro 938 thousand (Euro 515 thousand in H1 2021) related to association dues, entertainment expenses, and sundry losses;
- allocations to provisions of Euro 158 thousand (Euro 321 thousand in H1 2021);
- prior-year charges of Euro 70 thousand (Euro 186 thousand in H1 2021).

3.38. EFFECT VALUATION OF INVESTMENTS UNDER EQUITY METHOD - OPERATING INCOME/(CHARGES)

The account includes the effect of the application of the equity method for the valuation of the investment held in the jointly-controlled company Europropulsion S.A. These effects are recorded, in accordance with the option permitted by IFRS 11, under operating income and charges of the Group, based on the operating nature of the investment of the Avio Group in the company. The effect recognised for H1 2022, a charge of Euro 1,888 thousand, represents the income for the period of Euro 512 thousand, net of the reduction in the company's share of equity, in view of the fact that it paid dividends to Avio for Euro 2,400 thousand.

In the comparative H1 2021 period, the effect of the valuation of the investment in the above company was income of Euro 442 thousand.

3.39. COSTS CAPITALISED FOR INTERNAL WORKS

The account relating to costs capitalised for internally constructed assets, amounting to Euro 3,499 thousand (Euro 7,277 thousand in H1 2021), includes the costs for the internal construction of intangible assets, and to a lesser extent, tangible assets, recorded under assets in the Balance Sheet.

The account comprises the capitalisations of:

- internal development costs of Euro 2,481 thousand (Euro 5,712 thousand in H1 2021);
- costs for the internal production of tangible assets for Euro 158 thousand (Euro 281 thousand in H1 2021);
- costs for investments regarding the optimisation of operating processes to achieve production efficiency benefits in the amount of Euro 860 thousand (Euro 1,284 thousand at June 30, 2022).

3.40. FINANCIAL INCOME

The breakdown of the account is as follows (Euro thousands):

	H1 2022	H1 2021	Change
Interest income on VAT refunds	71	76	(5)
Financial income from amortised cost	125	185	(60)
Other financial income	-	8	(8)
	196	269	(73)
Realised exchange gains	57	129	(72)
Unrealised exchange gains	-	(50)	50
	57	79	(22)
Total	253	348	(95)

Financial income of Euro 253 thousand concerned:

- interest income from the discounting of receivables for Euro 125 thousand (Euro 185 thousand in the comparative period), of which:
 - Euro 80 thousand concerning the financial receivable of the associate Termica Colleferro S.p.A.;
 - Euro 45 thousand concerning the receivables from the Ministry for Economic Development for the disbursements as per Law 808/85 and receivables from other parties with maturity over the medium/long-term;
- exchange gains for Euro 57 thousand.

Realised exchange gains arise on the collection of receivables and settlement of payables in foreign currencies.

Unrealised exchange losses relate to the period-end translation of receivables and payables in foreign currencies.

3.41. FINANCIAL CHARGES

The breakdown of the account is as follows (Euro thousands):

	H1 2022	H1 2021	Change
Interest on EIB loans	137	182	(45)
Interest on other payables	15	14	1
Discounting on employee benefits	(18)	(20)	2
Financial charges from amortised cost	167	106	61
	301	281	20
Realised exchange losses	250	164	87
Unrealised exchange losses	-	(5)	5
	250	158	92
Total	551	439	112

Financial charges, amounting to Euro 551 thousand (Euro 439 thousand in the comparative period), mainly comprised:

- interest expenses on the two EIB loans of Euro 137 thousand;
- financial charges from amortised cost applied to liabilities for Euro 167 thousand;
- exchange losses for Euro 250 thousand.

Realised exchange losses arise on the collection of receivables and settlement of payables in foreign currencies.

Unrealised exchange losses relate to the period-end translation of receivables and payables in foreign currencies.

3.42. INCOME TAXES

The effective tax charge in the period is presented below (in Euro thousands):

	30/06/2022	30/06/2021
Italian company taxes	(41)	(162)
Taxes overseas companies	(1,474)	(10)
Net deferred tax income/charge	400	232
	(1,115)	60

This charge therefore comprises:

- IRES and IRAP income tax expense for the Italian companies of Euro 41 thousand (Euro 162 thousand in H1 2021);
- current tax charges of overseas subsidiaries for Euro 1,474 thousand (Euro 10 thousand in H1 2021);
- deferred-tax gain of Euro 400 thousand (Euro 232 thousand in H1 2021).

The reconciliation between the theoretical and effective IRES corporate income tax is presented below (in Euro thousands):

	30/06/2022	30/06/2021
Pre-tax result	(6,516)	(2,501)
Ordinary rate applied	24.00%	24.00%
Theoretical tax charge	(1,564)	(600)
Effect of increases (decreases) to the ordinary rate:		
Permanent increases	2,590	2,225
Permanent decreases	(4,061)	(6,415)
Temporary difference increases	6,423	8,890
Temporary difference decreases	(7,198)	(10,480)
Total changes	(2,245)	(5,780)
Utilisation of fiscal losses	-	-
IRES taxable income of the Group	(8,761)	(8,281)
Effective IRES taxes	(14)	(127)
Effective IRAP taxes	(27)	(35)
Other direct taxation of foreign companies	(1,474)	(10)
Sub-total current income taxes	(1,515)	(172)
Deferred-tax (charge)/income	400	232
Sub-total deferred income taxes	400	232
Total tax (charge)/income	(1,115)	60

3.43. EARNINGS/(LOSS) PER SHARE

An explanatory statement is reported below (in Euro):

	H1 2022	H1 2021
Group Consolidated Result	(9,453,889)	(2,449,845)
Number of shares in circulation	26,359,346	26,359,346
Treasury shares	(1,103,233)	(671,233)
Number of shares entitled to profits	25,256,113	25,688,113
Basic earnings/(losses) per share	(0.37)	(0.10)
Diluted earnings/(losses) per share	(0.36) ⁽¹⁾	(0.09) ⁽¹⁾

⁽¹⁾ Diluted earnings (or loss) per share was determined assuming the conversion of the 800,000 sponsor warrants into ordinary shares.

4. DISCLOSURE BY OPERATING AND REGIONAL SEGMENTS

Disclosure by operating segment

In the first half of 2022, the Avio Group continued operating activities in line with previous years, exclusively in the Space business. Consequently, all the assets and liabilities, costs and revenues refer exclusively to a single sector of activity, which corresponds to the consolidation scope of the Group.

The Group workforce numbered 1,047 at June 30, 2022. At December 31, 2021 and June 30, 2021, Group employees respectively numbered 991 and 944.

Disclosure by regional segment

The regional breakdown of Group revenues (defined based on customer country location), in H1 2022 (and in line with recent years) refers completely to Italy and Europe.

Group activities, and new investments, are similarly allocated - on the basis of the same criterion as revenues (customer country location) - entirely in Italy and Europe.

