

AVIO

BUY

SECTOR: Industrials

Price (Eu):

13.62

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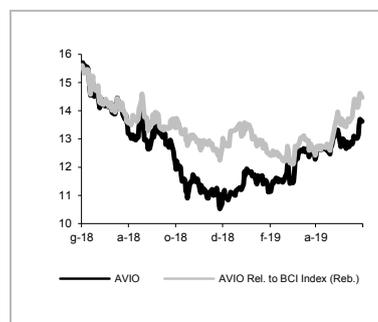
Target Price (Eu):

18.50

Defensive Stock In Troubled Times, Buy as 2023 is Approaching

- Unfolding the roadmap to 2023.** In this report we assess the company's medium-long term potential, turning the qualitative indications provided by management at its latest investor day into numbers. Thanks to the market expansion expected in the LEO segment and the launch of the new generation of products (Vega C maiden flight expected in early 2020, Ariane 6 to follow shortly afterwards), we forecast a 4.6% 2019-23 revenue CAGR, with the mix evolving more towards production rather than development activities. Increasing volumes coupled with commonality in the technology adopted for the new launchers will allow the company to benefit from major economies of scale, that will more than offset the less favourable business mix (development activities generally have higher margins), allowing EBITDA to grow faster than revenues, at a 7.2% 2019/2023 CAGR. The cash generated during the period will allow the company to make important investments while continuing to remunerate shareholders, with the DPS expect to grow by 9.6% yearly in the period, yielding 4% on average at the current price.
- Sound 1Q19 results.** In 1Q19 revenues amounted to Eu82.6mn, up 9.5% on 1Q18. Revenue growth was driven by higher development and production activity related to the Vega line, while Ariane revenues were broadly stable YoY. EBITDA came to Eu7.0mn, while EBIT closed at Eu3.1mn, marginally better than our Eu2.9mn estimate. Net cash was Eu48.7mn as at the end of March, in line with expectations and broadly flat QoQ as it was penalised by a Eu6.4mn negative impact from the adoption of IFRS16. Net of the change in accounting principles, net cash would have improved by around Eu6mn QoQ. It is worth remembering that 1Q is usually a seasonally weak quarter, as revenues and profits tend to be concentrated in the second part of the year.
- 2019 estimates aligned with the upper end of the guidance.** After the release of 1Q results we are fine-tuning our estimates, which are now aligned to the upper end of the guidance range provided by the company: we now expect net revenues of Eu405mn (vs. guidance of Eu380-405mn, previous est. Eu396mn), reported EBITDA to close at Eu44mn (guidance Eu42-44mn, previous est. Eu43.5mn) and a YE order backlog of Eu800mn (guidance Eu750-800mn). As for the following years, we have revised our 2020/21 EBITDA estimates upwards by 2.8% on average, as we expect the company to benefit from stronger growth in Vega-related business.
- BUY confirmed; target from Eu18.0 to Eu18.5.** We reaffirm our positive view on the stock as we think the company is well-placed in the highly promising market for launchers of small satellites, which should continue to enjoy sustainable growth in the coming years thanks to the demand for increasingly precise, flexible and reliable launchers. A solid order backlog that covers around 3 years of revenues, coupled with a visible pipeline ensure strong visibility on the prospects for the coming years, a real blessing in uncertain times. Furthermore, we appreciate management's commitment to achieving medium-long term results, as the top managers are shareholders of the company through Inorbit. Avio has a strong track record in the development of new products and its space launchers are among the most reliable on the market.

AVIO - 12m Performance



RATING: Unchanged

TARGET PRICE (Eu): from 18.00 to 18.50

Ch. in Adj.EPS est:	2019E	2020E
	3.9%	2.6%

STOCK DATA

Reuters code:	AVI.MI
Bloomberg code:	AVIO IM

Performance	1m	3m	12m
Absolute	3.0%	19.3%	-11.0%
Relative	4.5%	19.1%	-7.1%
12 months H/L:	15.70/10.52		

SHAREHOLDER DATA

No. of Ord. shares f.d. (mn):	27
Total No. of shares f.d. (mn):	27
Mkt Cap Ord (Eu mn):	370
Total Mkt Cap (Eu mn):	370
Mkt Float - ord (Eu mn):	218
Mkt Float (in %):	58.8%
Main shareholder:	
Leonardo	25.9%

BALANCE SHEET DATA

	2019
Book value (Eu mn):	299
BVPS (Eu):	11.00
P/BV:	1.2
Net Financial Position (Eu mn):	38
Enterprise value (Eu mn):	300

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Key Figures	2017A	2018A	2019E	2020E	2021E
Sales (Eu mn)	344	389	405	426	446
Ebitda (Eu mn)	39	43	44	47	51
Net profit (Eu mn)	18	24	26	28	31
EPS - New Adj.(Eu)	0.936	1.069	1.085	1.117	1.220
EPS - Old Adj.(Eu)	0.936	1.058	1.044	1.088	1.202
DPS (Eu)	0.369	0.423	0.453	0.486	0.535

Ratios & Multiples	2017A	2018A	2019E	2020E	2021E
P/E Adj.	14.5	12.7	12.6	12.2	11.2
Div. Yield	2.7%	3.1%	3.3%	3.6%	3.9%
EV/Ebitda Adj.	6.4	6.1	6.3	6.0	5.6
ROCE	16.6%	17.0%	15.8%	15.5%	16.0%

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AVIO - KEY FIGURES

		2017A	2018A	2019E	2020E	2021E
	Fiscal year end	31/12/2017	31/12/2018	31/12/2019	31/12/2020	31/12/2021
PROFIT & LOSS (Eu mn)	Sales	344	389	405	426	446
	EBITDA	39	43	44	47	51
	EBIT	25	29	29	31	34
	Financial income (charges)	(4)	(1)	(0)	(0)	(0)
	Associates & Others	0	0	0	0	0
	Pre-tax profit (Loss)	21	28	28	30	33
	Taxes	0	(2)	(1)	(1)	(1)
	Tax rate (%)	1.6%	-7.3%	-3.5%	-3.3%	-3.0%
	Minorities & discontinue activities	(4)	(1)	(2)	(2)	(2)
	Net profit	18	24	26	28	31
	Total extraordinary items	7	5	4	3	3
	Ebitda excl. extraordinary items	46	47	48	50	53
	Ebit excl. extraordinary items	32	33	32	33	36
Net profit restated	25	29	29	30	33	
PER SHARE DATA (Eu)	Total shares out (mn) - average fd	27	27	27	27	27
	EPS stated fd	0.670	0.896	0.956	1.025	1.128
	EPS restated fd	0.936	1.069	1.085	1.117	1.220
	BVPS fd	10.020	10.478	10.996	11.535	12.128
	Dividend per share (ord)	0.369	0.423	0.453	0.486	0.535
	Dividend per share (sav)					
Dividend pay out ratio (%)						
CASH FLOW (Eu mn)	Gross cash flow	30	39	42	45	48
	Change in NWC	5	(2)	(4)	5	3
	Capital expenditure	(26)	(23)	(35)	(35)	(35)
	Other cash items	(16)	7	(3)	(3)	(4)
	Free cash flow (FCF)	9	14	3	15	16
	Acquisitions, divestments & others	0	(4)	0	0	0
	Dividend	0	(10)	(12)	(12)	(13)
	Equity financing/Buy-back	0	0	0	0	0
Change in Net Financial Position	(7)	7	(11)	(0)	(0)	
BALANCE SHEET (Eu mn)	Total fixed assets	269	278	298	316	334
	Net working capital	(33)	(31)	(27)	(33)	(36)
	Long term liabilities	(72)	(77)	(77)	(79)	(80)
	Net capital employed	164	171	193	205	219
	Net financial position	42	49	38	37	37
	Group equity	282	296	310	325	341
	Minorities	10	11	11	11	11
Net equity	272	285	299	313	329	
ENTERPRISE VALUE (Eu mn)	Average mkt cap - current	370	370	370	370	370
	Adjustments (associate & minorities)	32	32	32	32	32
	Net financial position	42	49	38	37	37
	Enterprise value	296	288	300	300	301
RATIOS(%)	EBITDA margin*	13.5%	12.2%	11.7%	11.7%	11.9%
	EBIT margin*	9.4%	8.5%	8.0%	7.8%	8.2%
	Gearing - Debt/equity	-14.8%	-16.6%	-12.1%	-11.5%	-10.8%
	Interest cover on EBIT	7.0	43.0	76.9	82.3	90.2
	Debt/Ebitda	nm	nm	nm	nm	nm
	ROCE*	16.6%	17.0%	15.8%	15.5%	16.0%
	ROE*	6.9%	8.7%	8.9%	9.1%	9.5%
	EV/CE	2.0	1.7	1.6	1.5	1.4
	EV/Sales	0.9	0.7	0.7	0.7	0.7
	EV/Ebit	9.2	8.7	9.3	9.0	8.3
Free Cash Flow Yield	2.8%	4.2%	0.9%	4.5%	4.9%	
GROWTH RATES (%)	Sales	17.7%	13.0%	4.2%	5.3%	4.5%
	EBITDA*	27.3%	1.7%	0.6%	4.9%	6.8%
	EBIT*	20.1%	3.0%	-2.7%	3.1%	8.9%
	Net profit	1261.2%	33.8%	6.7%	7.2%	10.1%
	EPS restated	69.6%	14.2%	1.4%	2.9%	9.3%

