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JIT Financial Advisors

BUY

Share Price (EUR)	€28.20
Target Price (EUR)	€33.45
Upside	18.20%

Key Figures

Market Capitalization (EUR)	2,959m
IPO Date	01/01/96
Annual Dividend (EUR)	0.21
Dividend Yield	0.77%
52w Low (EUR)	24.16
52w High (EUR)	30.44
Avg. daily volume (5 days)	149,335
Number of Shares (m)	106
Enterprise Value (bn EUR)	3,241
Free float (%)	70.64%
TTM P/E	17.3123
Beta (Adjusted)	0.8

Figure 1: Interpump Share Performance vs. FTSE

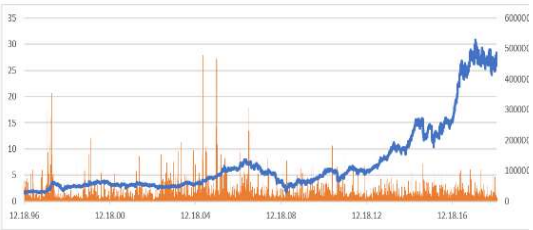


Figure 2: Stock Price with volume since first trading day

Shareholders

IPG Holding s.r.l	21.5 %
Fidelty M&C Company	5.51 %
Bulgarelli (Claudio)	4.13 %

	2018E	*2019E*	*2020E*
Revenues Team	1,271	1,424	1,537
Revenues Consensus	1,262	1,327	1,396
EBIT Team	244	278	303
EBIT Consensus	234	251	266
EBIT margin Team	19.18%	19.52%	19.69%
EBIT margin Consensus	18.53%	18.89%	19.21%
Net Result Team	12.59%	12.49%	10.24%
Net Result Consensus	12.77%	13.17%	13.36%
EPS Team	1.47	1.68	1.83
EPS Consensus	1.59	1.60	1.67

Source: TR Eikon and Team estimates

Figure 3: Revenues Team vs. Consensus

Founded in 1977 in Sant'Ilario d'Enza (RE) by Fulvio Montipò, Interpump Group S.p.a. went public in 1996 and is now the world's largest producer of professional high-pressure piston pumps and a leading global developer of hydraulics components.

INVESTMENT SUMMARY

Based on an extended valuation of the business and the market, we issue a BUY recommendation for Interpump Group. We computed an expected target price of **€33.45** reflecting an 18.20% upside with respect to the share price of €28.20 (opening price as of 13/02/2019). Our valuation is based on a discounted cash flow model and is extensively confirmed by a relative multiple valuation and a sensitivity analysis. Our recommendation is based on (1) strong expected results for Q4 2018 and near future in terms of sales growth, (2) improved future cost efficiency, (3) and valuable M&A transactions.

1) Interpump benefits from being world leader in a market with a promising revenues growth and profitability

Interpump's revenues have grown since FY2012 at a **CAGR of 15.8%** to estimated **€1.3B in 2018E** and in 2017 the company reported a double-digit annual growth of 18% (up by 15% with respect to 2016). The industry in which Interpump operates is also very promising in term of growth. In fact, the global high-pressure pumps industry is expected to reach **USD 2.79bn** by 2023, growing at a CAGR of over 3% due to its wide application in various industries for cleaning purposes, increasing power generation capacity, growing technological and growing investments in different industries. Interpump enjoys a world-leading position in the water-jetting sector, which shows outstanding EBITDA margins (+26% in 2017). Their position of predominance derives from a plurennial experience and the incremental technological development applied.

2) Interpump benefits from managing its costs efficiently and achieves high EBITDA margins.

Over the last 6 years, Interpump has managed to decrease its COGS (- 4% from 2012) and at the same time increasing its revenues at a CAGR of 15.8% reaching an estimated €1.3B in 2018E. Interpump was also able to reduce its service costs by 3%. This means that Interpump was able to efficiently manage its costs, which was also proved by the reported double-digit growth of 17% in 2017. Interpump might be even more efficient by adopting new technological frontiers. In the future, traditional mechanical devices, e.g. valves, pumps and pipes, could be integrated by data analytics. In fact, the large demand of customers and end-users to make informed decisions has led to a greater attraction and embracement for the industry 4.0, a new era for the industrial manufacturing industry referred to as the fourth industrial revolution. Data analytics will **optimise** the process **efficiency** and allow to take early intervention preventing downtimes and inactivity costs. The industry is evolving into a data hungry industry and those who will embrace the industry 4.0, or simply the I4, will be well positioned in the future market

3) Interpump holds countless opportunities thanks to its M&A strategy.

In the last years, two thirds of the company's growth came from non-organic growth. The M&A is a large part of the Interpump history with more than 40 acquisitions in the last 20 years. On the one hand, the main goals of the M&A strategy are to achieve substantial growth, increase market share, acquire new resources, new technologies, know-how processes and especially experienced engineering talents. On the other hand, through acquisitions, the company also aims to expand its product range to improve its competitive position on a particular set of products by enhancing the seller's commercial network and to exploit the opportunities derived from cross-selling. Moreover, the M&A strategy is widely used to penetrate new markets and reach new potential customers. We expect that Interpump will continue to use its outstanding level of liquidity to make acquisitions and to follow its inorganic growth strategy in order to increase shareholder value and to further diversify its business.

CURRENT HIGHLIGHTS.

Share Repurchase program. Recently, the company intensified its share repurchase program over the last 3 months. One of the company's acquisition policy is to pay new acquisitions with its own treasury stocks. At the Q3 2018 earnings call, the company stated it would have €43 million for the purchase commitments of subsidiaries.

Acquisition of Fluinox. Interpump acquired the Spanish company Fluinox, specialized in the design and components installment for the cosmetic, food, pharmaceutical and chemical industry. The new acquired company will be integrated to exploit synergies with its subsidiary Inoxpa.

BUSINESS DESCRIPTION

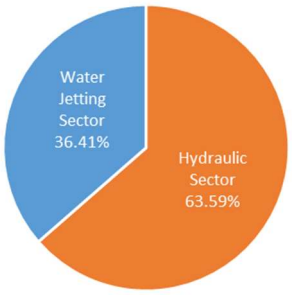


Figure 1: Distribution of sales based on sectors (FY 2017)

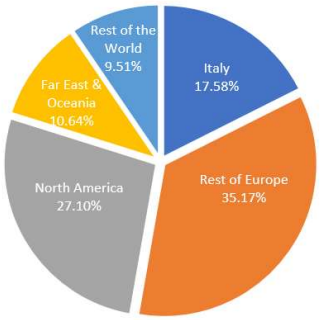


Figure 2: Distribution of sales on a geographical (FY 2017)

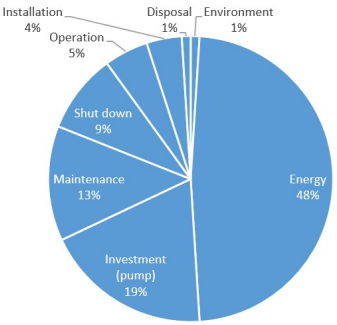


Figure 3: Lifecycle cost of a Pump

Figure 4: Power take off (PTO)

Figure 5: Piston Pump

Interpump is a global player in the manufacturing and wholesale distribution of high-pressure plunger pumps, oil pressure power takeoffs, hydraulic products and high-pressure system and it is based in Sant'Ilario D'Enza, Italy. Founded in 1977 by Fulvio Montipò, the company grew quickly, and went public in 1996 of the Milan Stock Exchange. In the last years, Interpump expanded through acquisitions and the development of approximately 45 production facilities in 17 different countries which helped to strengthen its market position. Interpump's ambition is to realize an industrial area of international relevance such that it enables the company to pursue its strategy to acquire a worldwide leadership in its operating sectors. As of today, the company is world leader for high, very high-pressure pumps and power takeoffs in its hydraulic sector and in the water-jetting sector.

Geographic and business segments. The company serves primarily 2 main sectors, with a specific target on niche markets: Water-jetting and hydraulics (Fig.1). In 2017, the company had more than half of its sales coming from Europe (53 %), 30% coming from North America and the rest coming from the Pacific area and the rest of the world (11% and 9%, respectively) (Fig.2). The water-jetting sector is a high margin sector for the company, while the hydraulics sector offers smaller margins but shows a higher volume. The water-jetting sector comprehends high pressure pumps (HPP) and very high-pressure pumps (VHPP), that find their application in different industrial application sectors such as in the transportation of fluids, high-pressure cleaners and in the food, chemical and cosmetic processing industry. The hydraulic sector includes the production and sale of power take-offs (PTO), hydraulic cylinders, pumps, directional controls, valves, hydraulic hoses and fittings and other various hydraulic components.

