CFA Institute Research Challenge

Hosted in:

CFA Society Italy

Kerberos

BUY
TP: €33.50

Valuation as of 11-02-19

Price: €27.80

Upside: 20.51%

EV: €3,245 mm

Float: 65.9%

Beta: 0.91

Listed on: Italian Stock Exchange

Ticker: IP-IT

MAIN SHAREHOLDERS

Gruppo IPG HOLDING SRL 23.3%

MAIS SPA 3.3%

FMR LLC 7.8%

FIN TEL SRL 4.1%

TREASURY SHARES 1.5%

STOCK DATA

Number of shares: 108.88 M

Avg Daily Vol (3m): 192.639,2

KEY FINANCIAL

EPS: €1.60

DPS: €0.21

Div. Yield: 0.8%

P/B: 3.71

ROE: 17.58

ROIC: 14.25

INVESTMENT SUMMARY

INTERPUMP GROUP

COMPANY PRESENTATION

IP has a market capitalization of around **€3 billion**: in 2018 the Group recorded sales exceeding **€1 billion**. The Group has manufacturing plants all over the world, with **a direct presence in 26 countries**. As regards **Water-Jetting division**, it produces and sells high and very high-pressure plunger pumps and high-pressure systems; for the **Hydraulic** one, IP produces **power take-offs**, gear pumps, hydraulic cylinders, hydraulic distributors, valves, pipes, fittings and other hydraulic products. Group's strategy aims to further strengthen its position through targeted acquisitions. In the last years (2012-2017) the **CAGR was 15.33%**, supported by an increasing **EBIT Margin (17.59% in 2017).**

COMPETITIVE ADVANTAGES

The Group's strength lies in its very **strong diversification** in terms of products and applications; IP is a leader in the Plunger Pumps market and has **high margins of profitability** both in the Hydraulic division and in the application of Flow-Handling, which has recently entered after some targeted acquisitions starting in 2015. With more than 40 acquisitions over time, IP presents a **successful M&A track record**, which has allowed the group strong external growth.

RELEVANT RISKS

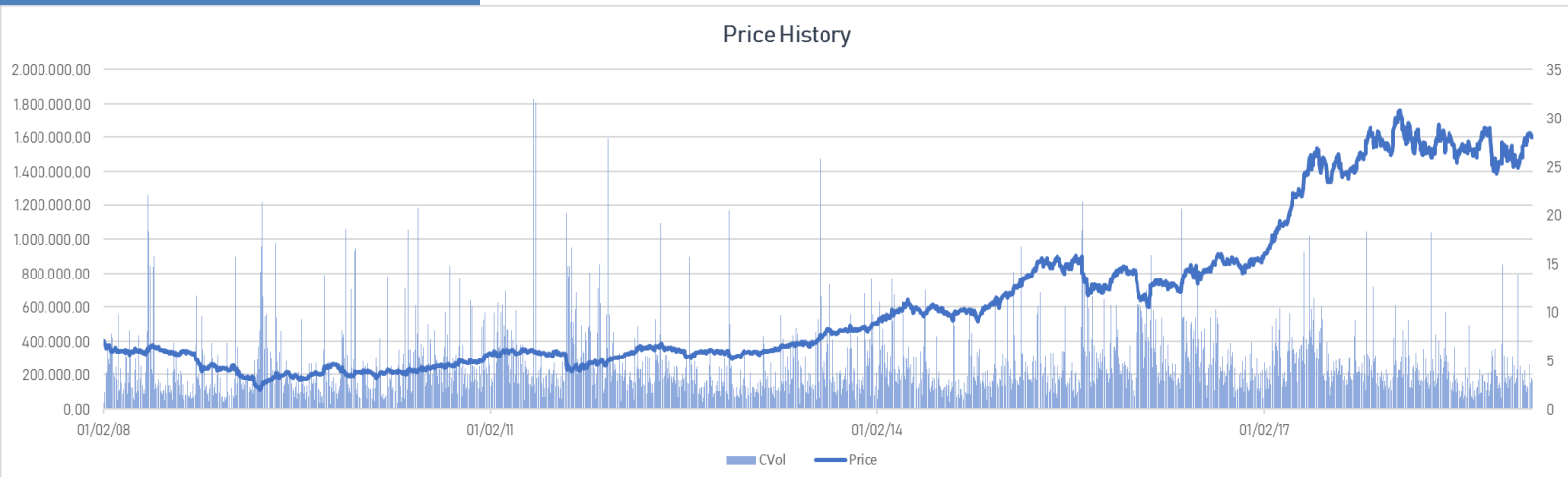
Operational Risk – The raw materials used by IP are subject to **price fluctuations** that could penalize the production of the group.
Strategic Risk - As the group's strategy provides for massive external growth, through M&A, IP runs the **risk of performing unprofitable operations**.
Macroeconomics Risk – The **contraction in infrastructure spending** and the **collapse of industrial production** (considering the recent downward estimates of industrial production in Italy) could severely penalize production and lead to a contraction of the business.

FINANCIAL HIGHLIGHTS

Our estimates about IP business potential lead to a **promising growth of revenues and profitability**. **Organic revenues**, mainly driven by Water-Jetting division, are estimated to grow at a **5Y 2019E-2023E CAGR of 5%**, reaching about **€2 billion in 2023**. The high profitability of revenues is expected to drive **strong cash generation** in the medium and long term.

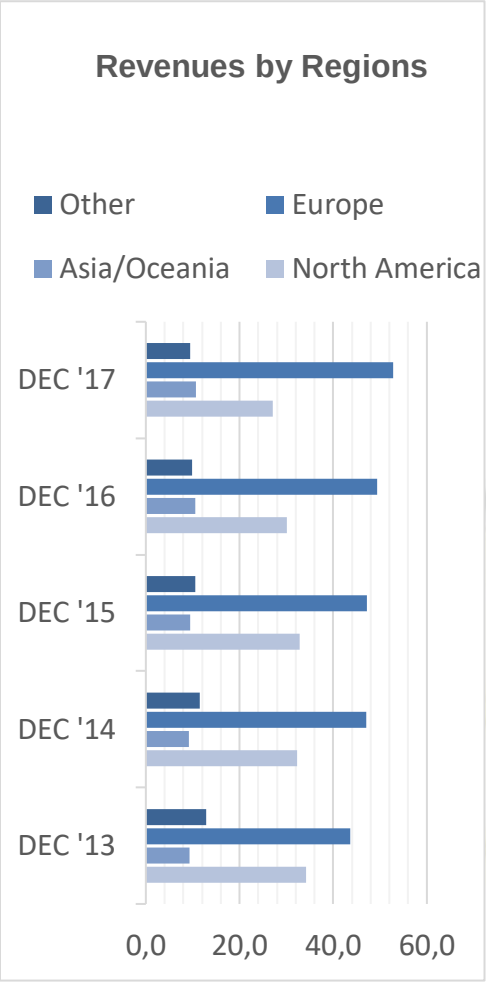
VALUATION: External growth and synergies as drivers

We recommend buying since the **target price is €33.5**, resulted from a **combination** of a **stable organic growth** 2019E-2023E (5% for Water-Jetting division and 4.5% for the Hydraulic one) and a **scenario analysis for external growth** in the same period; in the **final stage** the company will grow at a constant rate of 1,2% (1,5% for Water-Jetting division and 1% for the Hydraulic one). We think this is the best estimate we can provide of the company value, since it takes into account that it is not feasible to determine different stages of the company growth, because of a **lack of cyclical evidence in the past** and because of IP's growth is strongly **dependent on M&A operations.**



BUSINESS DESCRIPTION

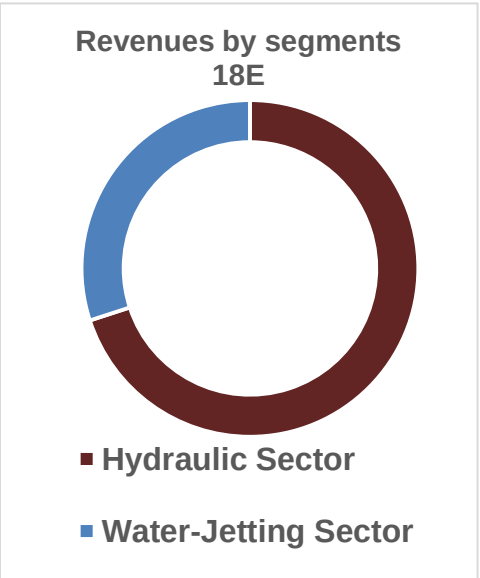
Interpump, a 42-year old success story - Interpump Group S.p.A. is one of the major worldwide producers of professional and high-pressure piston pumps. Founded in 1977 in S. Ilario d'Enza (Italy) by Fulvio Montipò, the company has been listed on the Milan Stock Exchange since 1996. In a short time, IP has become the world's largest producer of high-pressure piston pumps, and its products have affirmed themselves as a reference on the market. Between 1997 and 1999, Interpump Group entered the hydraulic components sector through the acquisition of several companies, becoming the world's largest producer of power take-offs (PTO). The Group has production facilities in Italy, United States, Germany, France, Portugal, China, India, Brazil, Bulgaria, Romania and South Korea with a direct presence in 26 countries. Nowadays, IP group counts 6.484 employees.



Business Segments – The business structure of the group changed in 2012 after the decision of selling the Electric Motor business represented by Unielectric, because of its relatively weak contribute to the group business strategy and because of its low complementarity with respect to the main products. After this dismission, IP decided to divide its operating activities into two sectors: Water-Jetting and Hydraulic. The **Water-Jetting** business segment is mainly focused on the production of innovative piston pumps used in high pressure cleaners, car wash systems, forced lubrication of tooling machines, water desalination with reverse osmosis and other applications. The offer consists of 60 different models of pumps able to bear very high levels of pressure (up to 4.000 bar) and absorbed power (up to 750 kW), but the very distinguishing factor is their design, which allows them to endure stresses over long production cycles, consistently with IP supply program focused on the offer of high-quality products able to last for long.

Following Bertoli acquisition in 2015, the Water-Jetting segment increased its range of activities in the **Flow Handling** business, thanks to a particularly complex product, in which the piston pump is the main component: the high-pressure homogenizer. The product range extension and the international expansion are based on the recent acquisitions (both made in **2017**) of Inoxpa Group (based in Spain with branches in 17 foreign markets) and Mariotti & Pecini (Italian specialist of magnetic transmission agitators).

The **Hydraulic** business segment is mainly based on the production of **Power Take Offs** (PTO), used to transmit power from the engine of an industrial vehicle to the other hydraulic components, and **hydraulic cylinders**, helpful to perform special functions, such as lifting dump bodies. Following Hydrocontrol and Walvoil acquisitions, begun in 2013, IP started the production of a particular component called **Directional Control Valve (DCV)**, an electric or mechanical component which is the main interface between user control and machine operation. All these products are used in a wide range of end-markets, such as the earth-moving, construction and agricultural ones.In this business segment IP pursues a diversification strategy of both products and markets, in order to be able to face the lack of predictability of the market cycle.