* Excluding extraordinary items

Source: Intermonte SIM estimates

Unfolding the roadmap to 2023

1. Top line trends

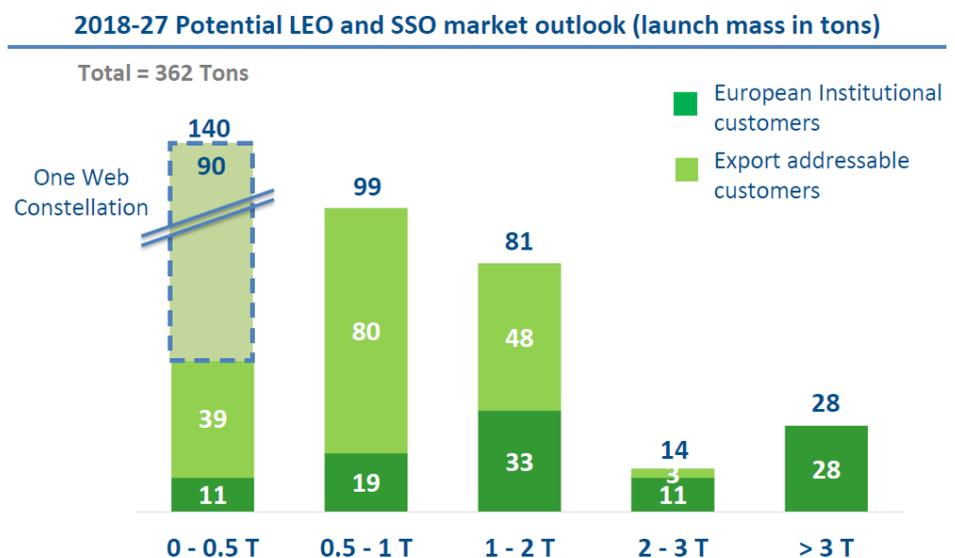
1.1 Reference Market trends

To analyse the expected trend in the space launchers market it is fundamental to understand the underlying trends in the satellite market, given that demand for launch services is strictly related to the number of satellites that needs to be sent into orbit. It is worth highlighting that different applications require different orbits and therefore different types of launchers.

Orbits are generally divided as follows:

- Low earth orbit (LEO): Satellites in LEO orbit the earth at altitudes of between 400km and 3,000km. LEO satellites can capture images and data in greater detail (higher resolution), communicate more quickly with earth (less latency), and require less power to transmit data and signals to earth. However, due to friction with the atmosphere, a LEO satellite will lose speed and altitude more rapidly than in higher orbit. The average life of a LEO satellite ranges from 2 to 7 years. The main applications for LEO satellites are earth observation, weather, and, recently, broadcasting. **LEO orbit is the core market for Vega launchers and the one expected to generate the highest growth in terms of mass launched into orbit in 2018-2027 (+9% CAGR).** This segment is expected to benefit massively from the launch of big satellites constellations, the most famous being OneWeb's one, whose target will be to provide high-speed, low latency services to a wide range of markets, including aviation, maritime, backhaul services, community Wi-Fi, emergency response services and more, delivering high-speed access around the world by air, sea and land. Arianespace thanks to its offering (Vega, Ariane and Soyuz) is on the frontline when it comes to launch constellation satellites into LEO and thanks to the new generation products Vega C and Ariane 6 it has the right products for this purpose. The next launches operated by Arianespace for the OneWeb constellation will utilize Soyuz launchers, but we expect in the future it will be substituted by Ariane and Vega, launchers, as the agreement with Soyuz will expire in the upcoming years.

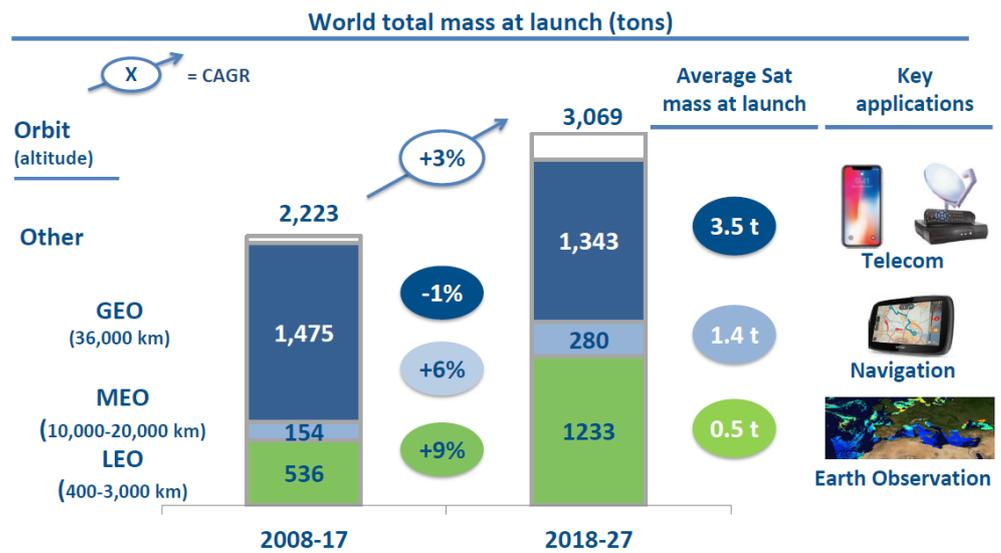
2018-27 potential LEO and SSO market Outlook (launch mass in tons)



Source: Avio estimate on Euroconsult data; Excludes satellites with mass <50kg

- Medium earth orbit (MEO): Satellites in MEO orbit the earth at altitudes of between 10,000km and 20,000km. The characteristics for this orbit are halfway between LEO and GEO and therefore the most common applications for satellites in this region are navigation and, to a lesser extent, communications. **MEO is currently served by Russian Soyuz launchers, although ESA will be able to serve MEO orbits using the new Ariane 6.2 launcher in the coming years. Total satellite mass for launch into MEO orbit is expected to grow at a 6% CAGR in 2018-2027.**
- Geostationary orbit (GEO): Geostationary satellites orbit the earth at altitudes of around 36,000km, forming a ring around the equator. Their orbits keep them synchronised with the earth's rotation, hence from the Earth they appear stationary over a fixed position on earth, and provide an almost hemispheric view. The main applications for geostationary satellites are telecommunications and broadcasting. **GEO orbits are the core market for the Ariane 5 launcher and in the future for the Ariane 6.4. In the coming years, the GEO segment is expected to be driven mostly by replacement of old satellites, thus registering a -1% CAGR in 2018/27.**

World total mass at launch (tons)



Source: Avio estimate on Euroconsult data; Excludes satellites with mass <50kg

1.2 Competitive scenario

Currently, only Russia, the USA, China, Europe, India and Japan are able to offer launch services capable of responding to a captive institutional market. The number of players able to serve commercial demand is even more restricted: Europe (through Ariane 5, Vega, and Soyuz launchers offered by Arianespace); the USA, through Space X's Falcon9 launcher; Russia, using Proton launchers (commercialised by ILS) and India, using its PSLV and GSLV (commercialised by ISRO). In the next years, China is also expected to address the commercial market, even though recent attempts have been unsuccessful.

Vega: Fourteen successful launches from fourteen attempts guarantees Vega's status as the world benchmark for putting Earth observation satellites, and, in general, LEO satellites into orbit, even though the sector competitors (India's PSLV, the Russian-German Rokot, Russia's Dnepr) have been very competitive in political and price terms, while US Minotaur launches are few and far between. However, despite costing more than rivals, Vega remains highly competitive for three reasons: reliability, versatility and scheduling certainty. On the first point, Vega enjoys a 100% launch success rate; its ability to take payloads into different orbits is proof of its versatility; and Avio is able to guarantee customers that the launcher will be available as scheduled without delays. Currently, the fiercest competitor is the Indian PSLV, mainly thanks to its competitive pricing power, which compensates its lower reliability and precision compared to Vega. However, we would highlight that the upcoming Vega C will be offered at a similar price to the current Vega, but the higher total payload mass capacity (2.3tons vs 1.5tons for the Vega) will bring down the price per kg for satellite producers, making Vega C more competitive on pricing as well.

- **Focus on Vega C:** Member States at the ESA Ministerial meeting in December 2014 agreed to develop the more powerful Vega-C to respond to an evolving market and to long-term institutional needs. Vega-C is expected to debut in 2020, increasing performance from Vega's current 1.5 t to about 2.2 t in a reference 700 km polar orbit, covering identified European institutional users' mission needs, with no increase in launch service and operating costs. The main objectives are to increase performances, reduce operating costs, provide cost-efficient launch services and reduce the dependency on non-European sources in launcher production at no extra cost. Additional modifications are being studied to enable Vega to carry micro- and nanosatellites in order to be cost-effective in this emerging market.