Interpump Products. The vast spectrum of products offered by Interpump present a crucial success factor. The foundation of Interpump's success comes from the founder's ability to innovate piston pumps, by substituting steel with ceramic and therefore making the product more durable. Pumps are a important component of the final product and therefore the economics of the pump are one of the key factors behind a customer's choice (Fig.3). The M&A strategy of the company enabled it to expand and diversify its product offering and to consolidate its position in the market. The products offered by the company find their application in a lot of different fields, such as food and pharma industry, trucks, earth moving and also in the construction sector. Additionally, in the water jetting segment one third of the segment's revenue derive from the after-sale service offered by the company.

Interpump's M&A shop. In the last years, two thirds of the company's growth come from non-organic growth. Through acquisitions, the company's aim to expand its product range to improve its competitive position on a particular set of products by enhancing the seller's commercial network and to exploit the opportunities derived from cross-selling. The acquisitions are not only made to diversify its business, but also aimed to make Interpump a full system supplier capable of offering a full product range to existing customers, including to those of the power takeoffs and hydraulic pumps businesses, where the company has already a clear market leadership. Various strategic investments helped the company to expand its modus operandi and to target various niche markets in its industrial sector. (Appx. 12)

Interpump Customer relationship. Interpump customer base is broadly diversified through dealers and OEM. The various applications possibilities from its products make them interesting to various sectors, as for example the construction, industrial and automotive sector (Fig.35). Another feature of Interpump's business is the small interdependence from its customers. In Q3 2018, the top customer in terms of sales accounted for less than 1% of the total while the top 20 accounted for approximately 10% of total sales. Customers find themselves often bonded to the specific characteristics of the products, which leads to an often-long-lasting relationship between Interpump and the customer.

Market strategy. Interpump will continue to use its outstanding level of liquidity to make acquisitions and to follow its inorganic growth strategy, to increase shareholder value and to further diversify its business. The research and development activities undertaken by Interpump are aimed to expand its product ranges, to customize existing products and to develop new ones. At the same time, the focus on R&D has reinforced its position in highly profitable markets. Only in 2017, the company completed Interpump will continue to pursue its delving to find new application methods for its high-margin water-jetting products while still serving the high-volume hydraulics market. From an operational point of view, the company plans to maintain its leadership in the water-jetting sector and to reduce the small gap with its competitors in the hydraulics market. Its research and development operations are executed by Walvoil, Interpump Hydraulics and IMM, while for the water-jetting sector this is carried out by Hammelmann. Another possible growth opportunity derives from the possibilities deriving from the emerging countries, that in 2017 accounted for less than 20 % of the company's turnover. In fact, during the last few years, the company was engaged in a big restructuring of its Chinese and Indian production plants, aimed to

increase their productivity. This shift of focus from more mature markets to those from the emerging markets led in Q3 2018 to a YoY growth of its business in China and India equal to 24% and 87%, in their home-currencies, respectively.

Interpump: A successful past. Interpump has been able to reposition itself more than once in its history. The company went through an initial reposition in 2005, after it sold its cleaning sector. Interpump's decision was driven by the sentiment of an overmatured market and an increasing number of competitors coming from China. The funds obtained were used to expand its water-jetting business, investing into Hammelmann which helped the company to thrive in this sector. Also, in 2010, the company divested its business in Electric motors to fully commit to its industrial focus.

Figure 6: Total sales by channel (FY2017)

INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

The global industrial market recorded one of its best years in 2017 since the last financial crisis and this is shown by robust equity market returns and volume growth (*source: KPMG*).

Machinery industry. Interpump operates in the industrial machinery industry engaged in manufacturing of piston pumps and hydraulic products (Appx. 13). The global high-pressure pumps industry is projected to reach USD 2.79bn by 2023, growing at a CAGR of over 3% during 2018-2023 due to its wide application in various industries for cleaning purposes, increasing power generation capacity, growing technological and growing investments in different industries (*source: techsciresearch.com*). The global HPP market is dominated by the Asia-Pacific region. As a matter of fact, the Asian market is primarily driven by the countries like China, India, Japan where the industrial sector is growing rapidly. The investment in R&D is the chief factor contributing to the market's success and influencing the trends that gain distinction in the market. The HPP market is steadily growing due to its large-scale application in automotive, steel manufacturing infrastructure and water processing industry *(source: abnewswire.com)*. Moreover, it is very important to segment the HPP market into 4 key dynamics (Fig. 14). Finally, another key point is that in most sectors, Interpump is moderately correlated to industry trends.

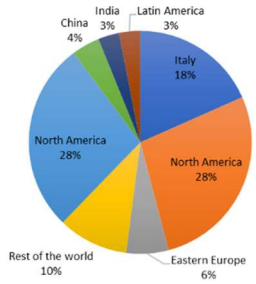


Figure 7: Sales in geographical terms

Global player. The Group has 45 production facilities spread in Italy, the US, Germany, China, India, France, Portugal, Brazil, Bulgaria, Romania and South Korea. In geographical terms, at the end of FY2017 the sales in Europe in Italy, and Europe amounted a bit more of 50%, while North America equaled a bit more than a quarter. (Fig. 7)

It is very important to distinguish the two business segments of the company, namely water jetting and hydraulic sector, since they have a different impact on the performance and on the strategic decisions.

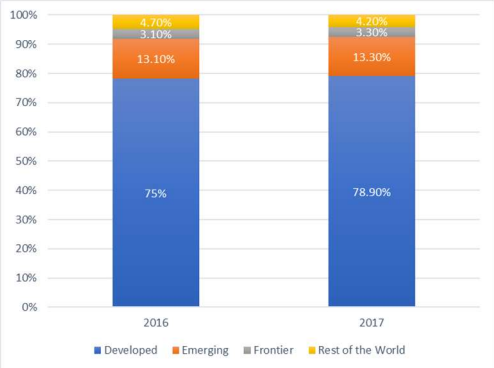


Figure 8: Revenue – Exposure by economy

Water-Jetting *(FY2017 sales +21.4%, EBITDA +26%):* the division constitutes 1/3 of the total sales. It has a higher impact on the *EBITDA* due to higher margins and 1/3 of revenues come from after-sales (maintenance, parts & service). This business segment represents their niche market of high-pressure plunger piston pumps (HPP) for water and other fluids with a *premium-price*. The premium represents a +15/20% compared to equal products of the competitors. The estimated total size of the market is approximately €1bn/yr and Interpump has almost *40% market shares* of the whole market (Fig. 12). The position of predominance derives from experience and the incremental technological development applied. The average duration of a pump is about 20 years and during this period an ordinary maintenance is required. Therefore, a new company that enters the market does not compete with the experience and history of Interpump. A key point for them is the long-term relationship with customers. This sector was strengthened with the penetration in the Flow Handling, Food, Cosmetics & Pharma with an estimated market size of €8bn/yr and a +10% CAGR/yr. The entry into this market was through a product *"the high-pressure homogenizer"* based on a piston pump. The product range extension was based on the acquisition of Bertoli, Inoxpa and the latest acquisition Fluinox. In the food processing industry, it is particularly important to be as near as possible to the client. Every raw material or unprocessed food has specific characteristics and consequently specific needs.

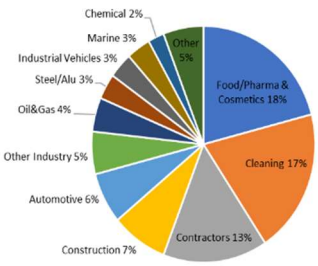


Figure 9: Water-jetting Diversification

Competitors: the main competitors of this business segment are the Swedish *Alfa Laval AB* with the "Food & Water" sector, the German *GEA Group AG* with the "Equipment sector" and finally the American *SPX Flow, Inc* with the "Food & Beverage" sector (Fig.12).