5. COMMITMENTS AND RISKS

The Group's principal commitments and risks are summarised in the following table (in Euro thousands):

	30/06/2022	31/12/2021
Guarantees given:		
Unsecured guarantees:		
Sureties issued to third parties on behalf of Group	64,206	59,131
Other guarantees	3,402	3,402
Total guarantees given	67,608	62,533
Guarantees received:		
Sureties and guarantees received	1,206	1,206
	1,206	1,206

Guarantees granted

Secured guarantees include sureties issued by third parties on behalf of the Group in favour of clients for the execution of contracts and other guarantees in the form of patronage letters issued in the interest of Group companies.

The increase in guarantees granted compared to December 31, 2021, is mainly due to a surety granted to the Italian Tax Agency for reimbursement of the VAT receivable of Avio S.p.A. related to fiscal year 2020.

Sureties and guarantees received

These principally include sureties received from suppliers against orders for supplies to be completed.

Other commitments

The associated company Termica Colleferro S.p.A. ("Termica Colleferro") is currently 40% owned by Avio and 60% owned by the controlling shareholder Cogenio S.r.l. ("Cogenio"), which took over SECI S.p.A. ("SECI") on December 22, 2021.

Termica Colleferro manages a thermoelectric power plant that produces energy and steam essential for the functioning of the Avio production site in Colleferro.

For the purpose of building the thermoelectric plant, Termica Colleferro stipulated, in February 2010, a loan agreement for a maximum principal amount of Euro 34 million, guaranteed by SECI with a first demand surety and with a pledge on Termica Colleferro shares for the portion held by the same, with an original maturity date of February 24, 2022.

The bank loan agreement requires Termica Colleferro to comply with typical financial covenants consisting of the ratio of financial debt to equity and of financial debt to EBITDA.

In consideration of the deterioration of the general conditions of the electricity market, in order to ensure compliance with the bank covenants, Termica Colleferro, Avio, SECI and the financing banks signed, in 2014, agreements amending the original loan agreement, according to which:

(i) the right of Termica Colleferro to cure any infringement of the financial parameters was provided for through the payment by SECI and Avio shareholders of a pro-quota amount, by way of capital increase and/or shareholders loan (the "Equity Cure"), sufficient to cure the infringement (the "Cure Amount");

(ii) it was also provided that SECI and Avio, in proportion to the shares held, would undertake, without any solidarity obligation, to grant a shareholder loan up to a maximum amount of Euro 18.2 million and Euro 12.1 million, respectively, in proportion to the share capital held in Termica Colleferro, and cumulatively corresponding to the residual portion of the bank loan outstanding at that date, payable in several instalments, upon request by Termica Colleferro, in relation to the latter's operating requirements, and subordinated to the bank loan.

In December 2016, Termica Colleferro restructured its remaining bank debt of approx. Euro 22 million, mainly by extending the duration of the repayment plan from 2022 to 2027, reducing the interest rate spread and raising the covenant thresholds. The bank debt restructuring agreement did not modify the guarantees to which the then shareholders SECI and Avio had committed themselves towards the financing banks, except for the alignment of the same to the new maturity of the bank loan.

On May 31, 2019, some Seci Group companies, including the holding company Seci S.p.A, and companies operating in the energy sector, in the agro-industrial sector, in the building/real estate sector and the last in the factoring sector, presented a voluntary arrangement with creditors application to the Bologna Court, agreed following the Order issued by the delegated Judge. The Court originally granted a deadline for the preparation and presentation of a business plan for the maintenance of the Group as a "going concern". Therefore, the majority stake in Termica Colleferro held by SECI S.p.A. has become an asset within the related procedure.

Termica Colleferro was not included in the companies presenting an administration procedure.

As the presentation by the parent company SECI S.p.A. of the application for an arrangement with creditors is, under the terms of the Termica Colleferro bank loan agreement, an acceleration clause for repayment of the loan, in order to define its position vis-à-vis the lending banks in April 2020, Termica Colleferro requested from them a waiver of the acceleration clause in the loan agreement.

In August 2020, the banks indicated that they are not in a position to carry out an assessment of the creditworthiness of the requests made by Termica Colleferro, while they shall not activate the acceleration clause.

After taking steps with SECI S.p.A. such that SECI S.p.A. could respond to requests for information from the banks, Termica Colleferro continued to pay the instalments of the loan.

In the first half of 2021, in pursuit of the objective to sell the stake in Termica Colleferro, SECI S.p.A. mandated an energy sector consulting firm to contact the leading industry players and issued a process letter to them calling for a formal, binding expression of interest in acquiring the 60% holding in Termica Colleferro.

This action led a number of parties potentially interested in acquiring stakes in Termica Colleferro to contact Avio in order to ask about potential future collaborations should they be awarded the equity interest.

In July 2021, the Court of Bologna declared SECI S.p.A. bankrupt on the basis of the judgement of inadmissibility of the application for "Full Agreement" with the filing of the plan for an arrangement with creditors on a going concern basis pursuant to Articles 160 - 161 and 186-bis of the Finance Law.

In consideration of the declaration of bankruptcy, although the liquidation scenario of the investment in Termica Colleferro started by SECI S.p.A. remained substantially unchanged, Termica Colleferro and Avio promptly contacted the receivers in order to coordinate and accelerate the disposal of the 60% of the share capital of the Company.

Following discussions with the Receivership, in which Termica Colleferro and Avio, as supplier and customer, laid out their respective operational needs, the Bologna Court took immediate steps to initiate the sale of the stake held by SECI S.p.A. in Termica Colleferro, authorising the Receivers to take steps in this regard by issuing an authorisation order on August 18, 2021, which was followed by publication of the related call for tender on September 1, 2021.

In the meantime, on August 24, 2021, Termica Colleferro repaid the second instalment on the bank loan, completing the repayment plan scheduled for the entire 2021.

With respect to Termica Colleferro's request, promptly submitted to the lending banks, for a waiver of the acceleration clause of the loan due to the composition with creditors of the controlling shareholder SECI, on the assumption of the normal continuation of Termica Colleferro's operations not impacted by SECI's composition with creditors, as well as Termica Colleferro's independent ability to punctually repay the instalments of the bank debt falling due, the lending banks never manifested their willingness to avail themselves of the right granted to them by the loan agreement, and this is also reasonable in light of Termica Colleferro's ability to autonomously and punctually meet the payments due, as was the case.

On September 1, 2021, the Court of Bologna ordered the auction sale of the entire equity investment (equal to 60% of the share capital) held by SECI in Termica Colleferro, which concluded, thanks also to the search for potential buyers carried out

in the first half of 2021, with the final award to Cogenio, subject to satisfaction, inter alia, of the suspensive condition, to which the sale was subject, of the prior obtaining of a waiver from the lending banks.

The waiver from Termica Colleferro's lending banks was obtained on December 10, 2021 and Cogenio's takeover was finalized on December 22, 2021. Termica Colleferro's Shareholders' Meeting, held on December 22, 2021, approved the financial statements for fiscal years 2019 and 2020, with reference to which Termica Colleferro has always considered the going concern assumption to exist, even during the period in which the bank waiver was outstanding, in light of the Company's ability to independently and punctually honour the repayment of the bank debt and, more generally, the payments, as in fact occurred.