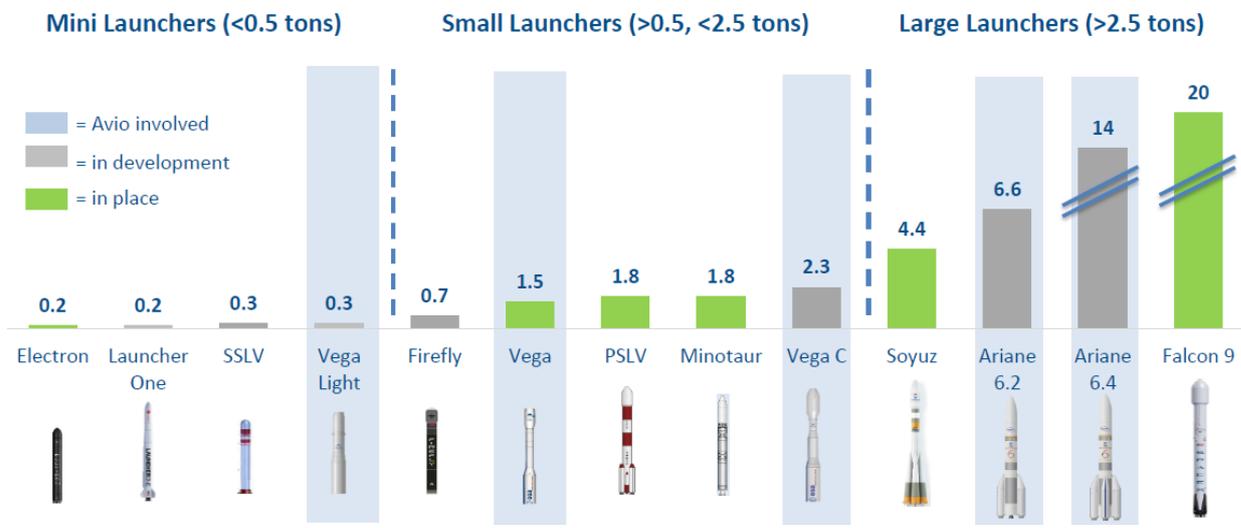
Vega-C is based on the existing Vega launcher and comprises four stages. Three stages will use solid-propellant motors and one will use liquid propellants. The first stage is based on the P120C, the largest monolithic carbon fibre solid-propellant rocket motor ever built. Its development relies on new technologies derived from those of P80, Vega's current first stage motor and will provide a significant increase in performance. The P120C will also be used for the liftoff boosters on Ariane 6. The second stage with the new Zefiro-40 (Z40) motor will contain about 36 t of solid propellant providing an average thrust of 1100 kN. The Zefiro-9 third stage, currently used on Vega, burns 10 t of solid propellant. The AVUM+ upper stage for orbital positioning and attitude control is derived from the current Vega AVUM but has a lighter structure. It carries more propellant inside larger tanks and features several new European-developed components. AVUM+ has a propellant mass of 0.74 t and the main engine will provide an average thrust of 2.45 kN. A larger fairing with an increased payload envelope (diameter 3 m) to accommodate larger satellites is also being developed. It will be suitable for Earth observation satellites of more than two tonnes, and the Space Rider reentry vehicle.

Vega-C will be launched from the same site used for Vega at Europe's Spaceport in Kourou, French Guiana. The evolution requires modifications to the Vega launch pad and mobile gantry, such as a more powerful crane, new pallets, and modified fluid services. These modifications are being made in such a way to keep the pad and gantry compatible with both vehicles during the period when launches of Vega will be alternated with Vega-C.

We note that competition could also come from Mini Launchers (<0.5 tons) and Large Launchers usually assigned to MEO and GEO orbits. However, for the time being, mini launchers have not yet proven their sustainability from an economic perspective, with only the Electron managing to conclude a flight (with a very limited load factor). As for Large Launchers, the drawback is the difficulty in reaching an adequate load factor to make a launch profitable (it requires a large number of satellites to be launched at the same time, which is unlikely in the real world) and lower versatility compared to Small Launchers (it is difficult to launch a large number of satellites into different orbits).

- **Focus on VEGA light:** The company is actively weighing a scaled-down version of Vega that would compete directly with launchers in development at Virgin Orbit, Rocket Lab and other commercial ventures focused on dedicated missions for payloads weighting a few hundred kilograms or even less. The key advantage for Avio over newcomers is that the company already has the essential components for a "light" version of the Vega C, able to launch around 250 kilograms to LEO. Compared to rideshare missions, such a launcher would allow satellites operators to reach specific orbits, to launch on more timely missions, or both. According to company's sources, if Avio pursues the mini-launcher, it would want to have the system ready by 2020 or 2021, he said.

Launchers in LEO orbit



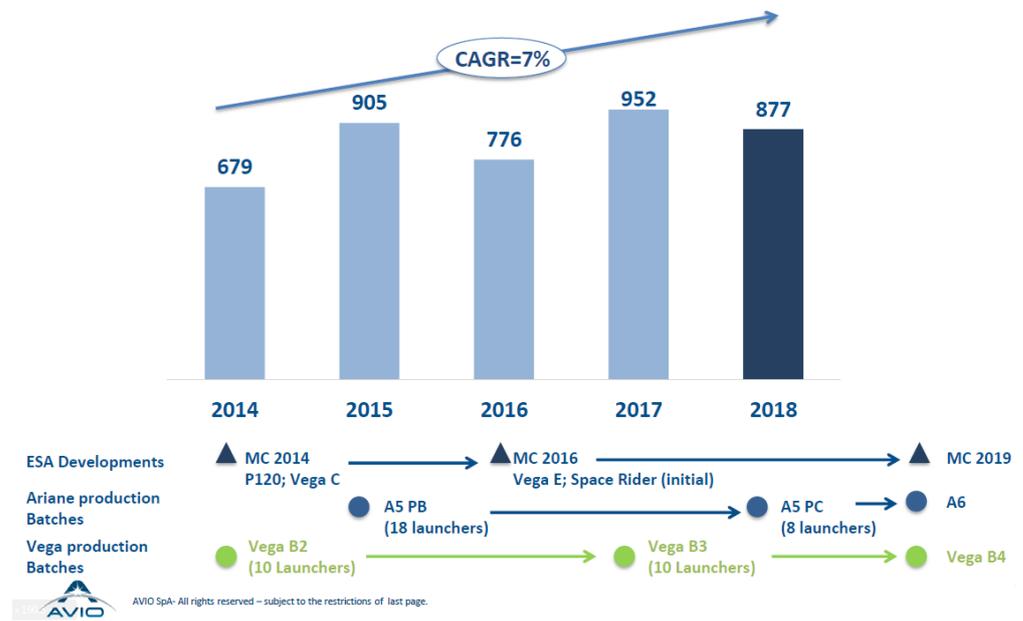
Source: Company presentation

Ariane: The competitive scenario in the segment served by Ariane has not changed substantially since the time of the Business Combination. Competition among launchers for GEO satellites is quite fierce, featuring those with an established presence in the market (Ariane5 itself, Russia's Proton, the US Atlas 5), and a relatively new player achieving satisfying results (SpaceX's Falcon 9). However, as is the case for Vega, Ariane5 remains very competitive, despite costing more than rivals, as the launcher offers remarkable reliability (no failure since 2002), good versatility, and timetabling certainty (Arianespace is able to guarantee customers that the launcher will be available as scheduled with no delays). Moreover, thanks to the development of the new Ariane 6.2, the Ariane family will also be able to serve MEO orbits, a less competitive segment than LEO and GEO. The real competitor in this particular market will be Russian's Soyuz, although it offers lower reliability and versatility, as the technologies it is based on are quite dated.

1.3 Order backlog

A highly cyclical order book is a feature of the business, and one that is tightly linked to sector financing from European Space Agency as far as development activities are concerned, and to the number of global launches in regard to production activity. The cyclical nature of order intake is partially offset by the fact that production and development orders often come in different years, smoothing the order backlog trend.

Net order backlog evolution (Eu mn)



Source: Company presentation

We expect the company to sign a new batch of production orders for the Ariane6 launcher shortly, while a fourth batch of orders for the Vega family is expected later. The situation for development activities is rather more complex, as it will depend on the outcome of the Ministerial Conference of ESA members taking place at the end of 2019. As the importance of the European launchers program has been reaffirmed by ESA on several occasions, we would expect Avio to benefit from the tail of development activities on Vega C and Ariane 6 and the launch of the bulk of development activities on the Vega E and Space Rider programs (first orders expected in 2020):

Vega E: Preparatory activities are under way for the development of Vega beyond 2025 into a family of configurations. These will be based on existing building blocks and others under development (P120C, P80, Z23, Z40, Z9, AVUM, VUS) capable of improving the system's competitiveness for the normal Vega-C payload class and in the small-satellite market. The main aspect of this evolution is a new European cryogenic upper stage powered by a 10t-class liquid oxygen and methane expander cycle engine. This would replace the current Zefiro-9 and AVUM. New technologies such as additive manufacturing will be evaluated and tested as possible ways to reduce the recurring cost of the engine and other subsystems. To reduce the environmental impact, improve the safety of the ground processes and reduce costs, a new roll and attitude control system using hydrogen peroxide will be developed, with potential early application on Vega-C and Space Rider. In addition, efforts are being aimed at widening the Vega market. These include creating opportunities for small spacecraft mission services and for reaching GEO orbit and beyond with the use of the flexible Venus (Vega New Upper Stage) electric propulsion module, while keeping the cost competitive on the world market.

Space Rider: Space Rider aims to provide Europe with an affordable, independent, reusable end-to-end integrated space transportation system for routine access and return from low orbit. It will transport payloads for an array of applications, orbit altitudes and inclinations. Space Rider is fully integrated with Vega-C to provide a space laboratory for payloads to operate in orbit for a variety of applications in missions lasting about two months.

Space Rider will have the potential to enable:

- free-flying applications such as experiments in microgravity;
- in-orbit technology demonstration and validation of applications for:
 - Exploration, such as robotics;
 - Earth observation, such as instrumentation;
 - Others, such as Earth science, telecommunication;
- surveillance applications such as Earth disaster monitoring, satellite inspection.

It will be capable of carrying multiple missions for different applications on each flight. Payloads that are integrated with the payload bay will benefit from a high-tech platform for experiments in space. Space Rider will be launched on Vega-C from Europe's Spaceport in Kourou, French Guiana, remain in space in a low-drag altitude orbit for about two months, return to Earth by landing in Europe with its payload, and then be prepared for the next mission. Space Rider is designed to operate at different orbital inclinations, from equatorial to high-latitude. The Azores archipelago is therefore a suitable European landing location for missions that require high-latitude inclinations because it allows Space Rider to return at the same latitude as its operational orbit, requiring fewer deorbiting manoeuvres. With the objective being to define and develop an affordable and competitive Space Rider system, both non-recurring development and recurring exploitation cost issues are being considered. Technological synergies and shared features between the Space Rider and Vega launch systems are being implemented in order to reduce development costs, enabling participating States to invest in one technological development and benefit from further programmes and applications. To maximise competitiveness and minimise the recurring cost of each mission, Space Rider is fully or partially reusable, is of limited size, and requires minimal refit, allowing expensive components of the mission to be reused. The launch system is based on Vega-C to allow an end-to-end European mission with minimum launch service cost.