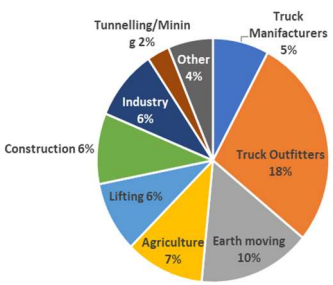


Figure 10: Hydraulics Diversification

Hydraulics sector *(FY2017 sales +15.8%, EBITDA +20%):* a fast-growing global player in a huge market of estimated **€**40 bn/yr (Fig 11). In this case, Interpump has been looking for diversification of its business because of a huge competition. It represents a commodity market and a price-premium could not be applied because the market sets them. The products have only a functional value without added value. In this type of market, it is not possible to distinguish itself. Moreover, here there is no after-sales market for components. The only way to gain position is focusing on cross-selling. Even though, the hydraulic pumps and other products can be adjusted to distinct specifications, which bind the customer to the

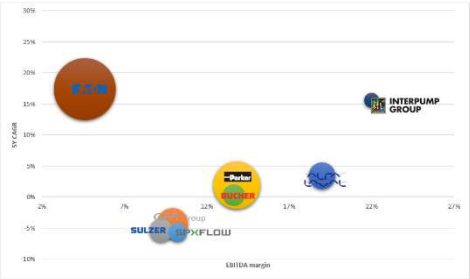


Figure 11: Competitive Market in both business segments

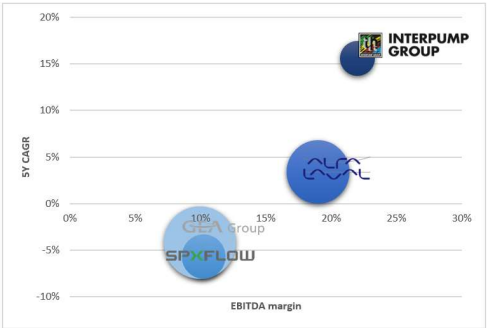


Figure 12: Water-jetting niche market

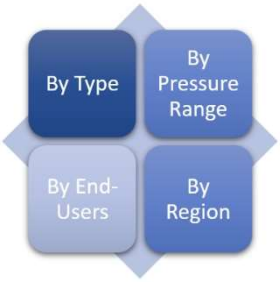


Figure 14: Segmentation of HPP Market

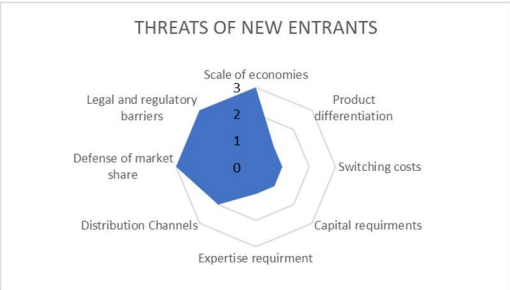


Figure 15: 5 Forces – Threats Of New Entrants

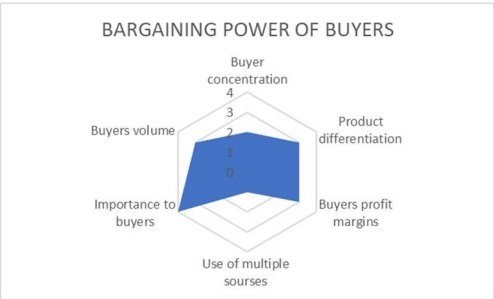


Figure 16: 5 Forces – Bargaining Power of Buyers

producer or require tailor-made products. The biggest customers are represented by the utility producers and usually they ask for trust, constant supply, broad product selection and the presence in the countries where the big construction companies want to expand. Therefore, it is so important the role of M&As. Indeed, there is an ongoing expansion into sectors and with little or no cyclicality.

Competitors: the hydraulic sector is more crowded, with 4 main competitors: the two Swiss *Sulzer AG* and *Bucher Industries AG* with the "Pumps Equipment" and "Hydraulics" division respectively. The Irish *Eaton Corp. Plc* with the "Hydraulics" business, the American *Parker-Hannifin Corp*. with "Diversified industrials" sector and the with the "Industrial technology" business (Fig.11)

Ratio / Company	Current		Quick		Days Receivables		Days in Inventory		Days Payables		Operating Cycle	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Interpump Group S.p.A.	2.19	1.77	1.29	0.97	74.78	73.36	167.31	160.36	68.46	73.57	242.10	233.72
Alfa Laval AB	1.32	1.36	0.78	0.81	87.85	85.71	125.35	134.06	41.02	43.63	213.21	219.77
GEA Group AG	1.59	1.20	1.21	0.82	109.87	118.62	70.95	75.98	75.54	81.40	180.82	194.60
SPX Flow, Inc.	1.70	1.55	1.12	1.04	87.91	83.26	82.05	80.17	61.21	59.92	169.96	163.44
Bucher Industries AG	2.13	2.03	0.29	0.25	73.38	68.74	122.07	113.12	44.01	84.19	195.45	181.86
Sulzer AG	1.65	1.40	0.18	0.14	121.10	119.17	88.92	91.34	85.08	90.65	210.02	210.51
Eaton Corp. Plc	1.27	1.64	0.79	0.99	67.25	67.18	69.90	70.21	53.09	55.81	137.15	137.39
Parker-Hannifin Corp.	2.20	1.41	1.56	0.84	51.48	51.73	53.18	54.61	45.71	46.83	104.66	106.34

Figure 13: Competitor Ratios

COMPETITIVE ANALYSIS: Porter's 5 forces analysis

Interpump is the global leader in the **water-jetting sector** representing their **niche market** of HPP and VHPP however, in the **hydraulic sector** they have been looking for **diversification** of the business due to a huge competition. Comparing the *EBITDA margins* of Interpump Group with the water-jetting sector of competitors they have the highest value representing 22% in FY2017 (Appx. 8) as well as the *net income margin* with 12.4% FY2017 because of their business model and competitive advantages. On the equity side, IPG shows a ROE (18,8%, FY2017) that is above the average of the three main competitors. In the hydraulic sector the highest *EBITDA margin* is detained by Eaton Corp. with 17.2% in FY2017 while the lowest is represented by 10.1% in FY2017 by Sulzer AG. For what concerns the Debt to Equity, IPG presents the lowest ratio with 1 and 0.92 in FY2016 and FY2017 respectively. With this strategy, they lose the tax shield but gain flexibility in financing. Moreover, the R&D margin is also the lowest in the two business segments because they tend to capitalize all the costs except for the personnel design costs.

Carrying out the Porter's five forces analysis for IPG (Appx. 13), we shaped the competitive landscape and the main drivers in each business.

Threats of new entrants – LOW (2). The high barriers of entry enjoyed by Interpump includes the fragmentation of customers, the quality and differentiation of the products, the brand awareness and the aftermarket support. Main customers (OEMs), which represent the 70% of the total sales, are satisfied with the quality of Interpump and a new entrant would have difficulties in entering the market. Switching costs for customers are also very high in terms of quality and product integration (Fig. 15) since Interpump is able to offer a wide range of services and implementation solutions.

Bargaining Power of Buyers – MODERATE (3). Products are, to a large degree, mission-critical to buyers. Interpump does not only produce products itself but manufacturers also components for other buyers' products. Pumps are the most essential machinery required for every home, office and industry use. Industries are greatly dependent on pumps in moving fluids such as gases or liquids. The way each of the water pump works is dependent on their design and specific characteristics. Pumps have great importance whatever the use the buyers make of them and water pumps have a wide range of applications. Given Interpump expertise in this niche market, companies have a hard time finding different sources for these specific components.

Threat of substitutes – MODERATE (3). The threat for standardized products is high and low for customized products. In fact, Interpump might lose market share for the commodities products due to their focus on customized and specialized products. Customers, however, seem to be satisfied with Interpump's products and services. Their long-lasting relationship with the company is an indicator on their loyalty and their satisfaction. In addition, Interpump should be able to offer: a) a high level of service in the aftermarket, like proximity to the client, rapid delivery of spare parts, etc., 2) pumps with low life cycle costs, like introducing a steel pump instead of using expensive stainless steel so as to lower the LCC, 3) pumps with high quality, efficiency and reliability and 4) a good product range.