On the basis of the most recent approved financial statements of Termica Colleferro S.p.A., the financial covenants in the above loan agreement have been observed.

The shareholder loan commitment undertaken by Avio S.p.A. has a maximum limit equal to 40% of the outstanding bank debt of Termica Colleferro. At December 31, 2021, Termica Colleferro's outstanding bank debt amounts to Euro 10.6 million. The maximum limit of the commitment undertaken by Avio S.p.A. at December 31, 2021 therefore amounted to Euro 4.2 million. At the reporting date, Avio has a financial receivable for the shareholder loan granted to Termica Colleferro of Euro 7.4 million, carried in the accounts under the amortized cost method at Euro 6.4 million.

As a consequence, due to the progressive repayment of the bank debt by Termica Colleferro, no further financial commitments existed for Avio S.p.A. towards Termica Colleferro as regards the latter's bank loan.

On February 24, 2022 and August 24, 2022, Termica Colleferro punctually repaid the instalments due on its bank loan in the amount of Euro 2.2 million, of which Euro 2.0 million in principal. Consequently, the bank debt outstanding as of today amounts to Euro 8.6 million.

Discussions are currently ongoing with Cogenio on the future structure of Termica Colleferro.

There is no evidence of a risk that Termica Colleferro will interrupt the provision of electricity or heating. For further details, reference should be made to the "Main risks and uncertainties to which the Group is exposed" section.

Legal and tax cases and contingent liabilities

At the half-year reporting date, a number of Group companies were either plaintiffs or defendants to legal, civil, administrative and tax cases related to normal business operations, as outlined below.

Avio S.p.A. and the subsidiaries have established in their financial statements and, therefore, in the consolidated financial statements, appropriate provisions for risks and charges to cover foreseeable liabilities relating to disputes of differing natures with suppliers and third parties, both within the courts and extra-judicially, the relative legal expenses, in addition to administrative sanctions, penalties and client indemnities (where applicable). In establishing provisions, account was taken of: (i) the risks related to each dispute; and (ii) the applicable accounting standards, which require the provisioning of liabilities for probable and quantifiable risks.

Avio Group management consider the risks and charges provision estimates as appropriate with regards to the Group's overall amount of contingent liabilities.

In addition, with regards to disputes with a possible or remote risk of loss, or of an incalculable amount (of a limited number), in accordance with the accounting standards no risks provision has been established.

The Group in addition bases its risk of potential loss estimates on assessments/expectations with regards to the expected final judgment on the dispute, which remains however linked to the intrinsic uncertainty of each judgment, for which differing outcomes (whether favourable or unfavourable) for the Group against the *ex-ante* estimates may not be excluded.

A summary of current proceedings considered by the Group as significant on the basis of the amount or matters considered is provided below.

Legal disputes

Secosvim/Caffaro

The Colleferro industrial district includes an industrial area known as "Benzoin and derivatives" owned by Secosvim, until December 31, 2007 leased to Caffaro S.p.A., which since September 2009 was subject to an extraordinary administration proceeding. For the collection of Caffaro debts, Secosvim submitted an application for admission to its insolvency proceedings, which was accepted.

At the same time, the Emergency Commissioners Office of Sacco Valley issued a claim for damages against Caffaro for land pollution for an estimated amount of approx. Euro 7 million, corresponding to the expected cost for the recovery of these areas. Caffaro proposed before the Lazio Regional Administrative Court (over the period between 2008 and 2012) seven separate appeals, challenging a series of administrative acts (minutes of the conferences of service, notes with which Caffaro was requested to present contaminated waste disposal plans, approval deeds of characterization activities), by which the Commissioner's Office stated that, in the event of non-compliance with the orders issued, claims would be made against Caffaro. These motions were notified also to Secosvim as owner of the Benzoin area, which was therefore summoned before the court in accordance with law.

As the company Caffaro may claim these costs from Secosvim as the owner of the buildings, Secosvim therefore has requested since October 2009 before the Velletri court a prior technical declaration ("ATP") to establish any liability upon Caffaro for the contamination of the Benzoin area, which concluded with the filing of an opinion which confirmed the direct liability of Caffaro for the above-stated contamination.

In the pending rulings by the Lazio Regional Administrative Court, the State Prosecutor requested the court to assess the judicial incompatibility of the appeal decision. On conclusion of the hearing of December 6, 2016, the Lazio Regional Administrative Court consequently adopted separate ordinances (of identical tenor), with which (for each appeal) the President of the Counsel was requested to file within 90 days documented clarifications with regards to the criminal proceeding pending before the Velletri Court No. 1831/2014 (as reported in the previous paragraph, relating to the "Criminal proceeding against Consorzio Servizi Colferro with regards to the pollution of the Sacco river"). The hearing to discuss these appeals has been postponed multiple times as we await completion of the criminal proceedings. The last hearing was held on June 9, 2021.

With ruling No. 12946/2021 issued on December 15, 2021, the Lazio Regional Administrative Court, following a meeting of the court, rejected the seven separate appeals filed by Caffaro against deeds issued by the Commissioner's Office for the emergency in the area around the Sacco river in the provinces of Rome and Frosinone within the scope of managing the emergency.

This decision was appealed by Caffaro on March 15, 2022; therefore, the ruling is pending as we await a decision by the Council of State, Section IV, RG No. 2645/2022.

Secosvim duly entered an appearance, and the hearing is to be held on September 22, 2022.

Group tax audits

Information is provided below on the most significant tax audits and disputes which, at the date of the present financial statements, concerned Avio S.p.A. and its subsidiaries, with details on the specific disputes and the relative amounts.

A) Avio S.p.A. tax audits and disputes

A.1.) Settlement notice served on July 28, 2016 for indirect taxes on the transfer of the Aeroengine business unit from Avio S.p.A. to GE Avio S.r.l.

On July 28, 2016, the Tax Agency notified Avio S.p.A. of a settlement notice for registration, mortgage and cadastral taxes totalling Euro 58,220 thousand, re-categorising the conferment of the Aeroengine business unit from Avio S.p.A. to GE Avio S.r.l., and the subsequent sale of the shares of this latter company, during 2013, as a direct transfer of the business unit and, consequently, raised the alleged non-payment of the indirect taxes applicable to the above declared transfer of the business unit.

Convinced that there were extremely valid arguments for considering the charges brought by the revenue authorities to be baseless, Avio S.p.A. - in coordination with the General Electric Group, jointly appearing with Avio S.p.A. - appealed the aforementioned settlement notice. The Piedmont Regional Tax Commission decided in the company's favour in judgment 1740/18 filed on November 7, 2018, in which it granted the Company's appeal in full.