In light of the order mix that we expect in the coming years, we would expect 70% of company turnover in 2023 to come from production and 30% from development (from the 60%/40% mix in 2018).

Conclusions

In light of the trends outlined in the previous paragraphs and assuming the recent investments completed will allow the company to increase production cadence, and therefore flight cadence, we forecast a 4.6% CAGR for revenues in 2019/2023. While the Ariane BU is expected to remain broadly flat in terms of revenues, the Vega BU is forecast to grow by a 6.8% CAGR in the same period.

Avio – Revenues breakdown

	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Ariane	150	161	159	163	165	165	166
% YoY growth	5%	7%	-2%	3%	1%	0%	1%
Vega	177	206	224	240	257	274	292
% YoY growth	29%	17%	9%	7%	7%	7%	6%
o/w R&D	102	149	147	140	140	140	140
Tactical propulsion	15	19	20	21	22	23	25
% YoY growth	45%	32%	5%	5%	5%	5%	5%
Other revenues	2						
% YoY growth	3%	3%	3%	3%	3%	3%	3%
Net revenues	344	389	405	426	446	465	485
% YoY growth	17.7%	13.0%	4.2%	5.3%	4.5%	4.3%	4.4%

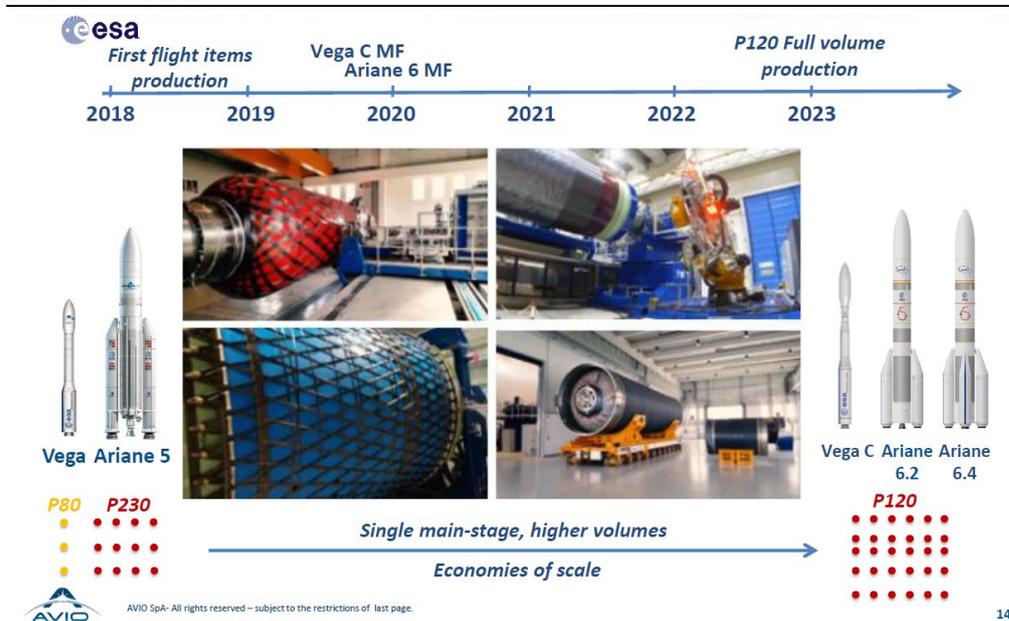
Source: Intermonte SIM estimates

2. Profitability trends

When we look at the EBITDA margin trend for the forecast period, we must take into account different aspects whose impact on business profitability is diametrically opposed:

1. **Product mix: development vs production.** Development activities bring generally higher margins compared to production revenues. Given that we expect product mix in the near future to be skewed toward production, we would expect a marginally negative effect on profitability. **Vega vs Ariane:** as explained above, launches into LEO orbit are expected to grow at a higher rate than MEO/GEO launches, thus increasing the share of revenues from Vega. As Avio is the prime contractor on the Vega program, profitability is usually lower than when it is an industrial partner, as in the case for Ariane. In conclusion, we can affirm that the product mix in future years will have dilutive effects on margins.
2. **Economies of scale.** Currently, the company does not produce enough engines to fully exploit potential economies of scale, as it produces 3 P80 engines per year on average for the Vega launcher and 12 P230 for the Ariane 5. In the future, the situation is destined to change substantially, as both the Vega C and the Ariane 6 will have the exact same main stage engine (P120), thereby allowing Avio to produce more identical engines. When both Vega C and Ariane 6 enter the production phase, we estimate that the company will manufacture > 30 engines per year, allowing significant economies of scale. This will clearly have a positive impact on overall profitability.

Products evolution



Source: Company presentation

3. **Ground operations.** Avio has recently increased the perimeter of its operations at the Kourou European Spaceport, and is now also in charge of ground operations for Vega launches. We do not expect these activities to bring any margin in the short term, but in the medium term we would expect them to become profitable and to contribute to company EBITDA.

The result of the aforementioned effects is an improvement to the EBITDA margin of around 1% in the forecast period.

3. Cash trend

1. **CAPEX:** we estimate that the company will go through a period of heavy investment in 2019-2023 to support the launch of the new generation of launchers and complete a new testing facility in Sardinia. All in all, we estimate cumulative CAPEX of around Eu160mn in the period, with investments of Eu35mn per year until 2021, before returning to more normalised levels from 2022.
2. **Working capital:** the working capital dynamic will be strictly related to order backlog evolution, as the company cashes in advance payments when orders are booked. Given the significant number of orders expected throughout the period, we expect a release of working capital starting from 2020. 2019 is expected to absorb working capital, as we expect orders to be more limited.
3. **Dividends:** We would expect Avio to stick with its current dividend policy, which foresees the dividend yield in a 1% to 5% range and a pay-out ratio between 25% and 50% of consolidated net profit. Given the solid net cash position and cash generation, we estimate a pay-out ratio close to the upper end of the dividend policy range (around 47%). In 2018 the dividend increased by 15% compared to 2017.

The combined effect of the trends described is FCF gradually ramping up in the period to reach Eu31mn in 2023. Average FCF in 2019-2023 is estimated at Eu18mn.

Obviously, our estimates do not include any cash out for M&A or buy back operations, however we would highlight:

4. **M&A:** Its solid balance sheet allows the company to seize any opportunity that could arise in the market. The focus will be on deals that could allow the company to 1) enter new markets (i.e. enter the US institutional market thanks to collaborations with a US player), 2) consolidate the industrial supply chain (insourcing of critical industrial suppliers to consolidate margins and reduce dependency on external sources) and 3) to increase diversification of the company (i.e. entering adjacent markets in the space value chain, for example buying satellites producers).
5. **Buy-Back:** The latest shareholders meeting approved the buy back policy of the company. The policy allows the purchase of Avio stocks, in one or more tranches, for an amount to be freely decided by the BoD and for a maximum total value of 10% of the share capital (about Eu9mn) as well as the disposition of own shares.

4. Financials

Avio – P&L

	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Net Revenues	343.8	388.7	404.9	426.5	445.6	464.6	485.3
% growth	17.7%	13.0%	4.2%	5.3%	4.5%	4.3%	4.4%
EBITDA Adjusted	46.5	47.3	47.5	49.8	53.2	56.7	60.6
% margin	13.5%	12.2%	11.7%	11.7%	11.9%	12.2%	12.5%
% YoY growth	27.3%	1.6%	0.6%	4.9%	6.8%	6.6%	6.7%
EBITDA	39.2	42.6	44.0	47.3	50.7	54.2	58.1
% margin	11.4%	10.9%	10.9%	11.1%	11.4%	11.7%	12.0%
D&A	-14.2	-14.0	-15.2	-16.5	-16.9	-17.0	-17.1
% on net revenues	-4.1%	-3.6%	-3.8%	-3.9%	-3.8%	-3.7%	-3.5%
EBIT Adjusted	32.3	33.2	32.3	33.4	36.3	39.7	43.5
% margin	9.4%	8.5%	8.0%	7.8%	8.2%	8.6%	9.0%
EBIT	25.0	28.5	28.8	30.9	33.8	37.2	41.0
% margin	7.3%	7.3%	7.1%	7.2%	7.6%	8.0%	8.4%
Financial Income	0.0	0.8	0.1	0.1	0.1	0.1	0.1
Financial Charges	-3.6	-1.5	-0.5	-0.5	-0.5	-0.5	-0.5
Pretax	21.5	27.9	28.5	30.5	33.5	36.9	40.6
Taxes	0.3	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0
tax rate	2%	-7%	-4%	-3%	-3%	-3%	-2%
Minorities	-3.6	-1.5	-1.5	-1.7	-1.8	-2.0	-2.2
Net Profit	18.2	24.3	26.0	27.8	30.6	33.9	37.4
% YoY Growth	1261%	34%	7%	7%	10%	11%	10%
Adjusted Net Profit	25.4	30.0	29.5	30.3	33.1	36.4	39.9

Source: Company data (A) and Intermonte SIM estimates (E)