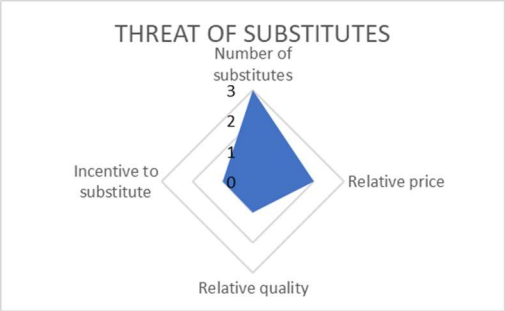


Figure 17: 5 Forces – Threat of Substitutes

Figure 18: 5 Forces – Rivalry Within the Industry

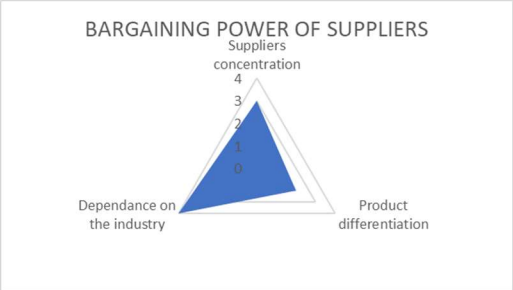


Figure 19: 5 Forces – Rivalry Within the Industry


Figure 20: M&A Activity in the World

Rivalry within the industry – HIGH (4). Interpump's market share in hydraulic sector is smaller than the one of its competitors since the it is only a commodity market whereas in the water-jetting sector they represent a niche market. IPG has not been subject to any particular M&A speculation yet. However, given that its main shareholders hold the major part of the stake and its product portfolio is very appealing we believe it is probable to attract potential investors. A key strength of IPG is that, in addition to working with generic use components and standard machines, they are not a production chain that produces a single commodity. All machine tools are programmable: they can switch from one product to another only by reschedule the program but without changing the production line. Furthermore, the fact that the two divisions are of a different nature that goes from components for trucks and agro-machinery versus HPP and VHPP, means there can be lots of ways to exit from them without causing a disruption.

Bargaining power of suppliers: MODERATE (3). in the Water Jetting sector, the cost of metals constituted approximately 19% of costs for the purchase of raw materials, semi-finished products and finished products in 2017. The metals utilized are primarily brass, stainless steel, aluminium and copper. The policy is to leave the cost of storage of materials to vendors. Nevertheless, the cost of metals in the Hydraulic sector constituted around 32% of purchase costs for raw materials, semi-finished products and finished products in 2017. The metals utilized are primarily steel, aluminium, mild steel and iron. The prices of these commodities, with the exception of aluminium, are not historically sensitive to significant fluctuations. *(source: FY Report 2017).* Supplier concentration is low for tailor-made components because of the expertise needed. On the other side, however, they have a vast network of suppliers for what concerns raw materials. Therefore, insuring good relationships with suppliers is a critical factor. In our opinion, Interpump dealt properly with this aspect building long-term relationships with its suppliers worldwide. Nevertheless, we have to take into account how the industry prices of commodities will evolve.

Opportunities for shared value. The greatest opportunities for the industrial manufacturing industry in order to increase shared value relies in creating and developing value in sustainable products and sustainable productions, developing more efficient machineries that do not pollute, do not generate waste and using renewable sources of energy that increase storage capacity but reduces costs. Innovative technology is an important aspect when it comes to reducing waste of long-term production lines. Water jetting for example, is used to handle cleaning, cutting, surface preparation problems and other activities in a various application. It is an environmentally-safe method as water is recycled while fumes and contaminants released are reduced. The very high-pressure water jet instead created by a pump or intensifier be used to cut all kinds of material. In this application IP is still in continuous development. Water jets can be used to cut materials such as food, paper products, cloth, leather, wood, fiberglass, and some aerospace composites. By adding abrasives, however, water jets are able to cut all kinds of material and may even outperform competing technologies such as laser, EDM (Electrical Discharge Machining) and plasma according to the studies by the producers of water jet cutting machines. In summary, in the water-jetting sector there is a lot of space for growth and, since it is a young technology, a lot of new applications to be found.

Industry 4.0 revolution. The macro economic environment is a continuously improving discipline and always on the search of new product technologies, automation and smart devices and machineries. The large demand of customers and end-users to make informed decisions has led to a greater attraction and embracement for the industry 4.0, a new Era for the industrial manufacturing industry referred to as the fourth industrial revolution. Traditional mechanical devices, e.g. valves, pumps and pipes, will eventually be substituted by data analytics. These will optimise the process efficiency and allow to take early intervention preventing downtimes and inactivity costs. The industry is evolving into a data hungry industry and those who will embrace the industry 4.0, or simply the I4, will be well positioned in the future market.

M&A Strategy. The M&A is a large part of the Interpump history with more than 40 acquisitions in the last 20 years. The main goals of the M&A strategy are to achieve substantial growth, increase market share, acquire new resources, new technologies, know-how processes and especially experienced engineering talents. The increase in the production capacity is mainly due to the reduction of costs and synergies derived by the M&A. The advantages that M&As bring to the company are the penetration of new markets and segments as well as the expansion of new products and services and a diversification in applications (Appx. 11, Appx. 12)

The M&A Activity in the world. 17 companies out of 28 (more than the half) conducted an M&A transaction in the 2017. The majority of the transactions took place mostly in North America in oil, gas and water industries and general industrial markets, such as industrial technology as well. Europe

instead represents about 30% of these transactions *(source: KPMG analysis of company press releases).* The main reasons for such M&A transactions are market diversification, new products development to lower operating costs, acquire experienced engineering talent and reassess supply chain in order to avoid uncertainty of potential trade tariffs post Brexit in the UK.

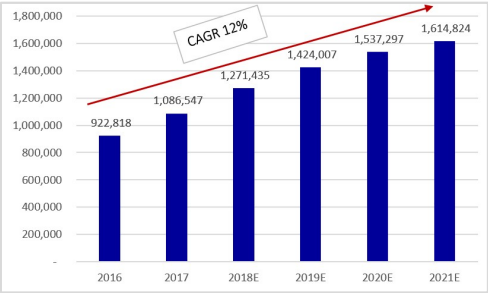


Figure 21: Revenues & CAGR over 6 years

Future plans. The research and development are considered as one of the main keys of future success within the Group. Many significant investments were conducted in 2017 principally with the aim of introducing new product ranges on the market. The competitive advantage of Interpump consists in optimizing and customizing the existing products, and at developing new technological solutions incorporating within the company those that are considered the big steps in the industry 4.0. Over the next years the Group's strategy is to continue to invest high levels of expenditure in the area of R&D in order to achieve substantial growth. Research costs and product development costs capitalized in 2017 amounted to €1,971k (€1,336k in 2016) *(source: FY Report 2017).*

Projects finished and future prospective. Five new projects were conducted in 2017 about the improvement of new pump versions and new mechanical components for high and very high-pressure pump. Moreover, seven more new projects were launched by the Group. For what concerns the water jetting sector, Hammelmann is carrying out 3 projects focused in the development of a new family of very high-pressure pump and several projects related to accessories. For the Hydraulic Sector instead, Walvoil, Interpump Hydraulics and IMM are conducing several R&D activities. In 2017 new power take-offs, valves and hydraulic components were successfully developed and still, there is space available for innovation and performance levels to be increased.

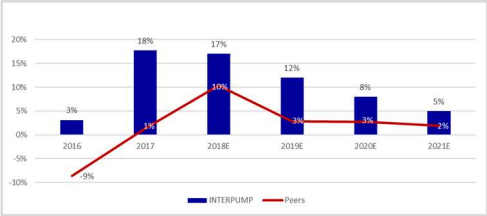


Figure 22: Revenues YoY Growth

FINANCIAL ANALYSIS

Revenues. Interpump Revenues have grown since FY2012 at a CAGR of 15.8% to estimated €1.3B in 2018E. In 2017 the company reported a double-digit annual growth of 18% (3% in 2016), which can be explained by the profitable acquisitions they made, which broadened their range of products and in turn affected sales. Firstly, the acquired Inoxpa Group, a Spanish company active in the water jetting sector. It significantly expanded and supplemented the products of the water jetting division, yielding a larger supply of pumps, valves, mixers, process plants and accessories alongside Bertoli homogenizers. Later in the year, they acquired Mariotti & Pecini Srl, an Italian company, which helped expanding sales in the cosmetics and pharmaceutical industry. Lastly, they acquired a British company specialized in sales and services in the hydraulic lines and fitting sector.