In 2020 the Italian Tax Office appealed the above judgment before the Court of Cassation. The Company appeared promptly in the proceedings with its own counter-appeal and simultaneous cross-appeal, reaffirming the soundness of its arguments. With regards to this dispute, on the basis of specific contractual provisions, the General Electric Group is required to indemnify Avio S.p.A. for any liabilities which may arise with regards to the indirect taxes relating to the disposal of the company GE Avio S.r.l. (containing the AeroEngine segment operations of the Avio Group), in addition to the provision to Avio S.p.A. of any amounts requested by the Tax Agency by the established payment deadlines. In this regard, on August 12, 2016, following the notification from the Tax Agency to Avio S.p.A. of the settlement notice for a total of Euro 58,220 thousand, GE Italia Holding S.p.A. confirmed to Avio S.p.A. its punctual fulfilment of the above contractual stipulations. In view of that above, and particularly the notification of the above-stated settlement notice which quantifies the alleged indirect taxes as Euro 58,220 thousand, in addition to the above payments of the contractually established indemnities and confirmed subsequently to the settlement notice at issue, a tax payable was recognised to the financial statements in relation to the liabilities which

may arise from the dispute regarding the settlement notice and a corresponding receivable from the General Electric Group recorded for the same amount of Euro 58,220 thousand.

With regard to the litigation in question, and in particular the subject-matter of the dispute, relating to the anti-avoidance provision of Article 20, headed "Interpretation of acts", of Presidential Decree No. 131/1986 ("Consolidated Registration Tax Act"), mention should be made of some circumstances post-dating the service of the payment notice. Specifically:

- the 2018 Budget Law (see Article 1, paragraph 87, letter a), of Law 205 of December 27, 2017) amended, with effect from January 1, 2018, Article 20 of the Consolidated Registration Tax Act, limiting the ability of the revenue authorities to reclassify acts subject to registration;
- the 2019 Budget Law (see Article 1, paragraph 1084, of Law 145 of December 30, 2018) attributed retroactive effect to the provision introduced by the 2018 Budget Law, which therefore should apply to payment notices – including that served on the Company – served in years prior to 2017;
- on July 21, 2020 Italy's Constitutional Court (see judgment no. 158) ruled that there was no basis for the challenges of the constitutionality of Article 20 of the Consolidated Registration Tax Act, holding that the statute is intended to reaffirm the "transaction tax" nature of registration tax, and clarifying the object of taxation in accordance with the structure of a levy on the legal effects of the legal transaction presented for registration, without the revenue authorities being able to attach relevance to extratextual elements and linked legal transactions devoid of any textual connection with the transaction in question;
- on September 17, 2020 the Central Directorate of the Tax Agency published official clarification (see reply no. 371) in which, acknowledging the above ruling by the Constitutional Court, it clarified that *"the sale of company quotas preceded by the contribution of a business line cannot be taxed on a par with the sale of a company as a whole on the basis of the provisions of Article 20 of the Consolidated Income Tax Act."*

At the reporting date, the Court of Cassation has yet to schedule a hearing.

A.2) Questionnaire of the Piedmont DRE of June 4, 2019 concerning transfer prices between Avio S.p.A. and Regulus S.A. - 2014 Tax period

In November 2019, the Piedmont Tax Agency served two separate assessment notices on the Company, respectively for IRES and IRAP, in relation to the 2014 tax year, concerning the application of "transfer pricing" tax regulations to transactions between Avio S.p.A. and its subsidiary Regulus S.A., on the assumption that the latter is a tax resident in French Guyana.

With regard to the IRES assessment notice, it should be noted that, pending the settlement procedure, the Company has asked the Office to be able to offset the greater taxable profit assessed against unused prior tax losses. Granting the Company's request, in July 2020 the Office recalculated the greater IRES assessed for 2014 (and related interest), reducing it to zero and levying a single administrative fine of Euro 1,250.00.

With regard to the IRAP assessment notice, since the value of production adjusted by the Office is still negative, no tax was recovered and a fixed penalty of Euro 250.00 was levied. Therefore, the liability associated with this dispute amounts to a total of Euro 1,500.

In June 2020, the Company filed timely appeals of two notices of assessment of IRES and IRAP taxes, being confident of the correctness of its actions and considering that it has acted in full compliance with the law.

In a ruling filed on June 24, 2022, the Turin Provincial Tax Commission upheld both of the Company's appeals concerning IRES and IRAP, citing the calculation of comparables performed by the Turin regional office and noted that the determination of the range of transfer prices was manipulated by that office without cause and in a debatable manner, whereas the documentation provided by the Company met the criteria set by OECD guidelines for determination of "normal value" as specified under Article 9(3) of the Consolidated Income Tax Law.

B) Se.Co.Sv.Im. Secosvim S.r.l. -Tax audits and disputes

The following is a brief description of the tax disputes of Se.Co.Sv.Im. S.r.l. and of the main related contingent liabilities.

B.1) Tax disputes with the Municipality of Segni relating to property tax (ICI).

2011: the dispute for the year in question concerns property tax, interest and penalties levied for a total of Euro 57 thousand. Se.Co.Sv.Im., following an unsuccessful settlement procedure, appealed to the Rome Provincial Tax Commission, which in June 2018 rendered a judgment unfavourable to the Company.

In February 2019 Secosvim lodged a timely appeal against the unfavourable judgment rendered by the Rome Provincial Tax Commission.

The Lazio Regional Tax Commission has set the hearing to discuss the case for October 2022.

2012 and 2013: the dispute for the years in question concerns property tax, interest and penalties levied for a total of Euro 14 thousand.

In July 2018, Secosvim lodged a complaint/appeal with the Rome Provincial Tax Commission.

The Rome Provincial Tax Commission rejected the Company's claims in a judgment filed in December 2019.

The Company promptly appealed the above judgment in September 2020 and is now awaiting the fixing of the appeal hearing by the Lazio Regional Tax Commission.

B.2) Tax dispute relating to non-application of VAT on reclamation costs recharged to Avio in the years 2010, 2011 and 2012

These disputes concern three notices of assessment for VAT related to 2010, 2011 and 2012, disputing the Company's alleged failure to apply VAT to reclamation costs billed to Avio S.p.A. in these years for a total, including interest and penalties, of Euro 3,568,202.

In 2019, the company decided to agree to the expedited settlement of the pending tax disputes as per Article 6 of Legislative Decree No. 119 of October 23, 2018, converted with amendments by Law No. 136 of December 17, 2018. This settlement resulted in the payment of the taxes alone, without any past-due interest or penalties. The total amount due for all settlements is Euro 1,659,486.05, which is to be paid in 20 quarterly instalments. The first instalment was paid on May 31, 2019, and the final payment must be made by February 28, 2024.

For 2021, the amount to be paid as an agreed settlement is Euro 323,939.65 (Euro 331,897 including interest).

As at July 31, 2020, the Tax Agency had not notified the Company of any refusal of the settlement of pending litigation, as a result of the provisions of Article 6 of Decree-Law No. 119/2018, the settlement of the disputes by the Company must be considered final and legitimately carried out.

B.3) Correction and settlement of increased registration, mortgage and land taxes from the reclassification as the disposal of a business, with related recalculation of goodwill relating to the business unit, of the transfer of the "Energia Colleferro" business unit to Termica Colleferro S.p.A. and the subsequent transfer of the investment in this latter to the indirect parent company Avio S.p.A..