Avio – Balance Sheet & Cash Flow

	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Tangible assets	82.9	92.3	111.1	130.0	148.5	162.1	170.6
Goodwill	61.0	61.0	61.0	61.0	61.0	61.0	61.0
Intangible assets	117.6	117.0	117.7	117.3	116.8	116.2	115.5
Investments	8.0	8.1	8.1	8.1	8.1	8.1	8.1
Total Fixed Assets	269.5	278.4	297.9	316.4	334.4	347.4	355.3
Inventory	117.5	116.1	117.4	123.7	129.2	134.7	140.7
Contract work in progress	-131.3	-73.9	-70.0	-75.0	-75.0	-75.0	-75.0
Trade receivables	8.5	7.0	7.3	7.7	8.0	8.4	8.8
Trade Payables	-89.4	-131.4	-131.9	-139.0	-145.2	-151.4	-158.1
Other assets and liabilities	61.3	51.3	50.0	50.0	47.0	43.0	43.0
Working Capital	-33.4	-31.0	-27.2	-32.6	-35.9	-40.3	-40.6
Deferred tax assets and liabilities	76.5	76.2	79.2	82.2	85.2	88.2	91.2
Provisions for risks	-61.3	-66.0	-66.7	-67.7	-68.8	-69.8	-71.0
Provisions for employee benefits	-10.9	-10.7	-10.8	-10.9	-11.0	-11.1	-11.2
Net Invested Capital	240.5	246.9	272.4	287.3	303.9	314.4	323.6
Equity	272.2	285.0	298.6	313.3	329.4	347.2	366.9
Minorities	10.1	11.4	11.4	11.4	11.4	11.4	11.4
Total Equity	282.2	296.0	310.0	324.7	340.8	358.6	378.3
Net Cash (Debt)	41.7	49.1	37.7	37.3	36.9	44.2	54.7

	2017A	2018A	2019E	2020E	2021E	2022E	2023E
Net profit	22	26	27	29	32	36	40
Depreciation and amortisation	14	14	15	16	17	17	17
Change in Working Capital	5	-2	-4	5	3	4	0
Provisions	-6	-1	-1	-1	-1	-1	-1
Change in funds	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0
Operating Cash Flow	35	37	38	50	51	56	56
YoY change	-378%	5%	3%	32%	2%	9%	0%
Capex	-26	-23	-35	-35	-35	-30	-25
Disposals	0	0	0	0	0	0	0
Acquisition	0	-4	0	0	0	0	0
Capital Increase	0	0	0	0	0	0	0
Dividends	0	-10	-12	-12	-13	-15	-16
Others	-16	7	-3	-3	-4	-4	-4
Cash Flow	-7	7	-11	0	0	7	10
NFP at the beg. of the year: Cash/(Debt)	48	42	49	38	37	37	44
Cash Flow: Cash/(Debt)	-7	7	-11	0	0	7	10
NFP at year end: Cash/(Debt)	42	49	38	37	37	44	55

Source: Company data (A) and Intermonte SIM estimates (E)

5. 1Q results

Sound 1Q19 results. In 1Q19 revenues amounted to Eu82.6mn, up 9.5% on 1Q18. Revenue growth was driven by higher development and production activity related to the Vega line, while Ariane revenues were broadly stable YoY. EBITDA came to Eu7.0mn, while EBIT closed at Eu3.1mn, marginally better than our Eu2.9mn estimate. Net cash was Eu48.7mn as at the end of March, in line with expectations and broadly flat QoQ as it was penalised by a Eu6.4mn negative impact from the adoption of IFRS16. Net of the change in accounting principles, net cash would have improved by around Eu6mn QoQ. It is worth remembering that 1Q is usually a seasonally weak quarter, as revenues and profits tend to be concentrated in the second part of the year.

Avio - Quarterly highlights

	1Q18A	1Q19A	% YoY	1Q19E	A vs E
Net Revenues	75.4	82.6	9.5%	78.4	5.3%
EBITDA	6.1	7.0	14.8%	6.4	10.2%
% margin	8.1%	8.5%		8.1%	
EBIT	2.8	3.1	10.7%	2.9	6.8%
% margin	3.7%	3.8%		3.7%	

Source: Company data (A) and Intermonte SIM estimates (E)

Avio – Change in estimates

	2019 N	2019 O	Δ	2020 N	2020 O	Δ	2021 N	2021 O	Δ
Net revenues	404.9	396.3	2.2%	426.5	408.0	4.5%	445.6	432.1	3.1%
EBITDA Adj.	47.5	46.0	3.3%	49.8	48.4	2.9%	53.2	51.8	2.7%
EBITDA	44.0	43.5	1.1%	47.3	46.0	2.9%	50.7	49.4	2.7%
EBIT	28.8	28.8	0.2%	30.9	30.1	2.4%	33.8	33.4	1.3%
Net profit	26.0	25.9	0.2%	27.8	27.1	2.7%	30.6	30.2	1.4%
Net profit Adj	29.5	28.4	3.9%	30.3	29.6	2.6%	33.1	32.7	1.5%

Source: Intermonte SIM estimates

6. Valuation

Summary

We have valued Avio using a market multiples comparison and a discounted cash flow (DCF). As we think that a multiple comparison does not fully reflect the company's value given that it does not incorporate the growth potential, and as we also think that the companies in the panel are not perfectly comparable, we have decided to attribute an 80% weighting to the DCF.

We have adjusted the net cash position by the discounted amount of current liabilities owed to the Italian State, as we consider these items to be financial debt. In addition, we have factored in our estimates the amount of deferred tax assets on the company balance sheet (discounted over 20 years).

Finally, associate companies and minorities are added back into our valuation at book value.

At our target price the stock would trade at 16.6x P/E and 8.5x EV/EBITDA for 2020.

Avio – Valuation summary

Method	Eu p.s.	Weight
DCF	18.7	80%
Multiples comparison	18.0	20%
Average	18.5	
Current price	13.6	
Upside/(downside)	35.7%	

Source: Intermonte SIM

Avio implied valuation @ current prices

	2018A	2019E	2020E	2021E	2022E	2023E
P/E	12.7 x	12.5 x	12.2 x	11.1 x	10.2 x	9.3 x
EV/Sales	0.7 x	0.7 x	0.7 x	0.7 x	0.6 x	0.6 x
EV/EBITDA	5.9 x	6.1 x	5.9 x	5.5 x	5.0 x	4.5 x
EV/EBIT	8.4 x	9.0 x	8.8 x	8.1 x	7.2 x	6.3 x

Source: Intermonte SIM and FactSet

Avio implied valuation @ our target price

	2018A	2019E	2020E	2021E	2022E	2023E
P/E	17.3 x	17.1 x	16.6 x	15.2 x	13.8 x	12.6 x
EV/Sales	1.1 x	1.0 x	1.0 x	1.0 x	0.9 x	0.8 x
EV/EBITDA	8.7 x	8.9 x	8.5 x	8.0 x	7.4 x	6.7 x
EV/EBIT	12.4 x	13.1 x	12.8 x	11.7 x	10.5 x	9.4 x

Source: Intermonte SIM and FactSet

Peer comparison

There are no perfectly comparable listed competitors in Italy or elsewhere. Nevertheless, it has been possible to assemble a sample group of listed firms of various sizes that admittedly present some differences to Avio in terms of business type, dimension and structure, but do operate in the same reference market (Aerospace). The multiples seen as most relevant for this analysis were chosen on the basis of sector-specific characteristics and the current market environment.

We have selected the following companies:

Leonardo (Italy) engages in the aerospace, defense and security sectors. The Helicopters segment designs commercial and military rotorcrafts. The Defense and Security Electronics segment engages in the information management, sensors, and systems integration business, as well as delivers systems for critical missions, military sustainment requirements, and homeland security. The Aeronautics segment produces complete tactical airlifters, combat aircraft, and unmanned air vehicles for both civil and military applications. The Space segment develops satellite systems for navigation, telecommunications, meteorology, environmental monitoring, defense, scientific missions, and earth observation. The Defense Systems segment produces missile systems, torpedoes, naval artillery, and armored vehicles.

Airbus (Eu) engages in the design, manufacture, delivery, and provision of aerospace products, space, and related services. The Airbus Commercial Aircraft segment develops, manufactures, markets, and sells commercial jet aircrafts; and offers aircraft conversion and related services. The Airbus Helicopters segment deals with the development, manufacture, marketing, and sale of civil and military helicopters. The Airbus Defence and Space segment covers systems and services in the field of defence and space for governments, institutions, and commercial customers.

Safran (France) engages in the design, manufacture, and sale of aircraft, defense and communication equipment and technologies. The Aerospace Propulsion segment designs, develops, produces, and markets propulsion systems for commercial aircraft, military transport, training and combat aircraft, rocket engines, civil and military helicopters, tactical missiles and drones. The Aircraft Equipment segment specializes in mechanical, hydromechanical and electromechanical equipment. The Defence segment includes all businesses serving naval, land, and aviation defence industries. The Security segment provides solutions developed by Group to increase the safety and security of travel, critical infrastructure, electronic transactions, and individuals.

OHB (Germany) engages in space and aeronautic technology, telematics, and satellite services. The Space Systems segment involves in the development and execution of space projects such as low-orbiting and geostationary small satellites for navigation, research, communications, earth and weather observation and reconnaissance, including scientific payloads. The Aerospace + Industrial Products segment concerns the fabrication of aviation and space products as well as performing other industrial activities.

Thales (France) engages in the manufacture, marketing, and sale of electronic equipment and systems for aeronautics, naval, and defense sectors. The Defense and Security segment designs and delivers systems for the following domain: land, air, naval, space, and cyberspace. The aerospace segment encompasses the Avionics and Space Global Business Units. The Transport segment offers Ground Transportation Systems and services such as rail signaling and control systems and passenger payment collection solutions to operators and transport infrastructure manager.

Boeing (USA) is an aerospace company, which engages in the manufacture of commercial jetliners and defense, space and security systems. The Commercial Airplanes segment includes the development, production, and market of commercial jet aircraft and provides fleet support services, principally to the commercial airline industry worldwide. The Defense, Space and Security segment refers to the research, development, production and modification of manned and unmanned military aircraft and weapons systems for global strike, including fighter and combat rotorcraft aircraft and missile systems; global mobility, including tanker, rotorcraft and tilt-rotor aircraft; and airborne surveillance and reconnaissance, including command and control, battle management and airborne anti-submarine aircraft.