Costs. Between the years 2012-2017, costs of sales accounted on average for 70% of turnover. COGS represented on average 38% of sales, followed by personnel costs (on average 25%) and service costs (on average18%). Other operating costs accounted on average by 1% over the years. It is worth to mention Interpump's policy as regards R&D costs. Their strategy is to continue on investing in R&D to assure renewed impetus to structured growth. Research costs have been capitalized in accordance with their multi-annual usefulness. Product development costs capitalized in 2017 amount to €1.971m (€1.336 in 2016), whereas the costs for design personnel charged to income statement totaled €19.234m (17.234€ in 2016). R&D expenditures for the hydraulic sector were borne by Walvoil, Interpump and IMM. R&D expenditures in the water-jetting sector were mainly borne by Hammelmann, which designed new ultra-high-pressure water pumps and recently opened 3 new projects on ultra-high pressure valves and pumps.

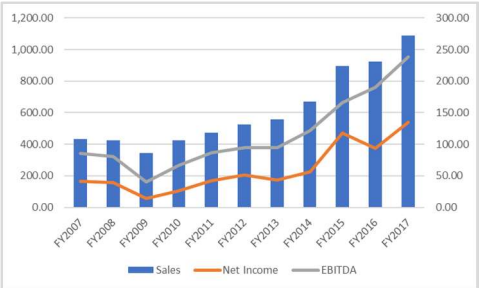


Figure 23: Development Sales over 10 years

Margins

EBITDA Margin. Over 2012-2018E Interpump's EBITDA margin has grown at a CAGR of 16%, from €102.6m to €292.4m. This increase might be explained by the fact that they were able to significantly reduce COGS (39% in 2012 and 35% in 2018E) and Service Costs (19% in 2012 and 16% in 2018E). In turn, reduction in COGS might be reflected in 1) the ability to capitalize the bulk of raw material expenditures in inventory and 2) the lower cost of raw materials. In terms of EBITDA, Interpump was quite profitable over 2012-2018E. In fact, the EBITDA/Sales was on average 20%, which suggests that they were able to keep 20% of flexibility, after having incurred uncontrollable expenses. Moreover, this ratio indicates that they performed positively also in terms of liquidity.

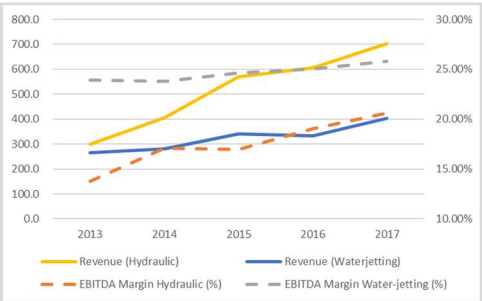


Figure 24: Development Sales by sector over 5 years with EBITDA Margin

EBIT Margin. EBIT margin has increased with a CAGR of 17% over 2012-2018E from €82.8m to 198.9m in 2018E. Such a result was mainly driven by higher cost efficiency, despite the large number of acquisitions. In fact, Interpump acquired many companies, which in turn increased their assets and therefore depreciation and amortization. Over the years, the operating profit margin (EBIT/sales) witnessed an increase from 15.7% in 2012 to 18.3% in 2017.

EBT Margin. EBT Margin has grown at a CAGR of 17% from €74.8m in 2012 to €239.4m in 2018E. The tax burden ratio (Net Income/EBT) raised from 62% in 2012 to 71% in 2018E. This suggests that taxes remained on average 30% over the analyzed years.

Net Margins. Net Income increased at a CAGR of 17.63% from €52.3m in 2012 to €160m in 2018E.

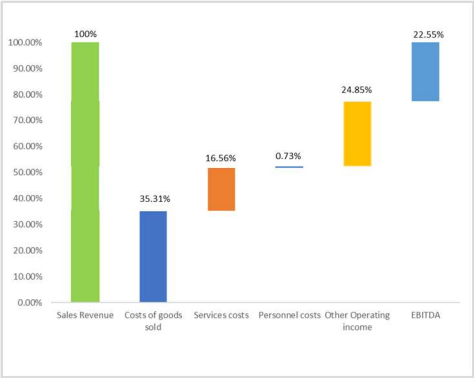


Figure 25: Cost bridge from Revenue to EBITDA (FY17)

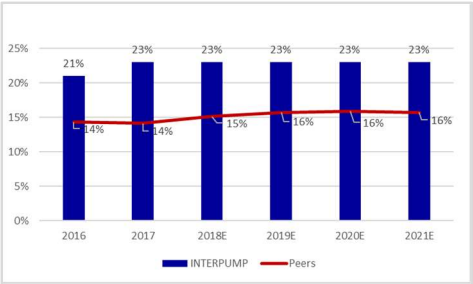


Figure 26: EBITDA Margin

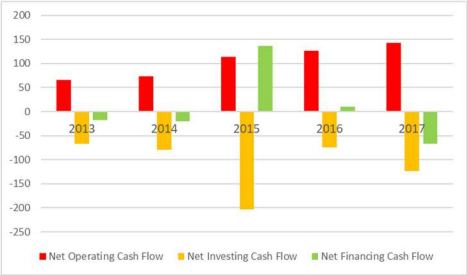


Figure 27: Development Cashflow 5 years

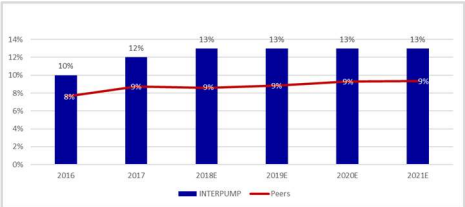


Figure 28: Net Income Margin

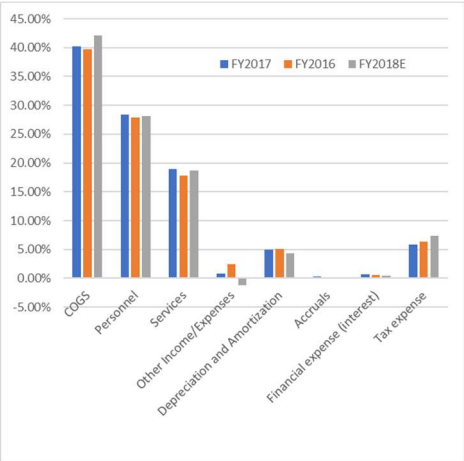


Figure 29: Cost Structure (AC 2 years and FY2018E)

Another net margin worth to be considered is NOPAT (Net Operating Profit After Tax). In fact, it provides investors with a better picture of Interpump's operational efficiencies than Net since it excludes the cost and benefits of debt financing in the capital structure. NOPAT increased at a CAGR of 21% from 2014 to 2017 (€65.9m in 2014 to €140.6 in 2017). This trend suggests that the profitability of Interpump's core business could grow more than net income, since considerable financial expenses affected it.

Returns. Interpump's extended acquisition strategy led to a rise in Capital Employed over the analyzed years, i.e. from 2012 to 2017. Accordingly, ROCE (inclusive of goodwill) decreased from 17.5% in 2012 to 16% in 2017. ROE has followed an increasing trend from 2012 to 2017, fluctuating from 13% to 14%, though being quite volatile since it peaked at 19% in 2016. This trend was reflected in the trend in dividend payout ratio, which, in fact, was decreasing from 35% in 2012 to 24% in 2017. Interpump is also creating value to its investors since our estimated WACC is 5.13% against a ROIC of 10.4% on average between 2012 and 2017. In fact, Interpump is creating roughly 6 cents of value for every euro that it invests in capital.

Cash Flows. In the last years, Interpump was able to convert on average 80% of its net income into FCFF and at the same time keeping its payout-ratio at high levels. Net Cash Flow from Operations (CFO) has grown at a CAGR of 17.05% from €55.26m to €142.09 in 2017. The trend in Net CFO/Sales ratio is increasing (5% in 2012 and 27% in 2017), which suggests that Interpump was able to raise the cash generation out of each euro sold. Net Cash Flow from investing activities has grown at a CAGR of 25%. This result is also represented in the increase in Capex/Sales ratio (3.25% in 2012 and 9% in 2017), which implies that Interpump invested a lot since Capex has grown much more than sales. Finally, Cash Flow available for dividends and debt repayments (FCF) increased at a CAGR of 21%. The FCF/sales suggests that Interpump was able to keep on average 15% of its cash generated by sales for debt and equity.