In relation to the transfer of the "Energia Colleferro" business unit to Termica Colleferro S.p.A. and the subsequent transfer of the investment in this latter to the indirect parent company Avio S.p.A., the Bologna Tax Office had served:

- a) a settlement notice for greater registration, mortgage and property registry taxes arising from the re-characterisation of the transaction as the sale of a company, for a total of Euro 142 thousand;
- b) an adjustment notice relating to the redetermination of the value of the goodwill attributable to the business unit subject to the purported company sale, for a total of Euro 16 thousand.

The dispute concerning the document referred to in *point a)* was resolved in the Company's favour in both the first and second instances. Accordingly, on December 2, 2019 the Italian Tax Office filed an appeal against the judgment of the Emilia Romagna Regional Tax Commission before the Court of Cassation.

On January 24, 2020 the Company appeared promptly in the proceedings, filing its own counter-appeal.

The Court of Cassation has yet to schedule a hearing.

The dispute concerning the document referred to in *point b)* was resolved in the Company's favour in the first instance, whereas in the second instance in December 2018 the Emilia Romagna Regional Tax Commission suspended the trial pending the resolution of the dispute indicated in *point a)* above.

C) Spacelab S.p.A. (ex ELV S.p.A.) - Tax audits and disputes.

It should be noted that this company had not been and is not involved in any tax audits or disputes at the reporting date.

D) Europropulsion S.A. – Tax audits and disputes.

Europropulsion was subject to a Tax Assessment by the French Tax Authorities with regards to the "*taxe professionnelle*" (an indirect tax adopted in France similar to the Italian IRAP) on ESA assets provided for use by the Company initially for tax years 2009, 2010 and 2011 and subsequently for 2012 and 2013.

The amounts contested are:

- for the years from 2009 and 2011, initially amounting to Euro 1.6 million, paid by the company in 2014. This amount was thereafter reduced to Euro 0.9 million following the recognition of partial relief of Euro 684 thousand by the French tax authorities;
- for the years 2012 and 2013 amounting to approx. Euro 250 thousand.

For the years 2009-2011, Europropulsion presented a first level appeal at the competent Tax Court, which judged against the company; the Company appealed this decision on September 9, 2016.

With judgment of November 11, 2017, the competent French tax authorities cancelled the challenge concerning financial year 2010.

In the course of the legal procedure, it bears mentioning that in 2020 the judicial authority, known as the “Conseil d’Etat”, declared the use of ESA assets subject to taxation according to an interpretation of the spirit of the tax law, referring the judgment to the next level, in accordance with the French legal system.

The last instance judgment was issued by the “*Cour Administrative d’Appel de Paris*” and was unfavourable for the Company. In view of the judgment rendered in 2020 and 2021 and the opinion of its legal counsel, in its 2020 and 2021 financial statements the Company decided to recognise the total amount of the tax liability associated with the matter for the years 2009 to 2020, which was recalculated and estimated at approx. Euro 4 million. Therefore, the financial statements of these joint ventures at December 31, 2021, still reflect this allocation.

6. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT POLICIES

Fair value of financial assets and liabilities and calculation models utilised

In relation to any financial instruments recorded in the balance sheet at fair value, IFRS 7 requires that these values are classified based on the hierarchy levels which reflects the significance of the input utilised in the determination of fair value. The following levels are used:

- level 1 - assets or liabilities subject to valuation listed on an active market;
- level 2 - input based on prices listed at the previous point, which are directly observable (prices) or indirectly (derivatives from the prices) on the market;
- level 3 - input which is not based on observable market data.

The company and the Avio Group did not have derivative financial instruments in place at June 30, 2022.

Types of financial risks and related hedging

The Avio Group through its operating activities is exposed to financial risks, in particular:

- credit risks, related to commercial transactions with clients and funding operations;
- liquidity risk, related to the availability of financial resources and access to the credit market;
- market risks;
- interest rate risk

These financial risks are continually monitored, undertaking initiatives to offset and contain potential impacts through appropriate policies and, where in general considered necessary, also through specific hedging instruments (currently not necessary as the loan interest rate with the EIB is fixed and competitive compared to the market).

Credit Risk

Credit risk represents the exposure of the Company and of the Group to potential losses due to the non-compliance with obligations by commercial and financial counterparties.

The exposure to credit risk is essentially related to receivables recognised to the financial statements, particularly trade receivables and guarantees provided in favour of third parties.

The maximum theoretical exposure to the credit risk for the Group at June 30, 2022 essentially concerned the overall carrying amount of trade receivables, whose value at this date amounted to Euro 2,337 thousand.

This amount was recognised to the Assets section of the Balance Sheet, as the net balance between the nominal value of trade receivables and, as counter-entry, advances to be received.

Regarding the reasons for the exposure to credit risk represented by receivables net of “advances to be repaid”, in accounting terms, the issuing of invoices involves as a counter-entry, against the recognition of an asset from the clients, the recognition of a liability concerning the advances to be received. These are both recognised to the balance sheet. The ageing analysis therefore is made net of the above-stated advances.

The main Group clients are government bodies and public sector clients, which by their nature do not present significant risk concentrations (ESA - European Space Agency, Arianespace, ArianeGroup).

In addition, operating on an order basis, the Avio Group plans the management of advances so as to attain the funding before and during the incursion of order costs, on the basis of the various contractual milestones and mitigating therefore the risk regarding the payment of receivables against the initiated production activities.

Based on an analysis of overdue trade receivables at June 30, 2022, trade receivables net of a doubtful debt provision were recorded of Euro 482 thousand. The overdue amounts were therefore not significant and mainly relate to timing factors.

Liquidity risk

The Company and Group's liquidity risk concerns any difficulties in obtaining at appropriate conditions the funding necessary to support operations. The principal factors which influence liquidity are, on the one hand, the resources generated and absorbed by the operating and investment activities and on the other the conditions concerning the maturity of the payable or the liquidity of the financial commitments.

Cash flows, funding requirements and liquidity are centrally monitored and managed, also through centralised treasury systems involving the main Group Italian and overseas companies, in order to ensure the timely and efficient sourcing of funding or the appropriate investment of liquidity, optimising the management of liquidity and cash flows. The Group periodically monitors forecast and effective cash flows and updates future cash flow projections in order to optimise liquidity management and calculate any funding requirements.

The currently available funds, in addition to those that will be generated from operating and financial activities, are considered sufficient to permit the Group to satisfy its requirements for investment activities, working capital management and the repayment of debt on maturity.

Market risk

With regards to the current financial structure of the Company and of the Group and the fact that the operating currency is almost exclusively the Euro, the company is not considered to currently be subject to significant market risks from fluctuations in exchange rates or interest rates on financial receivables and payables.

The Company and the Group, considering that stated with regards to the insignificant market risk related to exchange rate and interest rate movements, at June 30, 2022 had not undertaken specific cash flow hedges in relation to these types of risks.

Interest rate risk

The company has two loans with the European Investment Bank (EIB) for an original total of Euro 50 million (Euro 27 million remaining), at a competitive interest rate compared to the market.

Therefore, this risk is not considered applicable to the company and, therefore, to the Avio Group.