Market strategy - From IP's point of view, the Water-Jetting division turns out to be more stable than the Hydraulics, because of the leading positioning in Pressure Plunger Pumps market reached thanks to its reputation carefully built over time: IP today represents the 40% of the whole market. On the contrary, the Hydraulic market shows IP's great possibilities of enhancing its competitive positioning, given that this market turns out to be in continuous motion and neither reputation and brand name, nor after sale support are as important as in the previous one. **Diversification and cross-selling** in this case are the first solutions to be adopted in order to lower volatility, even if this introduces a trade off with complexity, because of the wider range of both products and markets. As a consequence, IP will continue to diversify its production, maybe increasing the range of end-markets or the product supply, in order not to get overtaken from other competitors.

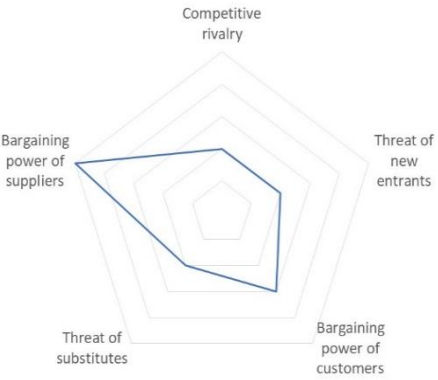
Value Chain - The main elements of the Interpump value chain are the **suppliers**, which may be medium-small or large multinational companies; the **companies within the IP Group**, which mainly perform mechanical production and assembly of components, and commercial; and **customers**, 30% represented by distributors and retailers and 70% by OEM (predominantly belonging to truck and Food&Pharma industries). Overall customers are over 20,000, distributed in over 130 countries. In 2017, the first customer in terms of turnover accounted for about 1.5% of sales, while the top 15 accounted for 10%.

IP's aim is to establish a strong and long-lasting relationship with them, principally focusing on the supply of high-quality and reliable products but also providing an accurate after-sale support (particularly relevant in the water jetting segment, in which it represents about the 33% of the revenues).

Company Strategy - M&A. The first pillar of Interpump's strategy is to increase its business through acquisitions, with the aim of achieving a comprehensive product range, reinforcing competitive positioning and enhancing distribution capabilities. Acquisitions are mostly bolt-on, and offer immediate cost synergies, basically no disruption in activity, and soft integration (management, IT, policies). IP usually focuses on the acquisition of high performing companies, generally characterized by consistent gross margins (higher than 15%) and by an entrepreneurial management, in order to take advantage of any efficiency opportunities.

IP also implements M&A program in order to increase its levels of know-how through the acquisition of innovative and specialized companies (e.g. Ricci Engineering acquisition in 2017): this procedure enables the group to realize cost savings in terms of R&D expenditures. Treasury shares have been used as full or partial payment, together with cash that is used mainly for acquisitions.

All acquired companies become part of the Group while **preserving their brands, organizational structure, and all their success factors**, minimizing integration costs and contributing to the economic results of the Group since day one. Overall, Group's key characteristic is diversification at various levels; its subsidiaries operate in a range of different subsectors and allow Interpump to avoid the criticality of a single-sector business. In addition, Interpump is well-diversified also in terms of customer base, product ranges, application domains and raw materials choices.



INDUSTRY OVERVIEW & COMPETITIVE POSITIONING

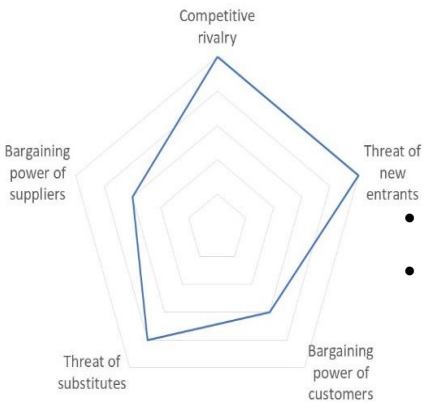
Water Division

The Water-Jetting sector presents more than one field of application; because of its strong diversification, in terms of application's sector, instead of presenting a general market vision, focused on the plunger pump's production, it is reasonable to analyse the sectors where Interpump is the main supplier, and hence the business depends on it.

All the estimates presented below, were taken from market studies, reports from associations and team estimates.

Pressure washer market is expected to grow at a CAGR of 4.14% during the period 2018-2023. **Pressure washers** are used in a wide range of cleaning applications to easily remove dirt, oil, mud, and paint that are usually difficult to remove using manual cleaning techniques. **The global waterjet cutting machine market** is expected to grow from USD 921.7 million in 2018 to reach USD 1,248.0 million by 2023, at a CAGR of 6.25% between 2018 and 2023. A **waterjet cutting machine** is an industrial appliance which is used for the purpose of cutting various materials with the help of high-pressure jet of water or mixture of water and abrasive material.

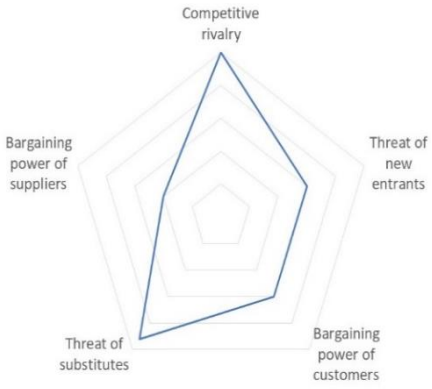
The Flow Handling system market is projected to grow at a CAGR of 4.8% between 2018 and 2023. Considering the fields of applications, and the relative growth rates, it is reasonable to assume an organic growth slightly higher than world GDP, between 4,5% and 5,5%.



Macro Trends

Many of the applications in the Water-Jetting division are oriented to **environmental sustainability** (such as "reverse osmosis desalination", "decommissioning of platforms at the end of life", "fuel pumps for methanol-converted marine engines"). This trend will influence the IP business over time, precisely because of the stronger focus on green economy.

- Growth of **World GDP**
- **Rapid growth in the automobile sector** is one of the key driving factors in the growth of global waterjet cutting machine market: the industry requires precision cutting and strict cutting tolerance, which is well served by waterjet cutting machines. Furthermore, the advancement of newer technologies such as multi axis water jet cutting as well as 3D cutting would comfort the water jet cutting process to increase its capacity worldwide. However, high costs involved in maintenance of water jet may act as a restraining factor for growth.



Hydraulic Division

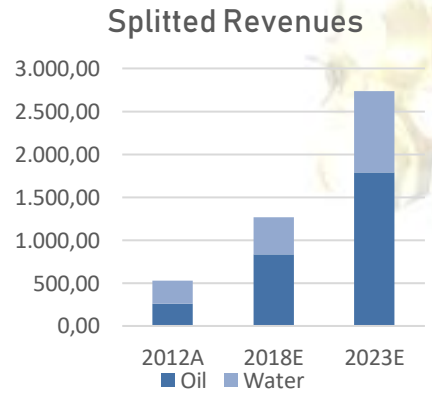
The Hydraulic division is extremely diversified. However, as with the Water division, we have identified the main businesses and their fields of application. IP estimates a market size of about **€40 billion** per year.

The Control Valve market is expected to grow from USD 7.48 billion in 2018 to USD 10.62 billion by 2024, at a CAGR of 6%. Control valves are used to regulate process variables, such as flow, temperature, pressure, and fluid level in the process industries including oil & gas, water management, chemicals, power generation, automotive, mining, pharmaceuticals, food & beverages, and many others.

Global hydraulic hose market is valued USD 1.21Billion in 2017 and is estimated to reach USD 1.65 billion by 2024 with a CAGR of 5%. A hydraulic hose is a synthetic rubber hose, which can withhold high pressure. The hydraulic hose is mainly used to transmit fluid power or fluid within hydraulic machinery. **Global Market for Power Take-off, IP's main business, is expected to grow at a CAGR of roughly 5.5 % over the next five years, will reach 450 million USD in 2023, from 330 million USD in 2017.**
Based on these expectations, extracted from market studies, we assume a total CAGR that ranges between 5% and 6%.

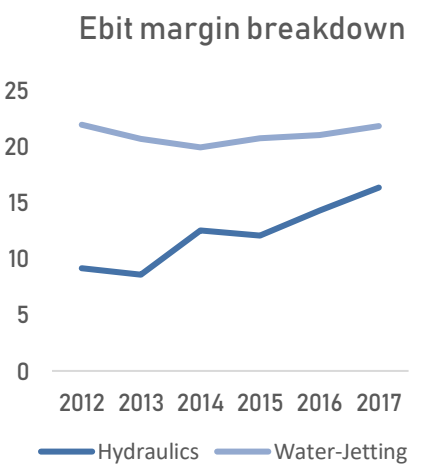
Macro Trends

- With the **urbanization of cities**, the growing population demands better infrastructure and facilities. The rise in the construction of roads, residential buildings, healthcare centres, and educational institutions will create **more demand for construction equipment**. Construction equipment includes various types of machinery that is used in **mining, building construction, earthmoving applications, and other different applications**. This equipment includes dump trucks, excavators, mini excavators, wheeled loaders and motor graders.
- Growth of **World GDP**
- The **growth in the agriculture sector** is mainly driven by an increase in the production output of developing nations like India, China, and Brazil. These **emerging economies** are continuously promoting mechanization of the agriculture sector to increase the product yield and minimize the gap between demand and supply.
- **The growing global population has led to an increasing demand for food products**, which is further expected to result in the need to enhance farm productivity, thereby increasing the rate of adoption of more technologically-efficient methods of farming in developing as well as developed countries. The growing demand for food across the globe is a key factor that is expected to result in the increasing utilization of agricultural machinery over the forecast period.



Competitive Drivers

Water Division - IP operates in a niche of very High-Pressure Plunger Pumps: the estimated niche's size is **less than €1 billion**. This relatively small proportion does not attract global competition and current competitors are principally smaller private companies mainly operating in local markets. Entry barriers are very high: technological development, starting in the 70s, has been incremental; each generation of pumps is obtained with modifications and improvements compared to the previous one, and there is no guarantee that such changes are observable. Recovering 40 years of research and development for new potential threats is extremely expensive and complicated.
Flow Handling market is estimated to be **around €8 billion** and it is characterized by high growth perspectives and by a strong intensity of internal rivalry among the firms: it is possible to identify a consistent number of small competitors and some huge leaders with a massive market share. It is reasonable to assume that in the following years the competition will be played on new technologies.