Assets. Net Total Assets have grown at a CAGR of 14% from €362m in 2012 to €790m in 2017. Tangible assets accounted on average for 38.96%, intangible assets for 60.87% and financial assets for the remaining 0.17%. The significant impact of intangibles is due to goodwill, which constitutes on average 91% of intangibles. This result is not a surprise, since Interpump relies on an intensive M&A policy.

Working Capital. Net working capital has grown at a CAGR of 16% from €143.6m in 2012 to €407.4m in 2018E. Inventory has grown at a CAGR of 14%, trade receivables at a CAGR of 16% and trade payables at a CAGR of 18%. It could be argued that Interpump is not managing its working capital efficiently since receivables and inventory are increasing as well as payables. Nevertheless, payables are growing less than inventory and receivables and, additionally, it displayed a current ratio of 2.06 on average, which suggest a good short-term liquidity.

Total Equity. Total equity increased at a CAGR of 12% over the analyzed years. Share capital slightly decrease from €56m in 2015 to €55m in 2017 due to some share repurchases. Nevertheless, both the retained earnings and the result of the group doubled from 2012 to 2017 and this explain the outstanding increase in total equity.

Net Debt. Net Debt has grown at a CAGR of 21% over the analyzed years, raising from €75m in 2012 to €273.5m in 2017. On average, the bulk of debt is long-term, since it accounted for 65%, against short-term only 35%.

Earnings quality. To assess the financial reporting quality, we relied on Beneish's model which calculates a score indicating the likelihood of earnings manipulation. The results indicate a very high earnings quality. Moreover, we also computed Altman's z-score which indicates the probability of bankruptcy which obviously was also very low (see Appx).

VALUATION

DCF Analysis

The target price of €33.45 is the result of a DCF analysis we employed to predict the real value of Interpump group indicating an 18.20% upside from the current price.

The forecast was divided into three steps. Firstly, we tried to estimate the last quarter of 2018 where the Q3 results were already given. In the next step, we carefully assumed the development for the following 4 years. Lastly, the terminal value was computed as perpetual growth of the last predicted FCF. The following assumptions were applied (Appx.4):

Starting from the income statement we wanted to predict future revenues. We have seen that sales in Q4 were always 25% of total sales over the last 5 years. Therefore, we estimated them assuming that Q3 amount to 75% leading to total revenues for 2018 of €1.271 billion. To predict the growth rate of the next four years, we decreased the double-digit growth of 17% recorded in 2018 to the industry average of 2% in fixed proportions until 2022. Accordingly, we decreased it by 5 percentage points each year.

Moving over to operating costs we decided to rely partly on the historical past 5-year cost structure of the company since it does not indicate any cyclicality or seasonality. Moreover, the company is rapidly

	P/E	P/EG
EATON	16.99	1.91
SPX	37.44	4.13
PH	17.24	1.86
GEA	30.54	2.59
Alfa Laval	27.33	1.70
Sulzer	23.18	n.s.
Bucher	23.56	n.s.
median	23.56	1.91
Interpump EPS&EG	1.47	17.00
Target price	34.63	32.39
average	33.51	

Source: TR Eikon

Figure 30: Computation Multiples

Covariance (IP,Rm)	8.9E-05
Variance (Rm)	0.0002
Levered BETA	0.5687
Unlevered BETA	0.4213
Adjusted BETA	0.8090
Market premium (average)	0.0772
Cost of Equity	0.0787

Source: Damodaran (2019), Fernandez (2018)

Figure 31: Computation Cost of Equity

Interest coverage >	Assigned rating	Risk-spread
-1.00	D2/D	19.38%
0.20	C2/C	14.54%
0.65	Ca2/CC	11.08%
0.80	Caa/CCC	9.00%
1.25	B3/B-	6.60%
1.50	B2/B	5.40%
1.75	B1/B+	4.50%
2.00	Ba2/BB	3.60%
2.25	Ba1/BB+	3.00%
2.50	Baa2/BBB	2.00%
3.00	A3/A-	1.56%
4.25	A2/A	1.38%
5.50	A1/A+	1.25%
6.50	Aa2/AA	1.00%
8.50	Aaa/AAA	0.75%
Risk-free rate		1.63%
Cost of Debt		**2.38%**

Source: Damodaran (2019)

Figure 32: Computation Cost of Debt

FCFF 2022	177,164
growth rate	1%
WACC	5.13%
Terminal Value	4,332,579

Source: Team estimates

Figure 33: Terminal Value

growing and so the costs are driven by sales increases.

We estimated COGS at 36% for 2018 since over the past 5-years median COGS where 38% and the company was able to reduce them by 2% every year. For the following period we wanted to apply a more prudent approach and decreased the percentage by 1% every year. Service cost amounted in median to 17% of sales and decreased y-o-y by 1%. We decided to take 16% for 2018 and decrease them by 0.5% over the following years. Personnel expense were on average 24% but increased by 2% per year due to M&A activity. For 2018 we selected therefore 26% and assumed an increase of 1% per year over the following period. Lastly, other operating cost was observed to be constant at 1% of yearly revenues so we decided to keep it constant.

The next step was to estimate operating working capital. We analyzed days in inventory outstanding which where 273 days in 2017 so we decided to keep this also for 2018. Since DIO in median increased by 5% each year for the last 5 years, we wanted to reflect this assumption also to the future. Regarding days in sales outstanding, again we kept the value of 2017, which was 79.5 days and increased it by the median change over the last 5 years by 0.5% for the following period. The days in payables outstanding were also kept at the 2017 of 61.1 days and we assume that the company is not willing to reduce them for the following years. The other short-term receivables and payables (accrued and deferred items) are assumed to be 20% of WC since this proved to be the case over the last years.

The estimation of non-current assets was based on the assumptions of CAPEX growth, which were provided by the company which predicts future capex to be 3-5% of sales. Since we were prudent in estimating sales growth, we decided to take 5%. The average depreciation of assets was 6% since large part of intangibles is not depreciated. By adding to last year's assets capex and deducting depreciation we were able to estimate total assets. Considering the non-current financial assets, which amount only to €615,000 on average over the last 5-years, we kept them constant since they are negligible. However, the tangible and intangible assets were divided according to their historical portion 60:40 intangible vs. tangibles.

Passing over to the capital, we firstly estimated the amount of staff leaving indemnities reserve. Since it was in median flat at 8% of personnel expense over the last years, we decided to keep it at this rate for the following years as well. Secondly, we projected risk funds. Over the last years, they were in median stable at 5% of sales and therefore, we decided to keep it at this rate for following years as well. Afterwards, we forecasted the equity side by looking at share capital and the payout ratio. We assumed share capital to remain flat as it was in the past, since it was quite stable in the last years. We kept payout ratio at 30% as it was over the last 5 years, since it was quite stable. As regards debt, we forecasted long-term debt by looking at the ratio between historical debt and capital employed. Since over the last years it was on average very stable at 40%, we kept this rate constant assuming that the company follows he same policy in the future. Lastly, we used cash and cash equivalents (incl. short-term debt) as plug.

In order to finalize the valuation, we needed to estimate the WACC to discount the projected cash flows (Appx. 6, Fig. 31, Fig.32). For the detailed computation please refer to the appendix (Appx. 7). Moreover, we needed to estimate the terminal value (Fig. 33), which we predicted as a perpetual growth of the last projected FCFF with a growth rate of 1% since we did not want to overestimate it. Moreover, by looking at the growth rates of the major economies Interpump is operating in no growth rate far above 1% can be found. Finally, to confirm the target price and the assumptions we run a sensitivity analysis, which indicates the target price range. (Fig.34)

Relative Valuation. To basically confirm the target price of our DCF analysis we conducted a multiple valuation (Fig. 30). We considered a peer group of companies comparable to Interpump mainly in terms of business segments but also based on geographical revenues exposure. On the vast number of multiples available, we decided to select P/E and P/EG. These multiples are generally used when it is difficult to identify competitors like in our case. In fact, Interpump has a very diversified business and its peers also cover a very segmented market. We calculated a median P/E and P/EG ratio within the peer group of 23.56 and 1.91. Applying Interpump's EPS and EG, this led us to an average target price equal to €33.51, which largely confirms the value of our DCF valuation and reflects the market premium and the growth potential of Interpump.