7. RELATED PARTY TRANSACTIONS

Avio regularly undertakes commercial and financial transactions with its subsidiaries and jointly-controlled companies, consisting of transactions relating to ordinary operations and undertaken at normal market conditions. In particular, these concern the supply and purchase of goods and services, including of an administrative-accounting, tax, IT, personnel management and assistance and consultancy nature, and the relative receivables and payables at period-end and funding and centralised treasury management transactions and the relative charges and income. These transactions are eliminated in the consolidation and consequently are not outlined in this section.

The related parties of the Avio Group are identified on the basis of IAS 24 - *Related Party Disclosures*, applicable from January 1, 2011, and are the parent companies, companies with a connection with the Avio Group and its subsidiaries as defined by the applicable rules, companies controlled but not consolidated within the Avio Group, associates and jointly-controlled companies of the Avio Group and other investee companies.

Until the effective acquisition date by Space2, Leonardo and In Orbit (on March 31, 2017), Leonardo - on the basis of rights arising under the Cinven shareholder agreement - had a connection with the Avio Group, although formally holding an investment in the Incorporated company under the threshold established by the IAS and Article 2359 of the Civil Code, final paragraph. Following the listing, although the shareholder agreement with Cinven had lapsed, Leonardo S.p.A. maintained this connection with the Avio Group on the basis of the increase of its investment in the Incorporated company over the threshold established by the above-stated rules.

The following tables present the quantification of transactions with related parties not falling within the Group consolidation on the Balance Sheet and on the Group Income Statement at June 30, 2022 and December 31, 2021 (in Euro thousands):

At June 30, 2022										
Counterparty	Other non-current assets	Inventories and Advances to suppliers	Trade receivables	Other current assets	Work in progress to order	Non-current financial assets	Trade payables	Other current liabilities	Advances from clients for contract work-in-progress	Financial liabilities
Leonardo S.p.A.	-	1,350	-	-	-	-	-	301	-	-
MBDA Italia S.p.A.	-	-	-	-	4,213	-	-	-	41	-
MBDA France S.A.	-	-	2,846	-	7,406	-	-	-	39,093	-
Thales Alenia Space Italia S.p.A.	-	-	-	-	-	-	45	-	-	-
Vitrociset S.p.A.	-	-	-	-	-	-	-	-	-	-
Companies with a connecting relationship and relative investee companies	-	1,350	2,846	-	11,618	-	45	301	39,134	-
Italian Space Agency (ASI)	-	-	-	-	2,114	-	-	3,132	431	-
Italian government body with a connecting relationship	-	-	-	-	2,114	-	-	3,132	431	-
Termica Colferro S.p.A.	-	-	801	-	-	6,495	5,744	-	-	1,061
Europropulsion S.A.	-	42,819	592	-	78,247	-	4,004	-	81,763	2,749
Potable Water Services Consortium	-	-	144	18	-	-	20	-	-	-
Servizi Colferro - Consortium Limited Liability Company	-	-	28	-	-	-	129	-	-	-
Associates and jointly controlled companies	-	42,819	1,565	18	78,247	6,495	9,898	-	81,763	3,810
Total related parties	-	44,169	4,410	18	91,980	6,495	9,943	3,433	121,329	3,810
Total book value	67,767	181,681	2,337	11,285	402,711	6,495	58,126	28,094	601,980	36,190
% on total account items	0.00%	24.31%	188.71%	0.16%	22.84%	100.00%	17.11%	12.22%	20.15%	10.53%

December 31, 2021										
Counterparty	Other non-current assets	Inventories and Advances to suppliers	Trade receivables	Other current assets	Work in progress to order	Non-current financial assets	Trade payables	Other current liabilities	Advances from clients for contract work-in-progress	Financial liabilities
Leonardo S.p.A.	-	1,350	-	-	-	-	1,855	283	-	-
MBDA Italia S.p.A.	-	-	17	-	4,779	-	-	-	35	-
MBDA France S.A.	-	-	135	-	10,080	-	-	-	37,761	-
Thales Alenia Space Italia S.p.A.	-	-	-	-	126	-	950	-	145	-
Vitrociset S.p.A.	-	-	-	-	0	-	-	-	0	-
Companies with a connecting relationship and relative investee companies	-	1,350	153	0	14,985	0	2,805	283	37,941	0
Termica Colferro S.p.A.	-	-	744	-	-	6,415	6,588	-	-	1,120
Europropulsion S.A.	-	27,526	268	-	84,611	-	1,670	-	63,047	7,749
Potable Water Services Consortium	-	-	99	4	-	-	(227)	-	-	-
Servizi Colferro - Consortium Limited Liability Company	-	-	15	-	-	-	173	-	-	-
Associates and jointly controlled companies	0	27,526	1,126	4	84,611	6,415	8,204	0	63,047	8,869
Total related parties	0	28,876	1,278	4	99,596	6,415	11,009	283	100,988	8,869
Total book value	70,926	154,732	3,696	7,376	453,808	6,415	76,927	26,383	609,634	47,454
% on total account items	0.00%	18.66%	34.58%	0.06%	21.95%	100.00%	14.31%	1.07%	16.57%	18.69%

In H1 2022 and H1 2021, the main income statement transactions by the Group with related parties were as follows (in Euro thousands):

Counterparty	At June 30, 2022			
	Operating Revenues and changes in contract work-in-progress	Operating Costs ⁽¹⁾	Financial income	Financial Charges
Leonardo S.p.A.		18		
MBDA Italia S.p.A.	283			
MBDA France S.A.	8,800			
Thales Alenia Space Italia S.p.A.	0	500		
Vitrociset S.p.A.	0	0		
Companies with a connecting relationship and relative investee companies	9,083	518	0	0
Italian Space Agency (ASI)	780			
Italian government body with a connecting relationship	780	0	0	0
Termica Colleferro S.p.A.	46	9,383	80	7
Europropulsion S.A.	411	407		
Potable Water Services Consortium	37	177		
Servizi Colleferro - Consortium Limited Liability Company	536	130		
Associates and jointly controlled companies	1,029	10,096	80	7
Total related parties	10,892	10,614	80	7
Total book value	133,516	141,149	253	551
% on total account items	8.16%	7.52%	31.63%	1.21%

⁽¹⁾ The account includes raw material consumables, service costs and personnel expenses.

Counterparty	At June 30, 2021			
	Operating Revenues and changes in contract work-in-progress	Operating Costs ⁽¹⁾	Financial income	Financial Charges
Leonardo S.p.A.	-	1,354	-	-
MBDA Italia S.p.A.	2,241	-	-	-
MBDA France S.A.	12,095	-	-	-
Thales Alenia Space Italia S.p.A.	22	-	-	-
Vitrociset S.p.A.	-	-	-	-
Companies with a connecting relationship and relative investee companies	14,358	1,354	-	-
Termica Colleferro S.p.A.	57	4,220	78	8
Europropulsion S.A.	31,051	13,623	-	-
Potable Water Services Consortium	37	263	-	-
Servizi Colleferro - Consortium Limited Liability Company	131	556	-	-
Associates, jointly-controlled companies and non-consolidated subsidiaries	31,276	18,662	78	8
Total related parties	45,634	20,016	78	8
Total book value	132,879	135,905	348	439
% on total account items	34.34%	14.73%	22.42%	1.71%

⁽¹⁾ The account includes raw material consumables, service costs and personnel expenses.