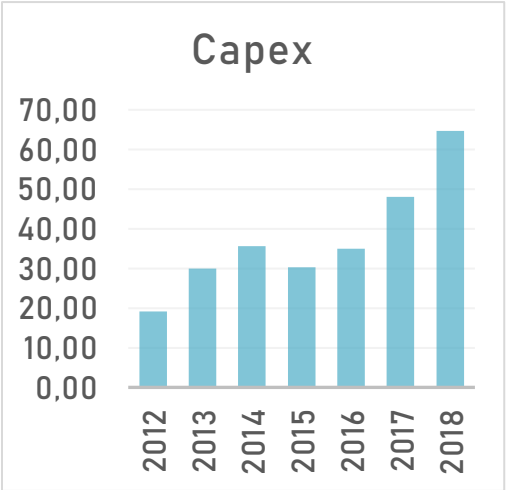
Hydraulic Division - IP participates in the hydraulic market through the production of a wide range of products, which are used in several fields such as trucks manufacturers, earth-moving, agriculture, construction, lifting and others similar. This market is characterized by a **huge number of small players** and a **few of large conglomerates**, whose hydraulic component production does not represent the core business. Sector's competition is played on smaller customers, on the basis of **geographical proximity, sales office's opening hours or availability of the product**, because of the fact that most of the products are interchangeable (as opposed to the Water-Jetting sector). IP represents about **1.5% -2%** of this market; the entry of one or twenty competitors makes no difference, as the big competitors (among which there is also IP) would keep their market share quietly. Therefore, the threat of new entrants does not represent a key factor for the analysis of this market. It is reasonable to assume that Interpump, as declared in the first 9M results' presentation, will improve its competitive positioning in the market through **small and focused acquisitions** and **expansion of product range**.

Competitive Advantages

- **Strong differentiation** in terms of products, applications, customers, geographies. This is the true strength of IP: as noted several times, the production of high and very high-pressure plunger pumps, and the production of hydraulic components led themselves to the most varied applications, and consequently to a wide range of consumers and markets (from those already developed to emerging ones).
- **High entry barriers** to defend the high profitability–IP has, over times, reached a very high competitive advantage based on a leading technological edge and economies of scale; as a consequence, it does not suffer from a particular internal rivalry in the market, and it comes out to be one of the undisputed leaders: other societies very hardly can menace IP's positioning on this niche market.
- **Successful track record in M&A**–As already mentioned, the IP strategy is focused on strong external growth based on acquisitions. Especially in the last few years, the company has made no mistakes, given the prudence in choosing the target company, looking in particular at the relative coherence of the business in order to expand production or exploit a previous sales network.
- **Low cyclicality and flexibility** - The acquisitions carried out over the years have reached a diversification in application fields that permit IP to be less correlated with the industry and market trends. Furthermore, the company is able to front any buyers' demand, by managing the productive processes.
- **Power to set price to buyers** – Relatively to Water-Jetting sector, Interpump is on a competitive position in the market, which allows it to make prices that other players unlikely can apply.
- **High profitability margins** - The margins in Flow-Handling market for IP are extremely higher compared to the bigger competitors: this high marginality by IP, is due to the **obsessive attention to costs**, but also to the **totally opportunistic strategy of the group.**

FY2017	IP	GEA	Alfa Laval	SPX	Parker	Bucher	Eaton
Market Cap.	2.887 €	7.243 €	8.268 €	4.680 €	18.064 €	3.463 €	29.225 €
Revenues	1.087 €	4.604 €	3.665 €	1.140 €	11.836 €	2.385 €	18.090 €
Gross margin	37	31,2	33,13	35,26	35,3	20,4	33,5
SG&A%	19,8	23,7	18,87	14,24	14,2	8,6	19,8
EBIT margin	17,6	7,4	14,27	21,02	21	10,2	12,9
Net margin	12,37	5	8,43	19,28	15,8	6,5	14,6
ROIC	14,25	8,27	9,33	19,15	19,6	10,8	13
ROE	17,58	8,3	14,68	27,85	27,9	13,2	18,6
Debt/Equity	0,55	0,15	0,53	0,86	1,1	0,23	0,45
Payout ratio	-	65	59,9	40,8	41,2	-	35,9

Source: Team Estimates



Competitive Financial Analysis

Relatively to **Water division**, IP has good margins of profitability, in line with the competing companies; however, it presents significantly lower sales levels, in absolute terms, and a reduced market capitalization (due to completely different dimensions with respect to peers).
In the **Hydraulic division**, the situation has the same connotations, or even worse: despite profit margins in line with competitors, even higher in some years, market capitalization, as well as sales levels, are rather different among the various competitors. The same holds for market prices: this supports our thesis of not carrying out a multiple analysis, due to the strong diversification that characterizes not only Interpump business, but also other peers'.

FINANCIAL ANALYSIS

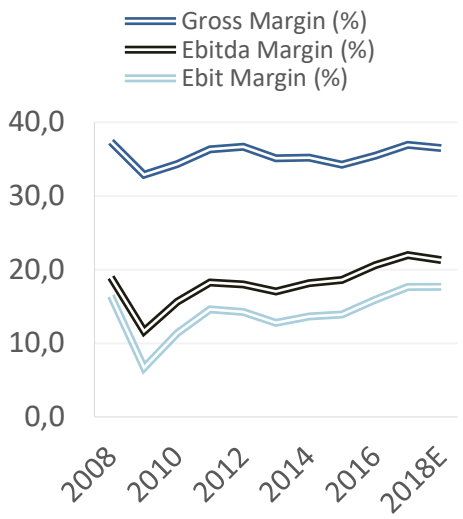
Historical analysis

Revenues
2008-2011 – CAGR: 3,52%

The most difficult phase occurred in the two-year period 2008-2009, with a decrease in annual revenue respectively of 6.4% and 19.22%, principally due to the global crisis. Despite this period of financial distress, IP continued its acquisition plan appealing to the banking debt, for a total amount of €120 million. This negative trend was inverted in the following years (+23.91% in 2010 and +11.15% in 2011).

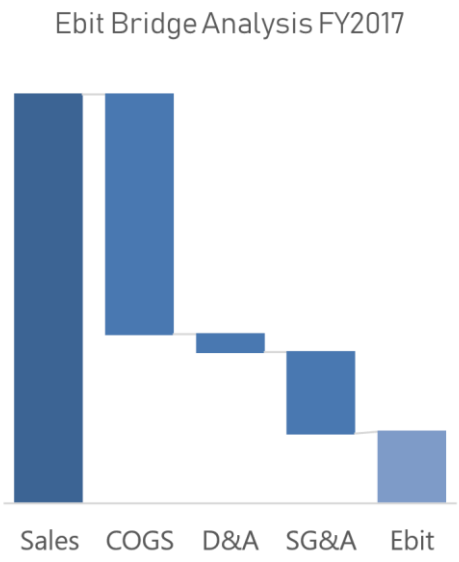
2012-2017 – CAGR: 15,33%

During the considered period, the hydraulic annual revenues have grown with a CAGR of 20,82%, much more than water jetting ones, which have overall increased with a CAGR of 8,92%. This difference is principally due to the higher number of strategic acquisitions carried out by the group in the hydraulic sector and to a contraction of sales in the water jetting sector in 2013 and 2016, because of the lower revenues in the Pacific and North America areas.



Margins

During the first time period considered, EBIT margin has varied within a range of 17%, reached in 2008 immediately before the financial crisis, and 8% in 2009 as a direct consequence of it. The recovery has started since the following year and continued until 2011 (15%). Since the group's reorganization, the water jetting EBIT margin has not significantly changed, remaining fairly stable at 20%; on the contrary, the hydraulic business segment has gone from 9% in 2012 to 16% in 2017. This is principally due to the cost efficiency policy pursued by the company, in particular SG&A have grown less than proportionally with respect to the gross income. In fact, IP has conducted a rationalising activity, merging target societies with respect to their own characteristics or geographic positions.



Cash flows

Free Cash Flows to Firm have been interested by high variability until 2014. Looking at the FCFF/net income margin, we can see that this ratio is particularly higher in 2009 (4.7x) and 2010 (1.82x). These values can be justified because of the group strategy aimed at containing working capital, principally through the reduction of inventory. After 2015, we can see a higher and quite stable cash flow, which reached an average 2015-2017 margin ca. 84%.

Returns

Return on Equity has been quite low during the period 2009 – 2014, due to the restrained net income, which has increased starting from 2015, when IP entered the flow handling

business segment. This is principally due to the increasing level of net income of the last few years, which has grown faster than equity value. Return on Invested Capital has followed a similar pattern, even if the growth has been lower, due to the higher level of invested capital, almost reaching the billion in 2017.

Forecast analysis

We based our forecast analysis on Q3 2018 figures, and carried them on basing on our assumption regarding the following five years, until 2023E.

Revenues. We believe revenues will continue to increase because of the agreed positive future trend that will interest the whole market. In particular, we believe that **organic growth** will be stable in both hydraulics and water jetting market. For the first one, we consider a constant growth rate equal to the average between the production segments composing the oil division, equal to 4.5%, slightly lower than IP forecast and in line with CAGR12-17. For the water jetting organic sales we forecast a percentage growth of c.a. 5 %, as the CAGR12-17, because of the stability of the forecasted growth of the segment in addition to the particularly exclusive and stable relationships that connect suppliers and customers, which allows IP to rely on long lasting revenues.

Because of the fact that the acquired companies enter the consolidated perimeter with a different timing, the growth rate can suffer from a bias that makes it highly volatile. Thus, relying on these estimates of organic and external growth can be mistaken. Moreover, the revenue's impact of the acquired on the IP annual revenues was particularly high in 2014 (24%) and 2015 (37%), due to the fact that IP was still in the early expansion phase, started in 2012, with a relatively lower revenue. Considering that IP will continue the same small acquisition strategy, it is reasonable to assume a lower impact of acquired revenue over IP's. Acquired companies' revenue, measured at their acquisition year, vary from c.a. €3 mm (Endeavour, 2016) to €180 mm (Walvoil, 2015), with an impact on current sales respectively of 0.3% and 18%, determining the external growth rates 19-23 in worst and best cases.

Costs and Margins. Thanks to the cost efficiency program implemented by the company and to the synergies obtained with acquisitions, we assume SG&A margin to be decreasing over the next five years, leading to an operating margin of 18% in 2023.

Change in net working capital. Within working capital we chose not to consider *cash and short term investments* because it does not belong to IP operating activity. It is mainly used to carry out M&A deals, as we saw in the past. A change in NWC on sales, as 5-years average, equal to 1.86%, is a valid assumption, in order to normalize this value.

Depreciation & Amortization. The amortization plan of IP considers an average cycle of the different types of asset equal to 9 years. For this reason, it is opportune to rely on a constant D&A/Sales margin (c.a. **4%**) equal to the last 9-period average, in order to normalize this value for cash flows' forecast purposes.