Northrop Grumman (USA) engages in the provision of security businesses. The Aerospace Systems segment includes the design, development, integration, and production of manned aircraft, autonomous systems, spacecraft, high-energy laser systems, microelectronics, and other systems and subsystems. The Mission Systems consists of sensors and processing; cyber and intelligence, surveillance and reconnaissance; and advanced capabilities. The Technology Services focuses on global logistics and modernization; advanced defense services; and system modernization and services.

Moog (USA) is a designer, manufacturer, and systems integrator of precision motion and fluid controls and systems for applications in aerospace and defense and industrial markets. The Aircraft Controls segment design, manufacture, and integrate primary and secondary flight controls for military and commercial aircraft and provide aftermarket support. The Space and Defense Controls segment involves in controlling satellites, space vehicles, launch vehicles, armored combat vehicles, tactical and strategic missiles, security and surveillance, and other defense applications. The Industrial Systems segment involves in customizing machine performance components and systems utilizing electrohydraulic, electromechanical, and control technologies in applications involving motion control, fluid control, and power and data management across a variety of markets.

Aerojet Rocketdyne engages in the provision of innovative solutions in the field of aerospace and defense, as well as in the field of real estate. The Aerospace & Defense segment operates in developing and manufacturing of aerospace and defense products and systems for the United States government, the National Aeronautics and Space Administration, major aerospace and defense prime contractors as well as portions of the commercial sector.

Avio peers: market multiples

Company name	EV/Sales			EV/EBITDA			PE		
	2019E	2020E	2021E	2019E	2020E	2021E	2019E	2020E	2021E
Avio SpA @ our est.	0.7 x	0.7 x	0.7 x	6.3 x	6.0 x	5.7 x	12.5 x	12.2 x	11.1 x
Airbus SE	1.1 x	1.0 x	0.9 x	8.3 x	6.8 x	5.7 x	19.4 x	15.9 x	13.5 x
Moog Inc. Class A	1.2 x	1.1 x	1.0 x	9.4 x	8.4 x	7.6 x	16.4 x	14.3 x	14.1 x
Leonardo SpA	0.7 x	0.6 x	0.5 x	5.3 x	4.7 x	4.2 x	9.6 x	8.3 x	7.2 x
OHB AG	0.6 x	0.6 x	0.5 x	8.2 x	7.2 x	6.3 x	18.8 x	16.4 x	13.8 x
Safran S.A.	2.2 x	2.1 x	1.9 x	12.1 x	10.5 x	9.4 x	21.0 x	18.0 x	16.2 x
Thales SA	1.2 x	1.1 x	1.0 x	9.2 x	7.9 x	6.8 x	15.3 x	13.2 x	11.8 x
Boeing Company	1.9 x	1.6 x	1.5 x	14.1 x	10.4 x	9.5 x	22.2 x	15.0 x	13.3 x
Aerojet Rocketdyne Holdings, Inc.	1.4 x	1.3 x	1.1 x	10.5 x	9.3 x	8.3 x	24.7 x	22.4 x	21.0 x
Northrop Grumman Corporation	1.9 x	1.7 x	1.6 x	12.8 x	11.5 x	9.8 x	15.8 x	13.8 x	11.8 x
Median	1.2 x	1.1 x	1.0 x	9.4 x	8.4 x	7.6 x	18.8 x	15.0 x	13.5 x

Source: Intermonte SIM for covered companies, FactSet consensus estimates for other companies

Avio peers: key financial metrics

Company name	Sales growth			EBITDA margin %			EPS growth %		
	2019E	2020E	2021E	2019E	2020E	2021E	2019E	2020E	2021E
Airbus SE	10.6%	5.7%	4.2%	13.1%	14.4%	15.7%	15.4%	22.4%	17.7%
Moog Inc. Class A	6.3%	4.1%	4.9%	13.2%	13.6%	13.2%	92.4%	14.0%	1.4%
Leonardo SpA	5.3%	6.3%	5.5%	12.5%	12.8%	13.1%	47.3%	16.2%	15.4%
OHB AG	5.2%	7.3%	4.5%	7.7%	7.8%	8.0%	14.6%	14.8%	19.1%
Safran S.A.	10.1%	5.7%	4.4%	18.5%	19.8%	20.4%	23.7%	16.9%	11.2%
Thales SA	18.1%	7.8%	3.9%	13.0%	13.6%	14.4%	15.4%	15.8%	12.2%
Boeing Company	0.2%	17.8%	4.3%	13.8%	15.6%	16.3%	-4.5%	47.9%	12.3%
Aerojet Rocketdyne Holdings, Inc.	2.9%	5.3%	5.2%	13.7%	13.8%	13.6%	-19.3%	10.3%	6.8%
Northrop Grumman Corporation	12.8%	6.1%	6.3%	14.6%	15.1%	16.3%	-9.2%	15.1%	16.8%
Median	6.3%	6.1%	4.5%	13.2%	13.8%	14.4%	15.4%	15.8%	12.3%

Source: Intermonte SIM for covered companies, FactSet consensus estimates for other companies

Peers comparison

	2019	2020	2021		2019	2020	2021
Peer Group median EV/EBITDA	9.4 x	8.4 x	7.6 x	Peer Group median P/E	18.8 x	15.0 x	13.5 x
EBITDA Adj.	47.5	49.8	53.2	Net profit Adj.	29.5	30.3	33.1
Fair EV	447.7	417.4	405.8				
Net Debt+Others	69.3	69.0	68.6				
Fair Equity value	517.0	486.3	474.4	Fai Equity value	553.9	454.5	447.1
N. of shares F.d.	27.2	27.2	27.2	N. of shares F.d.	27.2	27.2	27.2
Equity value per share	19.0	17.9	17.5	Equity value per share	20.4	16.7	16.5

Source: Intermonte SIM

DCF Valuation

Our discounted cash flow model, with detailed estimates for 2019 - 2023, yields a fair equity value of Eu507.9mn.

Our DCF model contains the following assumptions:

- a WACC of 7.5% (assuming a risk-free rate of 3.0%, a risk premium of 5.0%, beta of 0.9 and an equity weighting of 100%);
- a long-term growth rate of 2.0%.

Our terminal value accounts for 77% of the total enterprise value. On average, we expect the company to generate Eu22mn in free cash per year from 2019 to 2024, which would be 43% of our average EBITDA forecast.

Avio – DCF sensitivity

		Terminal Growth				
		1.50%	1.75%	2.00%	2.25%	2.50%
% WACC	6.5%	20.1	20.8	21.5	22.4	23.4
	7.0%	18.9	19.4	20.1	20.8	21.6
	7.5%	17.9	18.4	18.9	19.5	20.1
	8.0%	17.0	17.4	17.9	18.4	18.9
	8.5%	16.3	16.7	17.0	17.4	17.9

Source: Intermonte SIM estimates

7. APPENDIX

Group Snapshot

The Avio Group is a leading international player in the space propulsion sector. The experience and expertise developed in over 50 years of activity enable Avio to excel in the solid, liquid and cryogenic Space propulsion systems for launch vehicles and solid propulsion systems for tactical missiles.

The Group has 838 highly qualified direct employees in Italy and abroad, 30% of which are involved in Research & Development activities.

It is based in Italy, with operational headquarters located near Rome and other sites in Campania and Piedmont; other operational sites are located in France and French Guiana.

Its main operational focus is in the field of space propulsion, in particular the design, development and production of solid rocket motors, for Space launchers and tactical missiles, liquid propulsion systems and liquid oxygen Turbopumps for cryogenic engine, for space launchers, the design, development and integration of a complete space launcher (Vega), the development and integration of liquid-propellant propulsion systems for satellites, and research and development for new propulsion systems with low environmental impact.

The space launchers that currently incorporate AVIO products are the Ariane 5, used for the positioning of satellites in Geostationary Earth Orbit and VEGA, used for the positioning of satellites in Low Earth Orbit. As for tactical missiles, AVIO is a participant in the leading national and international programmes.

Since the late 1980s AVIO has been involved in the Ariane 5 programme, supplying the boosters and oxygen turbo pump for the Vulcain engine. Since 2000, through ELV, Avio has developed and manufactured VEGA, which carried out a successful qualification launch in February 2012, and in December 2015 successfully completed the 5 further launches required under the Vega Research and Technology Accompaniment (VERTA) contract in order to complete its qualification for commercial exploitation. Since 1990 Avio has had production facilities at the European Space Centre in French Guiana, which it uses for the production of solid propellant, the manufacture of engines for Ariane and Vega, the assembly of boosters and their integration into the Ariane launcher, and the integration of the entire Vega launcher.

Avio is also engaged in tactical propulsion, in particular with the production of the Aster 30 engine, provided to MBDA France. In the field of satellite propulsion, Avio has developed and supplied ESA and ASI with propulsion subsystems for the launching and control of several satellites, including the latest SICRAL, Small GEO and EDRS-C satellites..

AVIO operates in three business segments:

Ariane

Ariane is a European Space Agency (ESA)-sponsored programme for GEO missions. ArianeGroup (AG) is the prime contractor and Avio operates as subcontractor for the production of Ariane's components, and in particular for the manufacture of the P230 solid propulsion booster and the liquid oxygen turbo pump (LOX) for Vulcain 2 engines. Avio is also a subcontractor for the new generation launcher, Ariane 6, which is predicted to be launched in 2020. For this launcher Avio is developing and will produce the P120C solid propellant engine and the LOX for the Vinci engine, as well as continuing to produce the LOX for Ariane 6's Vulcain 2 engine.