		WACC						
		4.53%	4.73%	4.93%	5.13%	5.33%	5.53%	5.73%
Terminal Growth	0.70%	36.85 €	34.80 €	32.95 €	31.27 €	29.73 €	28.32 €	27.02 €
	0.80%	37.80 €	35.66 €	33.72 €	31.96 €	30.36 €	28.90 €	27.55 €
	0.90%	38.81 €	36.56 €	34.53 €	32.69 €	31.02 €	29.50 €	28.10 €
	1.00%	39.88 €	37.50 €	35.38 €	33.45 €	31.71 €	30.12 €	28.67 €
	1.10%	41.00 €	38.50 €	36.27 €	34.25 €	32.43 €	30.78 €	29.26 €
	1.20%	42.20 €	39.56 €	37.21 €	35.10 €	33.19 €	31.46 €	29.88 €
	1.30%	43.46 €	40.68 €	38.20 €	35.98 €	33.98 €	32.18 €	30.53 €

Figure 34: Sensitivity Analysis

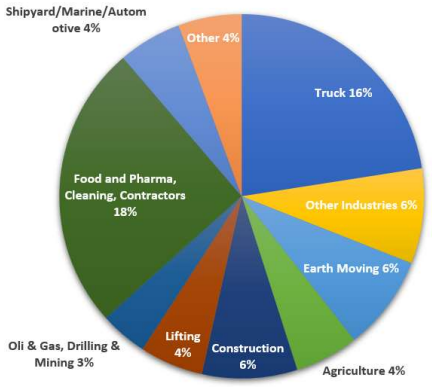


Figure: 35: Sales by application

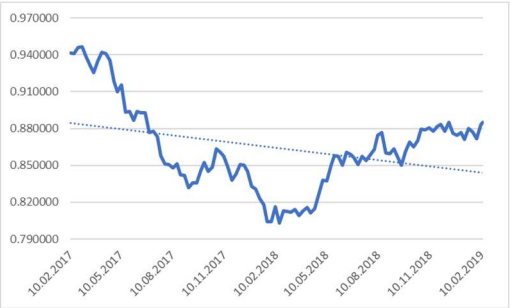


Figure 36: Evolution USD/EUR

Figure 37: $/ton of Steel

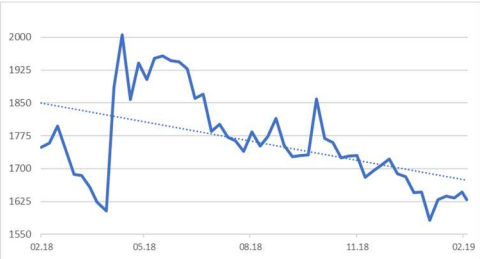


Figure 38: €/ton Aluminum Evolution

INVESTMENT RISKS

Internal Risks

Top Management Change. The age of two key figures of the company, Fulvio Montipò and Paolo Marinsek, is 75 and 69 years, respectively. These top figures were a big part of the company for multiple years and their expertise has been essential to guide the firm. The future chairmen (since double chairmen function in the company) have not been selected yet. As of today, the company has not officially stated a succession plan for its lead executive officers.

M&A Risk. Merger and Acquisition have been an important way to grow for the company (Two thirds growth come from M&A) and also almost half of the company's non-current asset book value (26% of total assets in Q3 2018) derives from goodwill. Acquisitions have been strongly used to exploit fully the diversification possibilities of the market and to exhibit new synergy sources. But M&A is not only a way for value creation but also value destruction of shareholder value. Still, by analyzing the stock price movement one day before and two days after the announcement of an M&A transaction, no evidence of a significant influence of M&A announcements on the company's stock price can be found. [Figure xy]. Also, another possible risk is due to not find a possible target to buy that gives Interpump further potential growth possibilities.

Risk to be the target. Another possible risk is to be on the other side of an acquisition, meaning to be the target of a possible M&A. This could be due to the fact that the company will face an important management change that will also transform the company completely.

New technology risk. Although the company considers the electrification as marginal, its advent could have tremendous effect on the company's business. Some products would need a complete turnover which could require diverse efforts. Also, the prospective industry 4.0 could have overwhelmingly effects on the industry and on Interpump.

Operational Risks

Failure to attract new talent. The company relies on constant innovation and strategic acquisitions to have a strategic advantage over its competitors. The acquisition of Ricci Engineering was targeted to engage the chief leading engineer of the company. This may imply some difficulties from the company to attract new talent that can help the company to grow inorganically.

Cyclical end markets. Although its efforts to create a fully diversified vehicle not exposed to any cyclicality, Interpump operates in cyclical markets such as trucks (its end market in the oil division) which are highly cyclical.

Legal/Regulatory. Interpump's market in both the sector faces strict safety and quality requirements that need to be fulfilled to be successful. The company is liable for any health and safety problems occurred from its products. Also, Interpump's business is also affected by export, trade and sanction regimes. The planned expansion of its business in China, which is supplied by some of the American subsidiaries, could be strongly affected by the trade war between the US and China.

Market Risk

Foreign Exchange Risk. Even though the company states a local-for-local policy, meaning that the company sells its product in the same country it produces them, Interpump has a significant exposure to its US currencies because of the size of its business in this continent: In Q3 2018, the company generated 25% of its revenues in North America, more specifically 38% came its hydraulics sector and 33% for the water-jetting sector. Also, the already mentioned effort to reach emerging markets, will expose the company to more volatile foreign currencies, such as the Indian rupee, the Chinese Yuan or the Brazilian real.

Commodity price Risk. Interpump is subjected to risk related on the price of the raw materials used to produce its final product. The company requires these metals for its production process, and these are all subject to substantial fluctuations depending on the market situation. Although the company maintains a big-inventory policy and the big margins enable some losses on the procurement, huge swings in the raw material prices can strongly affect the company's business and the cost of the finished products.

Italian growth lock. Another risk that Interpump faces is the slowdown in growth in Italy. The ongoing weakening in the Italian manufacturing sector lead to an anemic forecast by the European Union. In fact, on February 7th, the institution classified Italy as the least growing country in Europe, forecasting a GDP growth of 0.2% in 2019. This could possibly affect Interpump's Italian business, which only in 2017, constituted 23% of the company's whole business.

Emerging Markets. With its shift of focus from more mature markets, as of Italy for example, where in Q3 2018 the company did not report any particular growth, to those of the emerging markets could need extraordinary efforts to consolidate its business and therefore could negatively affect the Interpump's revenues. Further, this intensifying efforts by Interpump to get a big share in these big

markets will require great capital expenditures, which already in the third quarter of 2018 were €8 million higher than last year.

Non-Financial Risk

Environmental issues. The usage of more environmentally friendly commodities will require a workover of its product, since a pump must adapt to new lubricant characteristics of the commodity used. Also, future water scarcity could hamper the water-jetting sector because of a limitation on the use of water just for primary uses.

Figure 39: Interpump Headquarter

CORPORATE GOVERNANCE, SOCIAL RESPONSABILITY AND OWNERSHIP STRUCTURE

Corporate Structure. Interpump's headquarter is in Sant'Ilario D'Enza, Italy, where it was originally founded in 1977. (Fig.12) The group is composed of the holding company, Interpump Group SpA, and 55 subsidiaries in 17 different countries.

The company adheres to the "Codice di Autodisciplina", the Italian code that adheres best practices for listed companies' corporate governance structure. Also, the company publishes every year a report on its corporate governance. The company adopts an organizational structure that specifies clear hierarchical relationships and the division of functions and responsibilities. Also, its corporate structure model verifies measures that ensure relevant key figures are aware of the procedures to be followed in the ordinary exercise of their responsibility and the functioning of effective internal reporting systems for the distribution of information.

The company's board of directors is composed of the Chairman, Co-Chief executive Officer and founder, Fulvio Montipò, Co-Chief executive Officer Paolo Marinsek, 2 non-executive directors and 4 non-executory independent directors. (Fig. 40) Another key figure, not included in the board of directors is the long time CFO Carlo Banci, with a tenure of 23 years. (Appx. 17). Further, the statutory board consists of 3 components coming from different auditing institutions present in Italy.