Cash flow. We assume no new debt so a stable financial structure, in which new debt will be used in order to replace the reimbursed one. Cash flow will increase with a CAGR 2018-2023 of 13%.

VALUATION

The Target Price of **€33,50**, which implies an upside of 20,5%, is resulted from a two-growth stage DCF model in which revenues will increase at two different growth rates. The decision of considering only two different growth stages comes from the fact that, given the unpredictability of the market cycle, it is not feasible to determine manifold stages of the company growth. In this model, it is necessary to implement a scenario analysis for the external growth, in order to consider the different outcomes of IP future acquisition plan. As a consequence, the first stage of the model, that lasts in 2023, is determined using the constant growth rate equal to 13,9%, taken from the scenario analysis, while the second stage is determined by a terminal value calculated assuming that Interpump will increase its FCFF, after 2023, at a constant rate of 1.2%, hence using the *Dividend Discount Model*.

Cash Flow statement	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E
Ebit	69,6	22,9	48,3	68,7	74,9	71,3	91,8	124,6	146,8	191,2	215,7	262,4	298,9	344,2	392,0	446,5
Taxe rate %	33,9	30,5	40,0	34,5	30,0	38,0	38,0	27,6	36,4	29,4	29,4	29,4	29,4	29,4	29,4	29,4
NOPAT	46,0	15,9	29,0	45,0	52,4	44,2	56,9	90,2	93,4	135,0	152,27	185,26	211,01	242,98	276,75	315,22
D&A	10,9	17,0	18,3	17,6	19,8	23,7	30,0	41,7	43,6	47,5	54,2	62,0	70,6	80,4	91,6	104,3
Changes NWC	-3,8	44,4	10,1	-22,0	-12,9	-1,7	-22,6	-4,4	-12,8	-34,2	-26,7	-32,5	-37,0	-42,7	-48,6	-55,3
CFO	53,2	77,3	57,4	40,6	59,3	66,2	64,3	127,4	124,1	148,3	179,8	214,7	244,6	280,8	319,8	364,2
Capital expenditures	-18,6	-12,0	-9,1	-13,8	-19,2	-30,0	-35,6	-30,3	-35,0	-48,1	-64,61	-78,61	-89,54	-103,11	-117,44	-133,76
FCFF	34,6	65,3	48,3	26,8	40,1	36,2	28,7	97,1	89,1	100,2	115,1	136,1	155,0	177,6	202,3	230,5

Source: Team Estimates

Scenario analysis for the external growth The decision of implementing worst and best scenario for external growth, which represents a fundamental driver for IP valuation, is originated from the different acquisition plan that IP can implement. In order to consider the two different acquisition strategies formerly implemented by the group (both micro and macro acquisitions), it is appropriate to determine **two different revenues growth rates**, representing the worst and best scenarios, addressing to each of them a probability of 50% to happen. It is also appropriate to distinguish revenues growth depending on business segments: even though internal growth hypothesis is equal in both segments, external growth rates are supposed to be different according to the business segment acquisition program, connected in turn to both IP competitive positioning and its strategic tasks. In the way as in *forecasted revenues,* it is possible to have a well-defined minimum and maximum external growth rate, considering that IP will continue to acquire companies with similar size. The resulting base scenario is determined considering the average of the two total growth rates, equal to 13.9%. All the followed calculations are shown in appendix 7.

Relative valuation

Valuation through the comparison of peers is not appropriate because multiples do not show any difference among them, but this situation is not reflected in the companies' market price. Another reason is that the companies which can be considered peers are really different, in both product portfolio diversification and size.

Perpetual growth

At the end of the considered period, growth rate is supposed to become lower, in particular equal to 1.2%, as the weighted average between the 1% and 1.5% forecasted respectively for the hydraulics and the water jetting sector, in line with what declared by the Group.

Wacc	
Risk free rate	2,76
Equity Risk Premium	9,02
Beta	0,91
Cost of Equity	10,97
Country Risk Premium	-1,32
Cost of Debt	1,12
D/EV	0,35
Tax rate	29,4
Wacc	6,5

WACC computation

The estimate of the Wacc is made by considering that the target capital structure will be at 0.35 D/EV, as the company states that it will not think to issue debt or shares. The average cost of debt, which it is 1.12%, is calculated by the amount of interest expenses on total financial debt. The tax rate will be stable at current level of 29.4%. The cost of equity is derived from CAPM, in which in the Equity Risk Premium is taken from Italian CDS spread (source: Damodaran). Risk-free rate is the 52-weeks average of 10Y Italian Government Bonds (2.76%); it is reasonable to hold this value in order to consider the outlook for the Italian economy. In order to take account of the geographic diversification of IP, we reduce the cost of equity of the weighted sum of Country Risk Premium's differentials to Italian CRP in which IP operates (-1.32%), resulting a final cost of equity of 9.65%. Hence, the Wacc will be 6.52%. In appendix 6.

Sensitivity Analysis

In order to take into account some unexpected events, such as decrease in sales that may be due to a decrease in production processes or to an economy halt, the produced model is subjected to a sensitivity analysis that stresses initial assumptions on WACC and perpetual growth rates to observe variations in target price.

Terminal growth \ Wacc	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5
0,5	42,8	38,5	35,0	32,2	29,9	27,9	26,2	24,7	23,4
1,0	48,6	43,0	38,7	35,2	32,4	30,0	28,0	26,3	24,8
1,2	51,4	45,1	40,3	36,6	33,5	30,9	28,8	27,0	25,4
1,5	56,3	48,8	43,2	38,8	35,3	32,5	30,1	28,1	26,4
2,0	67,0	56,5	49,0	43,4	39,0	35,5	32,6	30,2	28,2
2,5	83,2	67,3	56,8	49,2	43,6	39,2	35,7	32,8	30,4
3,0	110,1	83,5	67,6	57,0	49,4	43,8	39,3	35,8	32,9

Investment Risks

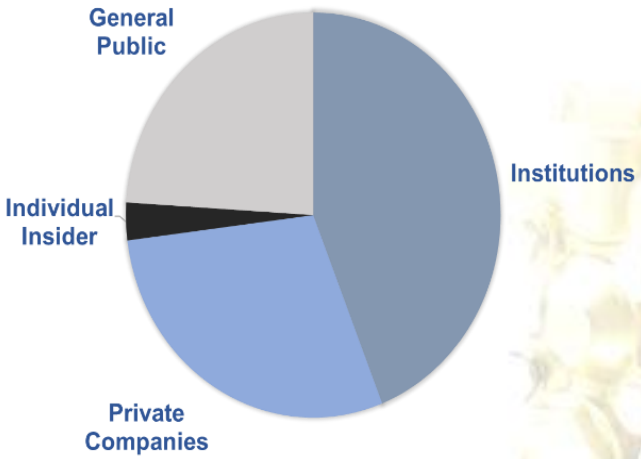
Macro	**Environmental policies -** It is a macroeconomic risk connected with the fact that some environmental policies may change, forcing IP to adjust its own machineries and production cycles in order to be compliant with them; this would imply even huge expenditures that could reduce IP cash flows, subtracting resources to other possible applications. In particular, in 2020 will expire the Horizon program 2020: this can lead to some modifications.
	Contraction of infrastructure spending - Although the market in which it operates is rather stable, the group could face the contractions in infrastructure spending, in the United States and in Europe, dictated by the new internal investment policies. This risk could result in a fall in customer spending in the construction, earth-moving, lifting and tunnelling sectors. However, as already mentioned, the economic cycle seems to have stabilized globally, leaving little room for concern. Furthermore, the growing demand for infrastructure in developing countries, where IP has recently expanded its distribution, acts as a buffer in the event of the contractions in the main markets.
Strategic	**Opportunistic behavior** - It is a business risk deriving from the possibility for acquired companies not to be accommodating with the entrance of IP into their corporate governance and trying instead to take advantages from the acquisition.
	Badwill M&A –A sound balance sheet and abundant free cash flow generation allow the group to implement further acquisitions. Value-destructive acquisitions (high prices paid but with mostly a poor integration into the existing business and lack of synergies) might represent a risk.
	Technology risks - New technologies could emerge in competition with IP, especially in the Flow-Handling and Oil sector, with an impact on the medium to long-term growth of IP in those sectors.
Governance	**Top Management Change –**Top management boasts a solid track record and has been able to position IP solidly in its reference markets, thanks to organic growth supported by constant product innovation. The change of top management might represent a risk. The next AD will have to continue along the lines of what has been done up until now.
Financial	**Currency Risk- T**he Group is exposed to risks deriving from changes in exchange rates, which may affect the economic result and the value of equity. Some of the Group's subsidiaries are located in countries that do not belong to the European Monetary Union. Since the reference currency for the Group is the Euro, the income statements of these companies are converted at the average exchange rate for the period. Changes in exchange rates may have an impact on the euro counter value of revenues, costs and economic results.
	Interest rate risk -The Group companies use external financial resources in the form of debt and use the liquid assets available in bank deposits. Changes in the levels of market interest rates affect the cost and yield of the various forms of financing and employment, thus affecting the Group's level of financial charges. The Group's policy is not to cover, given the short average duration of existing loans (around 3 years). At December 31, 2017, 4.7 million euros in cash and cash equivalents are at a fixed rate without time constraints, while the remainder is at a floating rate, as are financial and bank debts.
	Credit risk -The maximum theoretical credit risk exposure for the Group as at 31 December 2017 and 2016 is represented by the carrying amount of the financial assets represented in the financial statements. However, the Group has not historically suffered significant credit losses (0.2% of turnover in 2017 as in 2016). This is because the companies of the Group generally grant the deferred credit disbursement only to historical customers with proven solvency and soundness. Advance payment or the opening of a letter of credit is required for new customers who have passed an initial financial and economic analysis. The Group is not exposed to significant concentrations of turnover. In fact, in 2017, the first customer in terms of turnover represented about 2% of sales (about 1% in 2016), while the first 15 accounted for about 11% (about 11% also in 2016). At the sector level, the concentration is similar, as the first customer in terms of turnover represents about 1% for the Water Sector and about 2% for the Oil Sector, while the top 15 customers represent 11% for the Water Sector and 17% for the Oil Sector.
	Liquidity risk - The liquidity risk can manifest itself with the inability to find, at financial conditions, the financial resources necessary for the Group's operations. The two main factors that determine the Group's liquidity situation are, on the one hand, the resources generated or absorbed by operating and investing activities, on the other the maturity and renewal characteristics of the debt or liquidity of financial investments and the conditions of market.The current cash and cash equivalents at December 31, 2017 amounted to 144.9 million euros. The latter, and the strong cash generation from the operating activities that the Group was able to achieve in 2017 and in previous years, are certainly factors that reduce the Group's exposure to liquidity risk. The decision to maintain a high level of liquidity was adopted in order to seize the opportunities for acquisitions that should arise and to minimize the risk of liquidity due to uncertainties in the macroeconomic environment that may arise in the future.