Vega

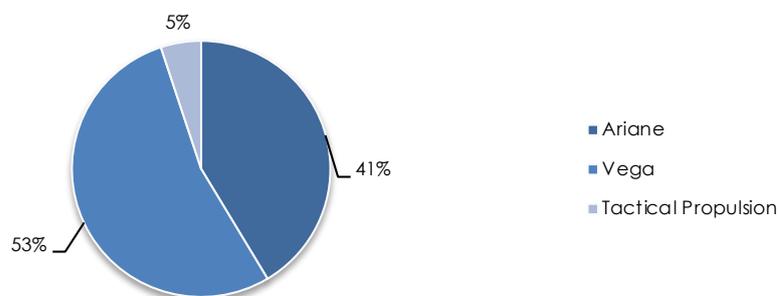
Vega is ESA-sponsored programme for LEO missions, for which Avio is prime contractor for the production and integration of components for the entire launcher and for the production of the solid propulsion engines P80, Zefiro 23 and Zefiro 9 and the liquid propulsion system of the Attitude Vernier Upper Module (AVUM). Moreover, the Group is prime contractor for the Vega Consolidated (Vega C) and Vega Evolution (Vega E), new generation launchers, for which qualification launches are planned in 2020 and 2024 respectively. For the latter group, Avio is responsible for the development and subsequent production of all of the space launchers, in addition to the development of the solid propulsion engine P120C, the Z40 solid propellant engine and an oxygen-methane liquid engine for the upper stage of the Vega E.

Tactical Propulsion

Avio is engaged in the Italian-French-UK joint programme for the development and production of the Aster 30 engine, more specifically the development and production of the propulsion components (booster and sustainer), steering (thrust vector control), and the aerodynamics (wings). Moreover, it is responsible for the design and production of the Aster 15 (sustainer motor and aerodynamic control surfaces), Aspide propulsion units and Marte sustainer. As for development programs, Avio is involved in the CAMM-ER, Aster 30 MLU and E TVC programs.

In 2018, Avio recorded net revenues of Eu388.7mn, of which 41% from the Ariane business segment, 53% from the Vega activities and a marginal 5% from Tactical Propulsion and other revenues.

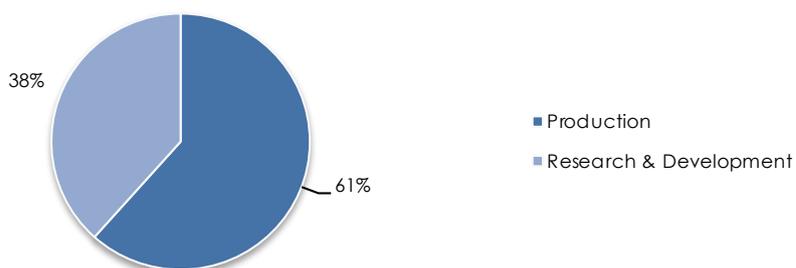
Avio – Revenues breakdown by Business (2018)



Source: Company data

As for the breakdown by activity, in 2018 Avio generated 61% of revenues from production activities, while Research and Development for the new Vega C and Ariane 6 launchers contributed 38%.

Avio – Revenue Breakdown by Activity (2018)

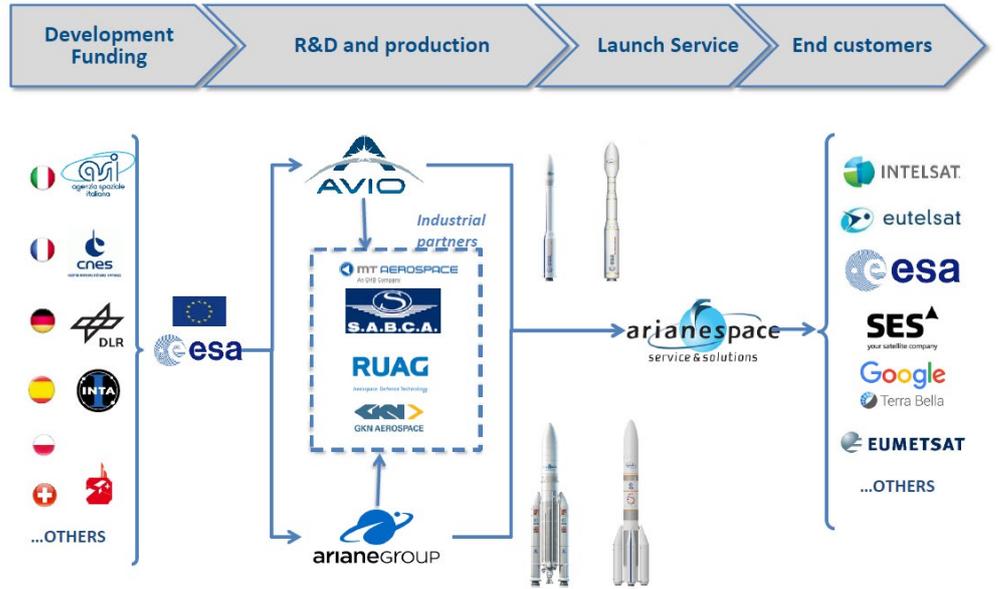


Source: Company data

Business Model

In terms of the business model, Avio is in charge of the development and production phase for Vega family launchers and of part of the Ariane launchers. Commercial exploitation of the launchers, are the responsibility of Arianespace, in which Avio has a 3.38% stake. Avio's liability in the event of launch failure ceases on acceptance of products by Arianespace.

Business Model

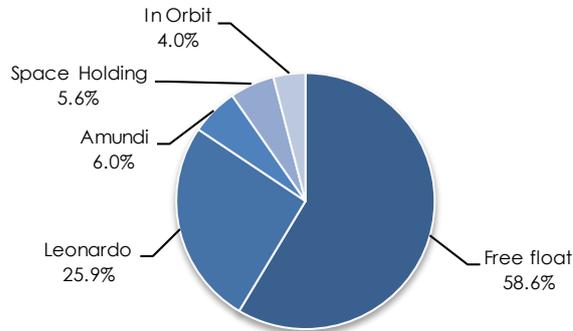


Source: Company presentation

Shareholders

The main shareholder of the company is Leonardo, with 25.88% of the capital. The other shareholders with more than 3% of the capital are Space Holding (5.6%), In Orbit (Avio management; 4.0%) and Amundi (6%). The free float therefore stands at 58.6%.

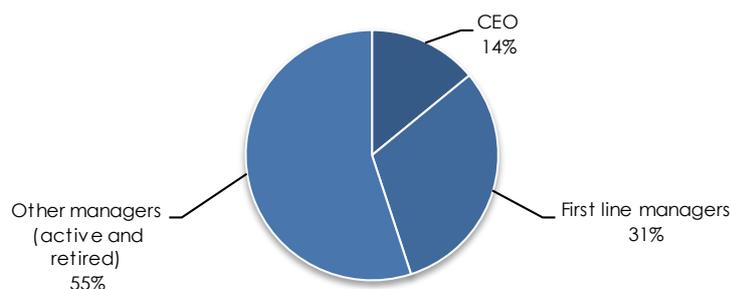
Avio – Current Shareholding



Source: Company data

Since the listing in April 2017, In Orbit has increased its investment in Avio by buying additional 140k shares, with 67 managers now participating to the investment vehicle. The main investor in In Orbit are the CEO (14% stake), the first line of managers (31%) and second, third line and retired managers of the company (55%).

In Orbit – Current Shareholding



Source: Company data

Company History

1912: Establishment of BPD, which develops and manufactures munitions for the Italian armed forces and for export.

1915-1955: Growth and consolidation of BPD in the national market; the company's activities become ever more diverse, ranging from munitions-related metalworking and mechanical engineering to construction and maintenance of railway carriages.

1960: With the dawning of the space age, rocket propellants enter the scene, and in 1962 BPD is approved by an international board to supply spacecraft propulsion systems as part of the ELDO/PAS project.

1968: BPD is acquired by SNIA

1970: Development and production work begins for the European Ariane launcher, including the manufacturing of the stage separation motors and the solid-propellant launch boosters for Ariane versions 3, 4 and 5.

1983: Snia Viscosa, which in the meantime had set up a Defence and Space division, sells BPD to Fiat Group.

1994: BPD Difesa e Spazio is absorbed by Fiat Avio, a Turin-based firm established in 1908.

2000: in collaboration with ASI, which has a 30% stake, ELV is set up as lead contractor for the European satellite launcher Vega.

2003: The company assumes its current name when it leaves Fiat Group to become an independent player in the global aerospace sector.

2006: The group is acquired by BCV Investments, whose ownership is divided amongst private equity fund Cinven (81% stake), Finmeccanica Group (14%) and other investors (5%).

2012: On 13th February, the Vega launcher successfully completes its first space mission

2013: Vega completes first commercial launch. On 1st August its aeronautical assets are acquired by General Electric and Avio remains an independent player in the space sector.

2014: In December the Ministerial Conference of the European Space Agency Member States decides to finance the programme for the consolidation and development of the Vega launcher up to completion; the project includes a common first stage (P120) shared with the future Ariane 6 launcher, which will also be financed up to qualification.

2015: The outcome of the Ministerial Conference of the ESA Member States the previous December leads in August 2015 to an important development contract for the Vega C and Ariane 6 launchers. Avio lands a significant role thanks to its participation in the development of the P120 first stage engine (common to both launchers) and its leading role in software development for the VECEP programme aimed at developing the Vega C launcher. For the first time ever, the Kourou Space Centre achieves 12 launches in a year, including 6 by Ariane and 3 by Vega.

2016: Space 2 identifies Avio as the target of the Business combination.

2017: Merger between Avio and Space 2 and subsequent listing on the STAR segment of the MTA.