Transactions with companies with a connecting relationship and relative investee companies

The transactions with Leonardo S.p.A., considered a company with whom a connecting relationship exists, concern assistance and consultancy services. Transactions with investee companies by Leonardo are typically of a commercial nature. With regards to the client MBDA Italia S.p.A., the guarantees issued by leading credit institutions cover prompt compliance with the contractual obligations undertaken by Avio for the Camm-er orders. Their release is based on completion of the relative contractual milestones.

Transactions with associates, jointly-controlled companies and non-consolidated subsidiaries

Company transactions with associates and jointly-controlled companies may be summarised as follows:

- trade receivables, relating to revenues from the sale of company core business products, as part of ordinary operations and concluded at normal market conditions. In particular, with regard to the company Europropulsion S.A., revenues are included from the sale of company core business products, as part of ordinary operations and concluded at normal market conditions.
- financial receivables, relating to short and long-term financial receivables from Termica Colleferro S.p.A.;
- trade payables, relating to costs incurred as part of ordinary operations and relating to transactions concluded at normal market conditions; in addition, with reference to the company Europropulsion S.A., costs incurred as a result of transactions within ordinary operations and concluded at normal market conditions are included;
- financial payables, relating to the short-term inter-company financial payables of Avio S.p.A. to Europropulsion S.A.;
- revenues, relating to the transactions described previously with regards to trade receivables;
- operating costs, relating to the transactions described previously with regards to trade payables;
- financial income, related to interest on the financial receivables previously stated.

Relations with the non-consolidated subsidiaries concern Servizi Colleferro S.C.p.A, mainly related to the service provided by this company for the collection and purification of the waste water of the companies operating at the Colleferro facilities.

Transactions with other related parties

Group transactions with other related parties concern the following operations:

- trade receivables, relating to revenues from the sale of Group core business products, as part of ordinary operations and concluded at normal market conditions.
- revenues, relating to the transactions described previously with regards to trade receivables.

8. LIST OF GROUP COMPANIES AT JUNE 30, 2022

The following table presents the key details of Avio Group investees at June 30, 2022:

Companies included in the consolidation scope at June 30, 2022			Holding
Parent			
Company Name	Registered office	Share capital	% Held
Avio S.p.A.	via Leonida Bissolati, 76 - Rome	Euro 90,964,212.90	N/A
Companies consolidated by the line-by-line method			
Company Name	Registered office	Share capital	% Held
Spacelab S.p.A.	via Leonida Bissolati, 76 - Rome	Euro 3,000,000.00	70%
Regulus S.A.	Centre Spatial Guyanais - BP 0073 97372 Kourou (French Guiana - France)	Euro 640,000.00	60%
SE.CO.SV.IM. S.r.l.	Via degli Esplosivi, 1 - Colleferro (RM)	Euro 53,929,691.00	100% (*)
Avio Guyane S.A.S.	Centre Spatial Guyanais - BP 506 97388 Kourou (French Guiana - France)	Euro 50,000.00	100%
Avio France S.A.S.	3 Rue du Colonel Moll - 75017 Paris (France)	Euro 50,000.00	100%
Avio USA Inc.	Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of Newcastle, Delaware 19801 (USA)	USD 1.00	100%
ASPropulsion International B.V.	Herikerbergweg 238, 1101 CM Amsterdam (Netherlands)	Euro 18,000.00	100%
Avio India Aviation Aerospace Private Limited (**)	Pitampura Delhi North West (India)	INR 16,060,000	100% (***)
Jointly controlled companies, measured at equity			
Europropulsion S.A.	11, rue Salomon de Rothschild 92150 Suresnes 388 250 797 RCS Nanterre	Euro 1,200,000.00	50%
Associates, measured at equity			
Termica Colleferro S.p.A.	Via degli Agresti, 4 and 6 Bologna	Euro 6,100,000.00	40%
(*)	Holding through ASPropulsion International B.V.		
(**)	The company is in liquidation. No financial commitments are expected for the Group related to the liquidation.		
(***)	Investment held in part directly by Avio S.p.A. (95%) and in part through ASPropulsion International B.V. (5%).		

9. INFORMATION ON PUBLIC GRANTS PURSUANT TO ARTICLE 1, PARAGRAPHS 125-129, OF LAW NO. 124/2017

The following information is provided in accordance with the public disclosure requirements imposed by public grant legislation: This disclosure concerns, as required by the regulation, disbursements accruing in H1 2022:

Grants under Law No. 808 of December 24, 1985 “Incentives for the development and improved competitiveness of the aerospace sector industries”

Receiving company	Disbursing PA	Project	Years_costs Project	Loans issued in H1 2022	Collection date	Ministry for Economic Development
				(€ / mln)		(€ / mln)
AVIO SPA	Ministry for Economic Development	Innovative, strategic carbon epoxy prepreg materials and modified elastomeric thermal insulation formulated and produced within Italy for filament winding applied to 40T space engines	2010	-	-	0.31
AVIO SPA	Ministry for Economic Development	Innovative, strategic carbon epoxy prepreg materials and modified elastomeric thermal insulation formulated and produced within Italy for filament winding applied to 40T space engines	2011-2012	-	-	0.27
AVIO SPA	Ministry for Economic Development	Innovative, strategic carbon epoxy prepreg materials and modified elastomeric thermal insulation formulated and produced within Italy for filament winding applied to 40T space engines	2012-2013	-	-	1.38
AVIO SPA	Ministry for Economic Development	Innovative, strategic carbon epoxy prepreg materials and modified elastomeric thermal insulation formulated and produced within Italy for filament winding applied to 40T space engines	2014-2015	-	-	1.63
AVIO SPA	Ministry for Economic Development	Innovative, strategic carbon epoxy prepreg materials and modified elastomeric thermal insulation formulated and produced within Italy for filament winding applied to 40T space engines	2016-2017	-	-	1.77
AVIO SPA	Ministry for Economic Development	LOX/LCH technology demonstrator for the first stage of the Vega E launcher	2014-2016	-	-	0.82
				-		6.18

“Receivables from the Ministry for Economic Development” for disbursements in accordance with Law 808/85, amounting to Euro 6.18 million, refer to the nominal value of the grants to be issued by the Ministry for Economic Development.

The amounts by Project are broken down as follows:

- Euro 5.36 million for the project “Innovative, strategic carbon epoxy prepreg materials and modified elastomeric thermal insulation formulated and produced within Italy for filament winding applied to 40T space motors”;
- Euro 0.82 million concerning the “LOX/LCH technology demonstrator for the third stage of the Vega E launcher” project.

These receivables are recorded in the accounts at the value resulting from the application of the amortised cost method, calculated utilising the effective interest rate, and are increased due to the effect of the accumulated amortisation of the difference between the initial value and the actual cash amounts and booked in the accounts under “Financial income”.