CORPORATE GOVERNANCE & SOCIAL RESPONSIBILITY

Interpump Group adopts the provisions as a reference model for its corporate governance of the Corporate Governance Code (*Codice di Autodisciplina*) promoted by Borsa Italiana. Interpump Group S.p.A. has adopted a traditional form of administration and control, where:

- Business management is attributed to the Board of Directors (BoD).
- The supervisory functions are headed by the Board of Statutory Auditors.
- The statutory audit and the accounting control are carried out by the auditing company appointed by the shareholders' meeting.
- The Supervisory Body pursuant to Legislative Decree 231/2001

Interpump Group S.p.A. exercises management and coordination activities pursuant to art. 2497 of the c.c. towards of its Italian subsidiaries, which maintain legal autonomy and apply the correct principles corporate and business management.
The Board of Directors has set up the Remuneration Committee, the Committee Control and Risk, the Appointments Committee and the Related-Party Transactions Committee. The Board of Directors is composed by nine members: they meet on a regular basis and work to ensure that it fulfils its functions in an effective manner, pursuing the primary goal of creating value for shareholders in accordance with group directives and policies. Fulvio Montipò, that founded IP in 1976, is also the CEO and Chairman of the firm.



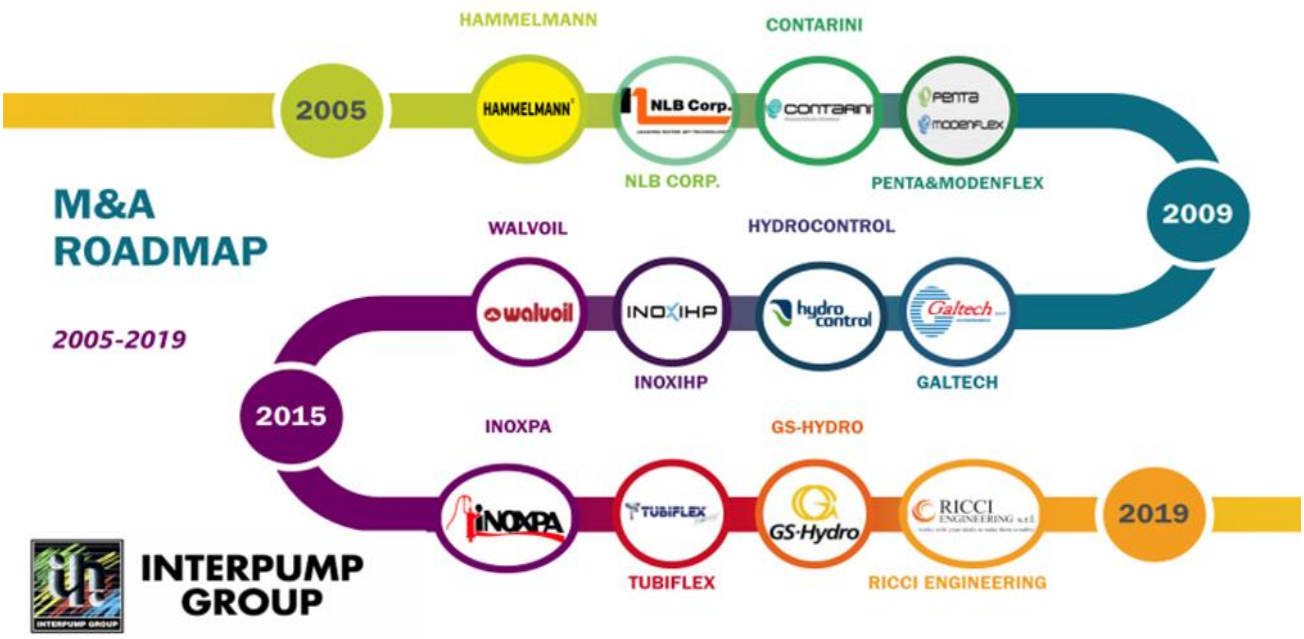
At 31 December 2017, IP has six independent directors: Franco Garilli, Marcello Margotto, Stefania Petruccioli, Paola Tagliavini, Antonia Di Bella and Angelo Busani. Franco Garilli is also the Lead Independent Director that represent a point of reference and coordination for the requests and contributions of the non-executive directors and, in particular, those who are independent. The Code of Ethics consists of a set of principles whose observance is of fundamental importance for the proper functioning, operational reliability, and corporate image of the Interpump Group. The Code of Ethics, adopted by all the companies of the Group, defines the behavioural principles and the guidelines relating to the five areas referred to in Legislative Decree no. 254/2016 (environmental, social, personnel-related, respect for human rights, fight against corruption).Due to the desire to seek an ever-increasing level of compliance with all applicable regulations and for the spirit of respect for legality and ethics in carrying out the business, Interpump intends to acquire a **Global Compliance Program** in order to define a corporate management model and organization of activities in line with the International Best Practices to prevent misconduct in the areas of the Decree.

Appendix – Table of contents

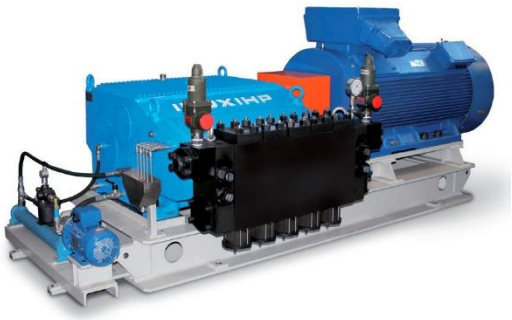
1. M&A Deals and Roadmap

Closing date	Target Company	Country	Business Segment	EBITDA	Price (€mln)	Cause
11 Dec 2018	Fluinox Procesos SL	Spain	Water jetting (FH)	€ 1,5 mln	11	Perfect integration of competences and production
2 Aug 2018	Ricci Engineering SRL	Italy	Water jetting (FH)	10% margin	0.6	Acquiring expertise and know how in order to open to new markets
31 Mar 2018	GS-Hydro Holding OY	Finland	Hydraulics	€ 4 mln	11	Consistent synergistic potential and increase of market presence
3 Oct 2017	Fluid System 80 SRL	Italy	Hydraulics	-	0.9	Increase in market penetration
12 Jun 2017	Mariotti & Pecini SRL	Italy	Water jetting (FH)	€ 2.7 mln 33% margin	9.95	Market presence reinforcement (food, chemical and pharmaceutical industries)
3 Feb 2017	Inoxpa Grup SL	Spain	Water jetting (FH)	€ 11.5 mln 19.3% margin	97.26	Increase water jetting segment through the offer of process implant in addition to pumps and valves.
25 Jan 2017	Bristol Hose Ltd.	UK	Hydraulics	13% margin	1.5	Downstream integration of the production chain
29 Jul 2016	Mega Pacific Pty Ltd.	UK	Hydraulics	€ 3.7 mln 19.5% margin	9.02	Expansion towards the oceanic area
8 Jul 2016	Tekno Tubi SRL	Italy	Hydraulics	€ 1.4 mln	4.54	Increase in pipes production
5 May 2016	Tubiflex SPA	Italy	Hydraulics	€ 5.3 mln 23.4% margin	31.08	Increase in pipes production
22 Jan 2016	Endeavour International Ltd.	UK	Hydraulics	16% margin	1.41	International presence reinforcement
28 Aug 2015	Osper Industria Ltda.	Brazil	Hydraulics	16.2% margin	2.8	Brazilian companies fusion (synergies)
4 Jun 2015	I.M.M. Hydraulics SPA	Italy	Hydraulics	€ 11 mln	22.6	Commercial synergies
22 May 2015	Bertoli SRL	Italy	Water jetting	€ 2.3 mln 20.7% margin	8.35	Food industry (homogenizer)

17 Mar 2015	INOXIHP SRL	Italy	Water jetting	30% margin	9.15	Strengthening in the steel sector
15 Jan 2015	Walvoil SPA	Italy	Hydraulics	€ 19 mln	141.21	Reinforcement in the oil sector; IP becomes a global leader
06 May 2013	Hydrocontrol SPA	Italy	Hydraulics	€ 7 mln	43.6	Productive and distributing synergies
16 Feb 2012	Takarada Ind. Ltda.	Brazil	Hydraulics	€ 1.5 mln 18.6% margin	15.76	Strategic expansion in the Brazilian hydraulic market
18 Jan 2012	MTC SRL	Italy	Hydraulics	€ 1.1 mln 23.8% margin	3.98	Reinforcement of competitive positioning
31 Jan 2012	Galtech SRL	Italy	Hydraulics	€ 0.5 mln	4.62	Reinforcement of competitive positioning
18 Apr 2011	American Gorwood Corp.	USA	Hydraulics	€ 1.4 mln 19% margin	6.80	Production synergies
7 Jul 2009	Hydro Service SPA	Italy	Hydraulics	€ 6.8 mln	25.34	Leading positioning in the hydraulics sector
9 Jan 2009	Oleodinamica Panni SRL	Italy	Hydraulics	-	-	Leading positioning in the hydraulics sector
9 Jan 2009	Cover SRL	Italy	Hydraulics	-	-	Leading positioning in the hydraulics sector
30 Oct 2008	Contarini SRL	Italy	Hydraulics			Production synergies in hydraulic sector
6 Apr 2005	Hammelmann GmbH	Germany	Water Jetting	€ 10.8 mln 22.2% margin	117.47	Increase in technologic expertise



2. Products : Water-Jetting



Product's catalogue includes more than 120 pump models supplying flow rates up to 900 LPM, pressures up to 1500 BAR and power up to 330 KW. There are a multitude of applications that range from the petrochemical to the siderurgy, from the building industry to water treatment, from industrial

Hammelmann's high pressure pump design sets the standard for methanol, LDHI and glycol injection as there is no equal. Hammelmann's process pump with vertical configuration and labyrinth sealing systems, reliably moves all types of mediums including challenging applications like dangerous or non-luberous fluids.

INOXIHP is able to supply components and complete systems of descaling (direct or hydro-pneumatic), piston pumps, distributors and valves for the control of water presses, as well as pumping groups and valves used in coal mines of the longwalls type.

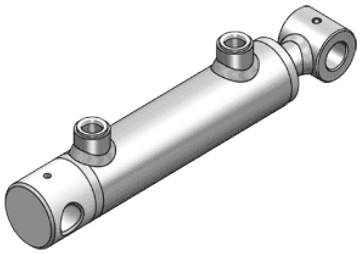
Bertoli has focused its business on the design and construction of high pressure piston homogenizers and pumps for the food industry. Buttonhole of the Bertoli product range is the GIOTTO series of pumps, made with great sturdiness and reliability that make it particularly suitable for processing tomatoes and products with pieces. The range of Bertoli homogenizers covers up to a flow of 50000 lt/h and a maximum pressure of 1200 bar.