SWOT Analysis

Strengths

- Leading company operating in a sector with extremely high technological entry barriers
- Strong reliability of both Vega and Ariane launchers
- High visibility thanks to a backlog that covers around 3 years of activity
- Exposure to the fast growing LEO market
- Exclusive access to the only European Spaceport
- Solid balance sheet able to support future growth
- Unique access to the European institutional market

Opportunities

- Potential access to new markets and new business segments
- Insourcing of critical industrial supplies to consolidate margins and reduce dependency on external suppliers
- Exploitation of important economies of scale thanks to the supply of P120 engines
- Improvement of launch cadence

Weaknesses

- More expensive products compared to competitors
- Highly concentrated client base
- Lack of diversification

Threats

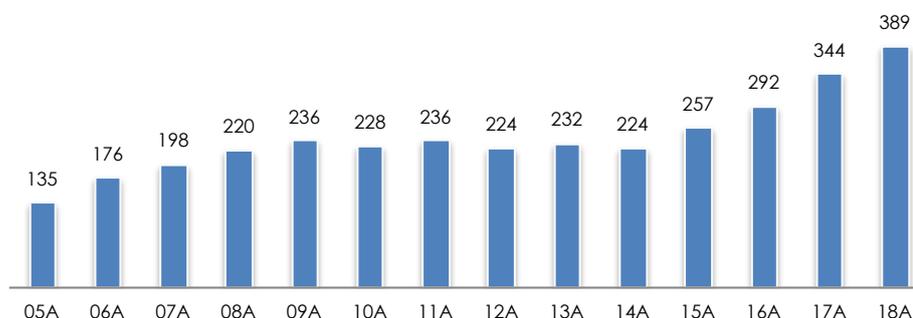
- Increasing competition, especially from emerging countries (India in particular) could lead to price pressure
- Deteriorating of the macroeconomic environment leading to reduced budget allocations for space programs
- Failure of launches

Source: Intermonte SIM

Historical snapshot

The last 14 years (2005 to 2019) have seen continual progress by Avio in developing its business, thanks to production activities related to Ariane launchers as well as ramping-up of development of the Vega launcher (first flight in 2012, see the chart below). Net Revenues CAGR for the 2005-2018 period was 8.5%.

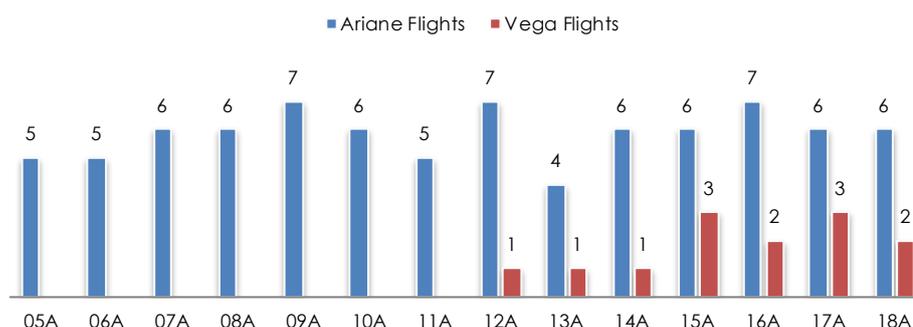
Avio – Net revenues (Eu mn)



Source: Company data

As shown in the graph below, over the last 14 years the number of flights completed by the Ariane launcher per year has been quite stable, ranging from 4 (in 2013 only) to 7. Vega flew once a year for its first 3 years to 2014, followed by a jump to 3 launches in 2015. In 2019, 4 Vega launches are expected.

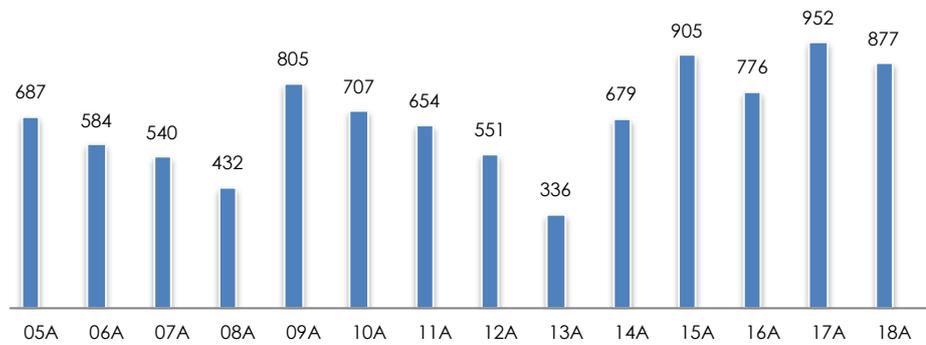
Avio – Flights per year



Source: Company data

A highly cyclical order book is a feature of the business, and one that is tightly linked to sector financing from European Space Agency as far as development activities are concerned, and to the number of global launches in regard to production activity. The cyclicity of order intake is partially offset by the fact that production and developments orders often come in different years, smoothing the order backlog trend. Avio currently has orders on hand for around 3 years of production.

Avio – Order backlog (Eu mn)



Source: Company data

Peer Group - Absolute Performances

Stock	Price	Ccy	Mkt cap	1M	3M	6M	YTD	1Y	2Y
AVIO	13.62	EUR	370	3.0%	19.3%	27.3%	22.0%	-11.0%	5.5%
AIRBUS	121.06	EUR	94,119	3.0%	8.6%	38.4%	44.2%	20.0%	60.5%
BOEING	353.80	USD	199,058	-0.2%	-16.3%	8.4%	9.7%	-4.2%	86.2%
LEONARDO	10.61	EUR	6,134	5.6%	25.1%	31.7%	38.2%	22.8%	-33.9%
OHB	33.05	EUR	575	0.2%	1.1%	4.4%	7.0%	3.9%	23.2%
SAFRAN	123.30	EUR	50,267	0.2%	3.1%	20.2%	17.0%	20.2%	55.7%
THALES	103.30	EUR	21,947	2.8%	-4.4%	1.2%	1.3%	-6.4%	5.2%
Mean performance				2.1%	5.2%	18.8%	19.9%	6.5%	28.9%
Italy FTSE Mib	20,485.0	EUR		-1.9%	0.0%	11.3%	11.8%	-4.1%	-3.0%

Source: FactSet

Peer Group - Multiple Comparison

Stock	Price	Ccy	Mkt cap	EV/Sales		EV/Ebitda		EV/Ebit		P/E		Div Yield	
				2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
AVIO	13.62	EUR	370	0.7	0.7	6.3	6.0	9.3	9.0	12.6	12.2	3.3%	3.6%
AIRBUS	121.06	EUR	94,119	1.1	1.0	8.6	7.1	11.8	9.4	20.2	16.6	1.7%	2.1%
BOEING	353.80	USD	199,058	2.0	1.7	14.7	10.8	17.3	12.3	23.2	15.6	2.3%	2.6%
LEONARDO	10.61	EUR	6,134	0.9	0.8	6.9	6.2	9.8	8.6	9.4	8.1	1.4%	1.7%
OHB	33.05	EUR	575	0.7	0.6	8.7	7.6	13.3	11.2	20.1	17.5	1.4%	1.6%
SAFRAN	123.30	EUR	50,267	2.3	2.2	12.5	10.9	15.6	13.3	21.5	18.5	1.8%	2.0%
THALES	103.30	EUR	21,947	1.3	1.1	9.8	8.4	12.1	10.3	16.2	14.0	2.3%	2.7%
Median				1.2	1.1	9.2	8.0	12.7	10.7	20.1	16.1	1.7%	2.1%

Source: Intermonte SIM estimates for covered companies, FactSet consensus estimates for peer group

DETAILS ON STOCKS RECOMMENDATION

Stock NAME	AVIO		
Current Recomm:	BUY	Previous Recomm:	BUY
Current Target (Eu):	18.50	Previous Target (Eu):	18.00
Current Price (Eu):	13.62	Previous Price (Eu):	12.48
Date of report:	11/06/2019	Date of last report:	20/03/2019

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- Discounted cash flow (DCF) model or similar methods such as a dividend discount model (DDM)
- Comparison with market peers, using the most appropriate methods for the individual company analysed: among the main ratios used for industrial sectors are price/ earnings (P/E), EV/EBITDA, EV/EBIT, price /sales.
- Return on capital and multiples of adjusted net book value are the main methods used for banking sector stocks, while for insurance sector stocks return on allocated capital and multiples on net book value and embedded portfolio value are used
- For the utilities sector comparisons are made between expected returns and the return on the regulatory asset base (RAB)

Some of the parameters used in evaluations, such as the risk-free rate and risk premium, are the same for all companies covered, and are updated to reflect market conditions. Currently a risk-free rate of 2.5% and a risk premium of 5.0% are being used.

Frequency of research: quarterly.

Reports on all companies listed on the S&P/IB40 Index, most of those on the MIBEX Index and the main small caps (regular coverage) are published at least once per quarter to comment on results and important newsflow.

A draft copy of each report may be sent to the subject company for its information (without target price and/or recommendations), but unless expressly stated in the text of the report, no changes are made before it is published.

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- BUY: stock expected to outperform the market by over 25% over a 12 month period;
- OUTPERFORM: stock expected to outperform the market by between 10% and 25% over a 12 month period;
- NEUTRAL: stock performance expected at between +10% and -10% compared to the market over a 12 month period ;
- UNDERPERFORM: stock expected to underperform the market by between -10% and -25% over a 12 month period;
- SELL: stock expected to underperform the market by over 25% over a 12 month period.

Prices: The prices reported in the research refer to the price at the close of the previous day of trading

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BUY:	14,89 %
OUTPERFORM:	42,55 %
NEUTRAL:	36,89 %
UNDERPERFORM	05,67 %
SELL:	00,00 %

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OUTPERFORM:	56,00 %
NEUTRAL:	24,00 %
UNDERPERFORM	00,00 %
SELL:	00,00 %

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EPS EQUITA PEP2	0,51	LONG
SPACTIV	0,64	LONG
THESPAC	0,91	LONG
VEI 1	0,65	LONG
WASTE ITALIA	0,65	SHORT

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