Other grants

Receiving company	Disbursing PA	Project	Years_costs Project	Loans issued in H1 2022	Collection date	Nominal receivable to be collected
				(€ / mln)		(€ / mln)
AVIO SPA	Ministry for Economic Development	ISAAC	NA	0.13	19/01/2022	NA
AVIO SPA	Lazio Region	MAGIC	NA	0.01	11/02/2022	NA
AVIO SPA	Ministry for Economic Development	AMMEP	NA	0.37	08/06/2022	NA
				0.51		NA

As reported in the explanatory notes in relation to current assets for tax receivables, the Avio Group benefits from facilities such as tax credits for research and development, tax credits for generic technological innovation, and tax credits for the acquisition of generic and Industry 4.0 capital goods.

10. SUBSEQUENT EVENTS TO THE PERIOD-END

Business

Successful maiden flight of the new Vega-C launch vehicle

On July 13, at the European Kourou space port in French Guyana, the maiden flight of the new Vega C launch vehicle - with Avio as the prime contractor - went off without a hitch, putting the following into orbit as planned:

- the LARES 2 primary payload in a science mission of the Italian Space Agency (ASI);
- six research CubeSats from France, Italy and Slovenia for the secondary payload.

The launch marks the crowning achievement of the long-term commitment of the ESA, of Avio as prime contractor, and of the industrial partners from 13 ESA member nations to carry forward the legacy of its predecessor, Vega.

Energy costs

This increase in energy costs became more acute in July and August 2022. At the end of August 2022, the price of gas had doubled from the price at the end of June 2022.

As set out in the "Goodwill and impairment tests" section of the explanatory notes, based on these overall assessments, the steeper rise in energy costs in July and August 2022 and the ongoing conflict Russia-Ukraine conflict, which is also generating indirect costs generally, were considered trigger events and therefore the goodwill at June 30, 2022 was subjected to an impairment test. This test did not indicate the need to for any write-down.

For further information, reference should be made to the "Goodwill and impairment tests" section of the explanatory notes.

New contracts

On August 2, 2022 Avio announced²² that it had been awarded new orders from MBDA totalling more than Euro 40 million. The first relates to increased production of boosters for the Aster 30 missile system for a European and NATO member state. The second order was signed for the development, qualification and production of the initial thrust propulsion system of the next-generation Teseo MK2/E anti-ship missile system for the Italian Navy.

²² See the press release dated August 2, 2022: <http://syndication.teleborsa.it/Avio/Financial-Announcements/firma-di-nuovi-ordini-per-la-propulsione-tattica/MXxib211bmljYXRpLjE3NzEwMDAwNDcyMDlyMXwxfDlwMjIwODIz>

Other significant events

Acquisition of Temis S.r.l. and of 5% of ART S.p.A.

the Golden Power notification was filed on July 6, 2022 and on August 5, 2022, the Prime Minister's Office announced that it had accepted the proposal not to exercise special powers put forward by the MEF in its role as the body in charge of the investigation.

Having received the go-ahead as regards the golden power decrees, the transaction was therefore concluded on September 8, 2022.

The transaction will involve a total financial commitment of Euro 4,700 thousand, comprising:

- the purchase price of the holding in Temis for Euro 3,000 thousand, of which Euro 1,750 thousand paid in cash and Euro 1,250 thousand in Avio S.p.A. treasury shares;
- the purchase price of the holding in ART of Euro 1,700 thousand, which will be paid entirely in cash.

* * *

September 9, 2022

The BOARD OF DIRECTORS
The Chief Executive Officer and General Manager
Giulio Ranzo

Deloitte

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REPORT ON REVIEW OF THE HALF-YEARLY CONSOLIDATED FINANCIAL STATEMENTS

To the Shareholders of
Avio S.p.A.

Introduction

We have reviewed the accompanying half-yearly consolidated financial statements of Avio S.p.A. and subsidiaries (the "Avio Group"), which comprise the statement of financial position as of June 30, 2022 and the income statement, statement of comprehensive income, statement of changes in equity and cash flow statement for the six month period then ended, and a summary of significant accounting policies and other explanatory notes. The Directors are responsible for the preparation of the half-yearly consolidated financial statements in accordance with the International Accounting Standard applicable to the interim financial reporting (IAS 34) as adopted by the European Union. Our responsibility is to express a conclusion on the half-yearly consolidated financial statements based on our review.

Scope of Review

We conducted our review in accordance with the criteria recommended by the Italian Regulatory Commission for Companies and the Stock Exchange ("Consob") for the review of the half-yearly financial statements under Resolution n° 10867 of July 31, 1997. A review of half-yearly consolidated financial statements consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with International Standards on Auditing (ISA Italia) and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying half-yearly consolidated financial statements of the Avio Group as at June 30, 2022 are not prepared, in all material respects, in accordance with the International Accounting Standard applicable to the interim financial reporting (IAS 34) as adopted by the European Union.

DELOITTE & TOUCHE S.p.A.

Signed by
Francesco Legrottaglie
Partner

Rome, Italy
September 9, 2022

This report has been translated into the English language solely for the convenience of international readers.

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Declaration of the Condensed Consolidated Financial Statements as per Article 81-ter of Consob Regulation No. 11971 of May 14, 1999 and subsequent amendments and supplements

1. The undersigned Giulio Ranzo and Alessandro Agosti, respectively CEO and Executive Officer for Financial Reporting of Avio S.p.A. declare, also in consideration of Article 154-bis, paragraphs 3 and 4, of Legislative Decree No. 58 of February 24, 1998:

- the conformity in relation to the characteristics of the company and
- the effective application of the administrative and accounting procedures for the drawing up of the condensed consolidated half-year financial statements in the period between January 1 and June 30, 2022.

2. The following significant aspects arose:

- the adequacy of the administrative and accounting procedures for the preparation of the condensed consolidated half-year financial statements at June 30, 2022 has been verified through the assessment undertaken of the internal control system on the financial disclosure
- this assessment utilised the criteria established in the “Internal Controls - Integrated Framework” model issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”);
- no significant issues were identified in the assessment of the internal control system.

3. We also declare that:

3.1 The condensed interim consolidated financial statements:

a) were prepared in accordance with international accounting standards, recognised in the European Union pursuant to Regulation (EC) No. 1606/2002 of the European Parliament and Council of July 19, 2002;

b) correspond to the underlying accounting documents and records;

c) provide a true and fair view of the equity, economic and financial position of the issuer and of the other companies in the consolidation scope.

3.2 The Directors’ Report includes a reliable analysis of the significant events in the first six months of the year and their impact on the condensed consolidated half-year financial statements, with a description of the principal risks and uncertainties to which the Group is exposed, in addition to the subsequent events and outlook. It also contains a reliable analysis of the significant transactions with related parties.

Date: September 9, 2022

Avio S.p.A.

Giulio Ranzo
Chief Executive Officer
(Signed)

Alessandro Agosti
Chief Financial Officer
(Signed)