NLB manufactures a full line of quality water jetting pump units and accessories for contractor and industrial uses, including pipe and tube cleaning, surface preparation, product removal, tank and tube bundle cleaning, pavement stripe removal, runway rubber removal, concrete hydro-demolition, concrete and pipe cutting, and more.

INOXPA is a global leader in the manufacture and sale of stainless steel process components and fluid handling equipment in the food-processing, beverage, dairy, cosmetic and pharmaceutical, wine-making industries: mixing skids, CIP skids, product recovery systems, pasteurizers, manifolds, process automation, pumps, agitators, blenders, mixers, valves, and fittings.

Hydraulic's Products

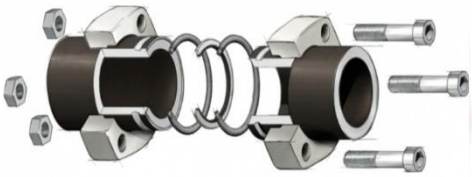
Mainly known for her robust line of power take-offs, **Muncie Power Products** is a provider of hydraulic components for the work truck industry and a variety of other hydraulic applications.
Muncie Power offer a wide breadth of products including power take-offs, pumps, cylinders, motors, valves, reservoirs and filters. These products can be used in a variety of applications, from utility trucks to dump trucks to walking floor trailers; just to name a few.



Contarini makes a wide range of cylinder and related spare parts. Thanks to a warehouse that offers quick availability of items, Contarini can help OEMs reduce their lead times. More than 20,000 standard cylinders from Ø25mm to Ø100mm with strokes from 50mm to 1000mm and 80,000-cylinder parts from Ø25 to Ø300mm are readily available. Contarini's hand pumps have high quality standard and top-level reliability. All pumps are 100% tested before shipment to customers

American Mobile Power features tank systems from 7 to 100 gallon capacity in carbon steel, stainless steel, and aluminium. Tanks can be ported, vented, and finished to clients specifications. Custom tank designs are also available.

I.M.M. Hydraulics is a multinational company which projects manages, produces and distributes hydraulic hoses and hose fittings together with related assembly and testing equipment. The core business of the group is the planning, the production and the distribution of the connection components for the oil-pressure system which are both metal components (fittings and adapters) and rubber components (iron- rubber hoses).



The **GS-Retain Ring System** is used in a broad range of high-pressure applications in a wide variety of industries ranging from Marine and Offshore to Metals & Mining, Pulp & Paper, Sugar and Testing. The GS-Retain Ring System is suitable for hydraulic, lubrication, hydro carbon, high pressure air, mud cement, high pressure water cleaning lines as well as other piping systems where high integrity, inherent cleanliness and fast installation times are needed.

Walvoil is one of the main producers of hydraulic valves and complete mechatronic systems for the worldwide market of moving equipment. Walvoil offers a wide range of products more and more dedicated and tested for every application: Monoblock valves, sectional valves, load sensing valves with electro-proportional controls interfaced with digital electronics, remote controls and diverter valves. Products which are tested a lot more for every application are available for use in the sector of agricultural machines, industrial vehicles, earth moving and construction equipment, truck cranes and fork lifts.

Porter's Forces Analysis

HYDRAULIC Porter's five forces		Score
Internal Rivalry	The high levels of product diversification in addition to the consistent dimension of the market, make the internal rivalry consistent. Player competition is based on the application of lower prices, on technological knowledge, but above all on geographical proximity to customers in order to promptly react to their needs. Thus, availability of products and helpful opening hours of points of sale are important competitive drivers.	
Threat of new entrants	This market is characterized by a huge number of small players, and a few of large conglomerates, whose hydraulic components' production does not represent the core business. High entry barriers are due to the elevated technological knowledge and expertise required to players in order to profitably compete.	
Threat of substitute products	The strong differentiation of products and their high standardization make them extremely subject to threat of substitutes.	
Bargaining power of suppliers	Given the market and products characteristics, bargaining power of suppliers is quite low, and consequently their ability to fix prices.	
Bargaining power of buyers	Buyers have quite high bargaining power, because of their possibility of addressing to the cheaper and more convenient supplier. This is principally due to the low levels of product differentiation.	

WATER JETTING Porter's five forces		Score
Internal Rivalry	The water jetting is a niche market characterized by many small and private players, mainly operating in local markets that try to chase the leading group of main great players. This is a quite stable market, in which top players have the major part of the market share and greater operative margins. The internal rivalry is consequently very low.	
Threat of new entrants	The high levels of knowledge in terms of production processes and technologies required to compete imply a quite low threat of new entrants. Entry barriers are in fact very high: technological development has been incremental since 1970. New entrants are required to spend a great amount of resources in order to equal old players.	
Threat of substitute products	The same reasoning as above, holds for the substitute product: the increase in production processes and innovative materials makes substitute products not threatening.	
Bargaining power of suppliers	The bargaining power of suppliers is elevated because of their strong competitive positioning that allows them to impose price levels.	
Bargaining power of buyers	On the contrary, buyers' bargaining power is low because of suppliers' ability to impose prices.	

WATER JETTING – Flow Handling Porter's five forces		Score
Internal Rivalry	The flow handling niche market is more similar to the hydraulic one, because of the high internal rivalry among players. It is in fact a particularly unstable market, with high growth perspectives. It is impossible to identify a consistent number of small competitors and some huge leaders with a massive market share.	
Threat of new entrants	The threat of new entrants is consequently high, due to the fact that this market niche is in an expansion phase.	
Threat of substitute products	The threat of substitute products is elevated, even though they have to be characterized by high levels of innovation and technology, and this can reduce the maximum degree of substitution.	
Bargaining power of suppliers and buyers	Suppliers' and buyers' bargaining power is restrained because of the continuous change in the competitive scenario that makes it impossible to fix product and service prices.	

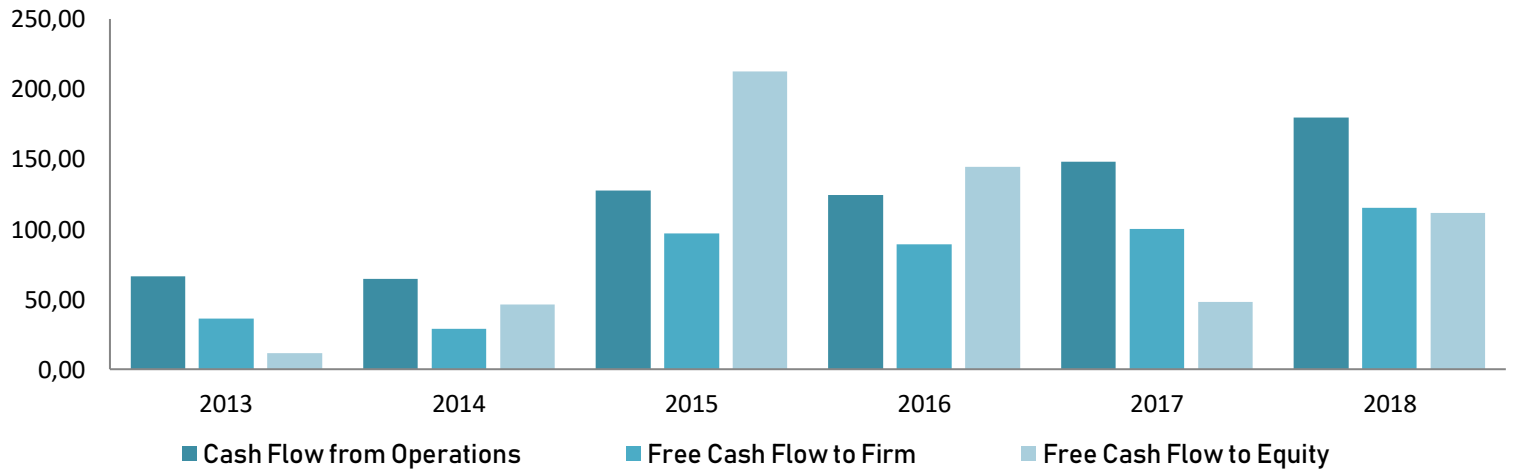
3. Swot Analysis

4. Financial Analysis

Income Statement	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E
Sales	424,5	342,9	424,9	472,3	527,2	556,5	672,0	894,9	922,8	1.086,5	1.265,8	1442	1642,2	1870	2130,4	2426,6
Growth (%)	-1,8	-19,2	23,9	11,1	11,6	5,6	20,8	33,2	3,1	17,7	16,5	13,9	13,9	13,9	13,9	13,9
COGS excluding D&A	255,0	213,2	260,8	283,1	314,2	337,3	405,6	546,8	552,3	637,4	750,1	855,0	973,8	1.109,2	1.263,4	1.439,0
Growth (%)		-16,4	22,4	8,6	11,0	7,3	20,3	34,8	1,0	15,4	17,7	14,0	13,9	13,9	13,9	13,9
Margin (%)	60,1	62,2	61,4	59,9	59,6	60,6	60,4	61,1	59,8	58,7	59,3	59,3	59,3	59,3	59,3	59,3
D&A	10,9	17,0	18,3	17,6	19,8	23,7	30,0	41,7	43,6	47,5	54,2	62,0	70,6	80,4	91,6	104,3
Margin (%)	2,6	5,0	4,3	3,7	3,8	4,3	4,5	4,7	4,7	4,4	4,3	4,3	4,3	4,3	4,3	4,3
Gross Income	158,6	112,7	145,8	171,6	193,2	195,5	236,4	306,5	326,9	401,6	461,5	524,8	597,8	680,8	775,5	883,3
Margin (%)	37,4	32,9	34,3	36,3	36,6	35,1	35,2	34,2	35,4	37,0	36,5	36,4	36,4	36,4	36,4	36,4
SG&A	87,7	88,6	97,0	100,4	116,4	122,3	139,6	178,8	184,3	214,9	233,4	262,4	298,9	336,7	383,5	436,8
Margin (%)	20,7	25,8	22,8	21,3	22,1	22,0	20,8	20,0	20,0	19,8	18,4	18,2	18,2	18,0	18,0	18,0
EBITDA	80,6	39,9	66,6	86,3	94,7	95,0	121,8	166,3	190,4	238,6	269,9	324,4	369,5	424,6	483,6	550,8
Margin (%)	19,0	11,6	15,7	18,3	18,0	17,1	18,1	18,6	20,6	22,0	21,3	22,5	22,5	22,7	22,7	22,7
EBIT	69,6	22,9	48,3	68,7	74,9	71,3	91,8	124,6	146,8	191,2	215,7	262,4	298,9	344,2	392,0	446,5
Growth (%)	-7,6	-67,2	111,2	42,3	9,0	-4,8	28,8	35,7	17,8	30,2	19,0	21,7	13,9	15,2	13,9	13,9
Margin (%)	16,4	6,7	11,4	14,6	14,2	12,8	13,7	13,9	15,9	17,6	17,7	18,2	18,2	18,4	18,4	18,4
Interest Expense	13,9	8,3	9,4	10,5	9,0	8,0	10,4	7,1	6,0	5,3	4,5	4,5	4,5	4,5	4,5	4,5
Pretax Income	60,8	20,2	45,5	67,0	75,0	71,4	93,0	163,6	148,5	192,2	233,1	275,2	313,4	357,0	406,6	463,1
Margin (%)	14,3	5,9	10,7	14,2	14,2	12,8	13,8	18,3	16,1	17,7	19,1	19,1	19,1	19,1	19,1	19,1
Income Taxes	20,6	6,1	18,3	23,0	22,5	27,0	35,4	45,1	54,0	56,4	59,2	80,9	92,1	105,0	119,5	136,2
Net Income	39,2	13,9	26,5	42,4	51,4	43,2	56,9	117,6	93,9	134,4	172,9	194,3	221,3	252,0	287,1	327,0
Margin (%)	9,2	4,1	6,2	9,0	9,8	7,8	8,5	13,1	10,2	12,4	14,2	13,5	13,5	13,5	13,5	13,5

Balance sheet	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E
Cash & Short-Term Investments	50,1	85,5	139,1	109,1	115,4	105,4	87,2	135,1	197,9	144,9	165,2	188,4	214,7	244,8	279,1	318,1
Short-Term Receivables	94,9	84,1	95,1	105,6	105,7	121,8	148,7	195,5	213,6	255,1	290,6	330,9	376,9	429,2	488,8	556,7
Inventories	120,0	100,8	108,0	117,0	131,7	146,0	182,5	238,6	257,5	291,7	332,2	378,4	430,9	490,8	558,9	636,6
Net Property, Plant & Equipment	72,5	107,1	103,1	102,8	112,5	150,7	209,1	286,1	300,9	321,8	332,2	348,8	367,8	390,4	416,3	445,7
Intangible Assets	199,0	221,6	233,6	237,0	248,1	258,5	304,0	380,6	420,7	467,5	477,9	494,5	513,5	536,1	562,0	591,4
ST Debt & Curr. Portion LT Debt	105,4	178,9	133,1	122,5	97,9	82,3	92,1	89,6	127,2	175,4	209,8	247,0	289,5	337,8	392,8	455,5
Accounts Payable	54,2	41,5	61,7	58,0	53,6	70,0	80,3	94,0	109,0	143,0	162,8	185,5	211,2	240,5	274,0	312,0
Income Tax Payable	4,4	5,3	8,1	8,6	6,7	5,7	11,7	19,9	18,1	18,5	20,9	23,7	26,7	30,2	34,1	38,6
Other Current Liabilities	21,3	24,1	24,7	27,8	32,8	49,8	42,5	53,3	53,4	57,6	65,1	73,6	83,1	93,9	106,1	119,9
Long-Term Debt(less current portion)	150,7	91,9	131,7	113,6	91,7	111,7	147,1	300,5	328,0	243,1	289,7	341,2	399,7	466,5	542,5	629,1
Provision for Risks & Charges	10,9	11,7	12,1	11,4	12,3	13,5	16,9	19,9	22,2	23,2	26,4	30,1	34,3	39,0	44,5	50,6
Total financial debt	256,1	270,8	264,8	236,0	189,6	194,0	239,1	390,1	455,2	418,5	499,5	588,2	689,2	804,3	935,3	1084,6
Net financial position	206,0	185,4	125,7	127,0	74,2	88,6	152,0	255,0	257,3	273,5	334,3	399,8	474,5	559,5	656,3	766,5
Total Equity	178,0	242,8	291,5	315,2	396,9	432,9	466,6	622,6	677,5	764,7	908,2	1069,5	1253,1	1462,3	1700,6	1972,0

Historical Cash Flows



Historical Cash Flow statement	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ebit	69,6	22,9	48,3	68,7	74,9	71,3	91,8	124,6	146,8	191,2
Taxe rate %	33,9	30,5	40,0	34,5	30,0	38,0	38,0	27,6	36,4	29,4
NOPAT	46,0	15,9	29,0	45,0	52,4	44,2	56,9	90,2	93,4	135,0
D&A	10,9	17,0	18,3	17,6	19,8	23,7	30,0	41,7	43,6	47,5
Changes in Net Working Capital	-3,8	44,4	10,1	-22,0	-12,9	-1,7	-22,6	-4,4	-12,8	-34,2
Cash Flow from Operations	53,2	77,3	57,4	40,6	59,3	66,2	64,3	127,4	124,1	148,3
Capital expenditures	-18,6	-12,0	-9,1	-13,8	-19,2	-30,0	-35,6	-30,3	-35,0	-48,1
Free Cash Flow to Firm	34,6	65,3	48,3	26,8	40,1	36,2	28,7	97,1	89,1	100,2
Interest expenses	13,9	8,3	9,4	10,5	9,0	8,0	10,4	7,1	6,0	5,3
Interest expenses*(1-tc)	-9,2	-5,8	-5,6	-6,9	-6,3	-5,0	-6,5	-5,1	-3,8	-3,8
Changes in Net debt	6,1	-4,2	-2,2	-31,3	-51,6	-19,8	23,8	120,4	59,1	-48,3
Free Cash Flow to Equity	31,5	55,3	40,5	-11,4	-17,8	11,5	46,1	212,5	144,4	48,1

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Current ratio	1,5	1,1	1,5	1,6	1,9	1,8	1,9	2,2	2,2	1,8
Acid Test	0,8	0,7	1,1	1,0	1,2	1,1	1,1	1,3	1,4	1,0
Cash ratio	0,2	0,3	0,4	0,3	0,3	0,3	0,2	0,2	0,3	0,2
Ebitda coverage	2,6	4,6	1,9	1,5	0,8	0,9	1,2	1,5	1,4	1,1
Ebit/Interest expenses	5,0	2,8	5,1	6,5	8,3	8,9	8,8	17,7	24,3	35,9

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E
Sales per Share	5,38	4,62	4,55	4,97	5,52	5,26	6,26	8,26	8,66	10,06	11,80	13,43	15,30	17,43	19,85	22,61
EBIT per Share	0,88	0,31	0,52	0,72	0,78	0,67	0,86	1,15	1,38	1,77	2,01	2,45	2,78	3,21	3,65	4,16
EPS	0,51	0,19	0,29	0,44	0,54	0,40	0,56	0,88	0,88	1,25	1,61	1,81	2,06	2,35	2,68	3,05
Dividends per Share	0,00	0,00	0,11	0,12	0,17	0,17	0,18	0,19	0,20	0,21	0,27	0,31	0,35	0,40	0,45	0,52
Dividend Payout Ratio (%)	0,00	0,00	38,73	27,33	31,14	41,16	33,27	17,26	22,62	16,71	17,00	17,00	17,00	17,00	17,00	17,00
Free Cash Flow per Share	0,29	0,79	0,61	0,33	0,40	0,36	0,37	0,79	0,89	0,90	1,07	1,27	1,44	1,66	1,89	2,15
Total Shares Outstanding	78,99	93,11	94,60	92,18	101,53	105,78	103,60	107,75	106,60	107,32	107,32	107,32	107,32	107,32	107,32	107,32

Profitability	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E
ROIC	15,0	5,9	9,1	12,8	12,7	9,3	9,1	10,6	10,5	14,3	15,5	17,9	19,4	21,0	22,5	24,0
ROE	22,0	5,7	9,1	13,4	13,0	10,0	12,2	18,9	13,9	17,6	19,0	18,2	17,7	17,2	16,9	16,6

Capital intensity & Efficienty	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E	2023E
Change in WC/Sales (%)	0,88	12,93	2,38	4,67	2,45	0,30	3,36	0,50	1,39	3,15	-2,11	-2,26	-2,26	-2,28	-2,28	-2,28
Capex/Sales	4,39	3,49	2,14	2,91	3,64	5,39	5,29	3,39	3,79	4,42	-5,10	-5,45	-5,45	-5,51	-5,51	-5,51
D&A/Capex	58,73	142,22	201,35	127,94	103,22	79,10	84,22	137,57	124,66	98,72	-83,92	-78,86	-78,86	-78,01	-78,01	-78,01
D&A/Ebitda	13,58	42,67	27,52	20,39	20,91	24,97	24,61	25,08	22,90	19,89	20,09	19,11	19,11	18,94	18,94	18,94
Capex/Ebit	26,75	52,34	18,86	20,02	25,61	42,08	38,75	24,33	23,83	25,15	-29,96	-29,96	-29,96	-29,96	-29,96	-29,96
Net income/ Employee	19.267	5.728	10.638	17.372	19.146	14.410	15.926	24.356	18.710	23.381	30.072	33.800	38.498	43.849	49.944	56.886

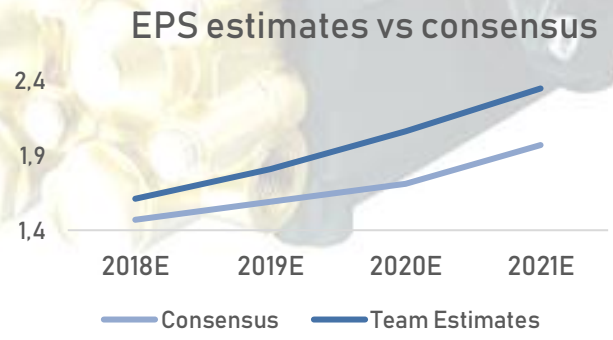
5. WACC Computation

Country risk premium	CRP%	CRP respect to Italy	Revenue exposure	Weight
Italy	3,06	0	17,6	0,00
USA	0	-3,06	17,0	-0,52
Canada	0	-3,06	10,1	-0,31
Germany	0	-3,06	7,0	-0,21
UK	0,69	-2,37	5,1	-0,12
France	0,69	-2,37	4,9	-0,12
Russia	3,47	0,41	3,2	0,01
China	0,98	-2,08	2,5	-0,05
			CRP	-1,319

Cost of Equity	
Risk-free Italy	2,76
ERP Italy	9,02
Beta (52weeks)	0,86
Beta adjusted	0,91
Cost of Equity Italy	10,97
CRP	-1,32
Cost of Equity	9,65

Wacc	
Risk free rate	2,76
Equity Risk Premium	9,02
Beta	0,91
Cost of Equity	10,97
Country Risk Premium	-1,32
Cost of Debt	1,12
D/EV	0,35
Tax rate	29,4
Wacc	6,5

Cost of debt	
Total financial debt	418,50
Interest expenses	4,70
Cost of debt	1,12
Debt	418,50
Equity	764,70
D/E	0,55
D/EV	0,35
Cost of Equity	9,65
Cost of debt	1,12
tax rate	29,40
Wacc	6,5

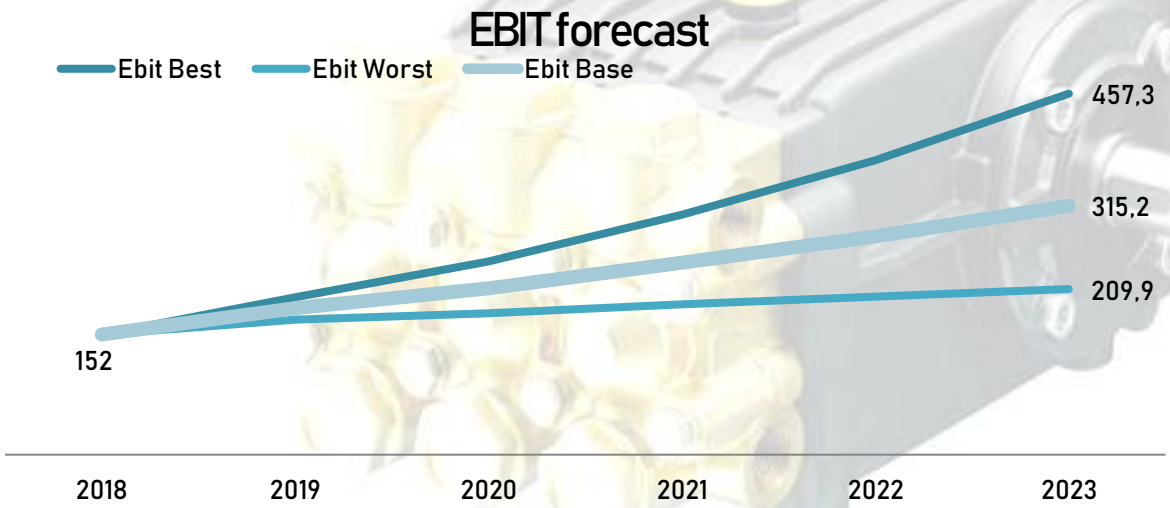


7. Valuation

Base scenario	2018	2019	2020	2021	2022	2023	TV
Sales	1265,8	1441,8	1642,2	1870,4	2130,4	2426,6	
Growth	16,5	13,9	13,9	13,9	13,9	13,9	
EBIT*(1-tc)	152	185,3	211,01	242,98	276,75	315,22	
D&A	54,2	62,0	70,6	80,4	91,6	104,3	
Change in NWC	-26,7	-32,5	-37,0	-42,7	-48,6	-55,3	
Capex	-64,6	-78,6	-89,5	-103,1	-117,4	-133,8	
FCFF	115,1	136,1	155,0	177,6	202,3	230,5	
					Perpetual growth		1,2
Wacc	6,5						
Discounted factor	1,00	0,94	0,88	0,83	0,78	0,73	0,73
Discounted FCFF	115,15	127,81	136,69	147,07	157,29	168,21	3.211,9
EV	4064,2						
Debt	418,5						
Equity	3645,7						
N° shares	108,9						
Target Price	33,5						

Best Scenario	2018	2019	2020	2021	2022	2023	TV
Sales	1265,8	1553,2	1905,7	2338,3	2869,1	3520,4	
Growth	16,5	22,7	22,7	22,7	22,7	22,7	
EBIT*(1-tc)	152	199,6	244,87	303,76	372,71	457,32	
D&A	54,2	66.8	81,9	100,5	123,4	151,4	
Change in NWC	-26,7	-35,0	-43,0	-53,3	-65,4	-80,3	
Capex	-64,6	-84,7	-103,9	-128,9	-158,2	-194,1	
FCFF	115,1	146,6	179,9	222,1	272,5	334,4	
					Perpetual growth		1,2
Wacc	6,5						
Discounted factor	1,00	0,94	0,88	0,83	0,78	0,73	0,73
Discounted FCFF	115,1	137,7	158,6	183,9	211,8	244,0	4.659,8
EV	5711,0						
Debt	418,5						
Equity	5292,5						
N° shares	108,9						
Target Price	48,6						

Worst scenario	2018	2019	2020	2021	2022	2023	TV
Sales	1265,8	1329,1	1395,6	1465,4	1538,6	1615,6	
Growth	16,5	5	5	5	5	5	
EBIT*(1-tc)	152	170,8	179,32	190,36	199,87	209,87	
D&A	54,2	57,2	60,0	63,0	66,2	69,5	
Change in NWC	-26,7	-30,0	-31,5	-33,4	-35,1	-36,8	
Capex	-64,6	-72,5	-76,1	-80,8	-84,8	-89,1	
FCFF	115,1	125,5	131,8	139,2	146,1	153,4	
					Perpetual growth		1,2
Wacc	6,5						
Discounted factor	1,00	0,94	0,88	0,83	0,78	0,73	0,73
Discounted FCFF	115,15	117,83	116,17	115,22	113,59	111,99	2.138,4
EV	2828,4						
Debt	418,5						
Equity	2409,9						
N° shares	108,9						
Target Price	22,1						



Sensitivity Analysis

Terminal growth \ Wacc	4,5	5,0	5,5	6,0	6,5	7,0	7,5	8,0	8,5
0,5	42,8	38,5	35,0	32,2	29,9	27,9	26,2	24,7	23,4
1,0	48,6	43,0	38,7	35,2	32,4	30,0	28,0	26,3	24,8
1,2	51,4	45,1	40,3	36,6	33,5	30,9	28,8	27,0	25,4
1,5	56,3	48,8	43,2	38,8	35,3	32,5	30,1	28,1	26,4
2,0	67,0	56,5	49,0	43,4	39,0	35,5	32,6	30,2	28,2
2,5	83,2	67,3	56,8	49,2	43,6	39,2	35,7	32,8	30,4
3,0	110,1	83,5	67,6	57,0	49,4	43,8	39,3	35,8	32,9

8. Investment Risks

	RARE	UNLIKELY	POSSIBLE	LIKELY	ALMOST CERTAIN
SEVERE	Natural Catastrophes				
MAJOR	Credit Risk		Badwill M&A	Contraction of Infrastructure spending	Price Risk
MODERATE		Liquidity Risk	Interest Rate Risk	Technology Risk	Product Selection Risk
MINOR		Opportunistic Behavior	Currency Risk	Top Management Change	Environmental Policies
NOT SIGNIFICANT					

9. Corporate Governance
Board of Director

Name	Role	Status
Fulvio Montipò	Chairman and CEO	
Paolo Marinsek	Deputy Chairman	
Angelo Busani	Director	Independent
Antonia Di Bella	Director	Independent
Franco Garilli	Director	Lead Independent Director
Marcello Margotto	Director	Independent
Stefania Petruccioli	Director	Independent
Paola Annunziata Tagliavini	Director	Independent
Giovanni Tamburi	Director	

Remuneration Policy

The remuneration of directors assigned special duties includes a fixed component, a variable short-term component and long-term incentives in order to promote the achievement of specific objectives in the interest of all shareholders. The long-term incentives component is especially geared towards promoting the achievement of long-range objectives with the aim of aligning the interest of managers with those of shareholders. The remuneration due to directors assigned special duties is defined by the Board of Directors based on a proposal from the Remuneration Committee. The level of fixed remuneration is mainly correlated with professional specialization, with the organizational role performed and with responsibilities. Part of the variable remuneration is correlated with performance in the short term, construed as both individual performance and the results of the Company and the Group. The variable remuneration component is never higher than 75% of the fixed component. The variable remuneration component is also oriented towards a medium and long-term horizon, thereby focusing the attention of beneficiaries on factors of strategic interest, building loyalty, aligning remuneration with the creation of value for shareholders in the medium and long-term, and guaranteeing a level of remuneration that is globally competitive.

Name	Office	Fixed Compensation	Compensation for Sitting on Committees	Other Compensation	Fringe Benefits	Total	Fair Value of Equity Compensation
Fulvio Montipò	Chairman and CEO	1.531		500		2031	1271
Paolo Marinsek	Deputy Chairman	351			9	360	66
Angelo Busani	Independent Director	30	13			43	
Antonia di Bella	Independent Director	30				30	
Franco Garilli	Independent Director	45	30			75	
Marcello Margotto	Independent Director	45	10			55	
Paola Annunziata Tagliavini	Independent Director	45	20			65	
Stefania Petruccioli	Independent Director	45	20			65	
Giovanni Tamburi	Non-Executive Director	45	10			55	

Code of Ethics

The Code consists of a set of principles whose observance is of fundamental importance for the proper functioning, operational reliability, and corporate image of the Interpump Group. These principles form a benchmark for the operations, conduct, and internal and external relations of Group companies.

Impartiality	In decisions that impact on relations with each Interpump Group company avoids all types of discrimination based on the age, gender, sexual orientation, health, race, nationality, political views, or religion of its counterparts.
Honesty	In the context of their professional activities, the Collaborators of each Interpump Group company and the Third Parties that work with the Interpump Group are required to comply diligently with the current laws in force locally and this Code of Ethics
Propriety	In the pursuit of any activity, the Collaborators of Interpump are required to adopt ethical conduct founded on the principles of propriety, transparency and professionalism.
Confidentiality	Each Interpump Group company ensures the confidentiality of the information, documents, studies, initiatives, projects and contracts in its possession, taking steps to protect that wealth of information and prevent it becoming accessible by unauthorized persons. Similarly, each Company avoids seeking and obtaining possession of confidential data or information in violation of current regulations.
Value of human resources	The Collaborators of each Interpump Group company are an indispensable factor in the success of the Group. For this reason, Interpump protects and promotes the value of its human resources with the aim of improving and increasing the knowledge and skills possessed by each Collaborator. The Interpump Group guarantees freedom of association of workers and recognizes the right to collective bargaining.
Fairness in the exercise of authority	In all relations that involve the creation of hierarchical relationships, particularly with Collaborators, each Interpump Group company strives to ensure that such authority is exercised in a fair and just manner, avoiding all forms of abuse. In particular, Interpump guarantees that such authority will not transform into an abuse of power that infringes on the dignity and independence of Collaborator, and that decisions about the organization of work will safeguard their dignity and values.
Responsibility	All Collaborators perform their work and activities with diligence, efficiency, and propriety, using the tools and time at their disposal in the best possible manner and taking responsibility for the performance of their duties.
Communication	Each Interpump Group company arranges to inform all Collaborators and Third Parties about the provisions and application of this Code of Ethics, requesting their compliance. Specifically, each Company arranges to distribute this Code to its intended recipients, to interpret and clarify the provisions of the Code, to check actual compliance with them, and to update the provisions in relation to any new requirements that may emerge from time to time.

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CFA Institute Research Challenge