In a separate filing, the company discloses its remuneration policy of the board. The remuneration committee, consisting of three of the members the board of directors, proposes, assesses remuneration policies for its chief executive officers and directors with special duties. The remuneration policy of the company is divided into a fixed part, a variable part related to the operating performance of the company, and a long-term incentive-based compensation related to a stock option plan.

Interpump adopts an Organization and Management model based on the Italian legislative decree 231/2001 which constitutes, together with the code of ethics, an important transparent and correct instrument to ensure the rightful adherence to the ethical and social values of the company. The company pursuits its own code of ethics in order to fulfill its reputational responsibilities and to ensure the observance of its set of principles that encompass the operational reliability and corporate image of Interpump.

Environmental awareness. Increase environmental awareness and exploit other ways of management of waste and consumption of resources, reduce the emission of noise and implement an excellent energy efficiency is vital for the Group. In fact, Interpump is committed in protecting the environment and adopting suitable measures to preserve the environment, by orienting towards a progressive reduction of direct and indirect impacts both on local level (soil, air and water where Interpump operates) as well as on a global level (climate change), which the company states in its additional ESG-filing. Nevertheless, ways of using renewable energy and ways of reducing, reusing and recycling water has been implemented.

Dual Co-executive Officer. One particularity of Interpump's corporate governance structure are the two CEOs, Fulvio Montipò and Paolo Marinsek. While Mr. Montipò has more a leader and visionary oversight of the company, Mr. Marinsek represents the industrial part of the company, having a distinctive experience in the automotive and engineering sector.

Shareholder base. Interpump went public in in 1996 on the Milan Stock Exchange as an exit-strategy of an LBO occurred in the same year. The company has slightly less than 107 million shares outstanding. Interpump has a dividend yield equal to 0.77%. The ownership of the company is quite fragmented, with less than half (46.01 %) in hands of the top 10 investors. IPG Holding is the greatest shareholder of the company with an ownership percentage of 21.5%, which amounts to a value of approximately €729 million. The same IPG Holding is owned by 25.7 % by Tamburi Investment Partners S.p.A, which is in hand of Giovanni Tamburi, director and member of the Board of Director.

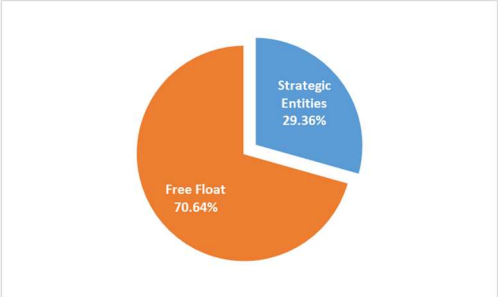


Figure 40: Ownership Structure

Executive	Non-Executive	Independent		C.R.C.(1)	R.C.(2)	N.C.(3)
x			**Fulvio Montipò** President and CEO			
x			**Paolo Marinsek** Vice President			
		x	**Stefania Petruccioli** Director	x		
		x	**Marcello Margotto** Director		x	x
		x	**Franco Garilli** Lead Independent Director	x	x	x
		x	**Paola Annunziata Tagliavini** Director	x		
	x		**Giovanni Tamburi** Director		x	x
		x	**Antonia Di Bella** Director			
		x	**Angelo Busani** Director	x		

Source: Borsa Italiana

Figure 41: Board composition with functions

APPENDIX – INDEX

1. Income Statement

YEAR	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E
Sales Revenue	**527,176**	**556,513**	**671,999**	**894,928**	**922,818**	**1,086,547**	**1,271,435**	**1,424,007**	**1,537,927**	**1,614,824**	**1,647,120**
Yoy Growth %		*5.56%*	*20.75%*	*33.17%*	*3.12%*	*17.74%*	*17.0%*	*12.0%*	*8.0%*	*5.0%*	*2.0%*
Costs of goods sold	(206,403)	(217,158)	(257,509)	(342,551)	(338,332)	(389,309)	(457,716)	(505,522)	(545,964)	(573,262)	(584,728)
% sales	*39.2%*	*39.0%*	*38.3%*	*38.3%*	*36.7%*	*35.8%*	*36.0%*	*35.5%*	*35.5%*	*35.5%*	*35.5%*
Services costs	(102,355)	(108,383)	(116,368)	(149,084)	(151,757)	(182,601)	(203,430)	(220,721)	(238,379)	(250,298)	(255,304)
% sales	*19.4%*	*19.5%*	*17.3%*	*16.7%*	*16.4%*	*16.8%*	*16.0%*	*15.5%*	*15.5%*	*15.5%*	*15.5%*
Personnel costs	(121,838)	(133,041)	(161,870)	(224,052)	(237,376)	(274,003)	(305,144)	(356,002)	(384,482)	(403,706)	(411,780)
% sales		*23.9%*	*24.1%*	*25.0%*	*25.7%*	*25.2%*	*24.0%*	*25.0%*	*25.0%*	*25.0%*	*25.0%*
Other Operating income	6,023	4,431	(988)	409	2,075	8,014	(12,714)	(14,240)	(15,379)	(16,148)	(16,471)
% sales	*1%*	*1%*	*0%*	*0%*	*0%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Total Costs	**(424,573)**	**(454,151)**	**(536,735)**	**(715,278)**	**(725,390)**	**(837,899)**	**(979,005)**	**(1,096,485)**	**(1,184,204)**	**(1,243,414)**	**(1,268,283)**
Total Costs on revenues %	*81%*	*82%*	*80%*	*80%*	*79%*	*77%*	*77%*	*77%*	*77%*	*77%*	*77%*
Ebitda	**102,603**	**102,362**	**135,264**	**179,650**	**197,428**	**248,648**	**292,430**	**327,522**	**353,723**	**371,409**	**378,838**
Ebitda margin %	*19.5%*	*18.4%*	*20.1%*	*20.1%*	*21.4%*	*22.9%*	*23.0%*	*23.0%*	*23.0%*	*23.0%*	*23.0%*
D&A	(19,798)	(23,719)	(29,961)	(41,693)	(43,602)	(47,464)	(47,362)	(48,335)	(49,707)	(51,338)	(53,102)
% on average Fixed Assets	*5%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*
Ebit	**82,805**	**78,643**	**103,525**	**136,095.0**	**152,459**	**198,912**	**243,855**	**277,973**	**302,803**	**318,858**	**324,522**
Ebit margin %	*15.71%*	*14.13%*	*15.41%*	*15.21%*	*16.52%*	*18.31%*	*19.18%*	*19.52%*	*19.69%*	*19.75%*	*19.70%*
Net financial result	(7,851)	(7,924)	(11,258)	26,466	(5,083)	(7,178)	(4,502.4)	(4,734.0)	(4,957.1)	(5,152.3)	(5,302.5)
Extraordinary result	(135)	353	842	(37)	834	416	0	0	0	0	0
Ebt	**74,819**	**71,072**	**93,109**	**162,524**	**148,210**	**192,150**	**239,352**	**273,239**	**297,846**	**313,706**	**319,220**
% sales	*14.19%*	*12.77%*	*13.86%*	*18.16%*	*16.06%*	*17.68%*	*18.83%*	*19.19%*	*19.37%*	*19.43%*	*19.38%*
Taxes	(22,494)	(26,985)	(35,367)	(44,218)	(53,737)	(56,427)	(79,325)	(90,555)	(98,710)	(103,966)	(105,794)
Taxes on Ebt %	*30.06%*	*37.97%*	*37.98%*	*27.21%*	*36.26%*	*29.37%*	*33.14%*	*33.14%*	*33.14%*	*33.14%*	*33.14%*
Net result	**52,325**	**44,087**	**57,742**	**118,306**	**94,473**	**135,723**	**160,028**	**182,684**	**199,136**	**209,739**	**213,426**
Net result %	*9.93%*	*7.92%*	*8.59%*	*13.22%*	*10.24%*	*12.49%*	*12.59%*	*12.83%*	*12.95%*	*12.99%*	*12.96%*

2. Balance Sheet

YEAR	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E
Intangible assets	248,067	258,547	304,022	380,581	420,747	467,538	483,349	497,069	513,382	531,024	548,576
Tangible assets	112,527	150,668	209,073	286,066	300,921	321,833	322,233	331,379	342,255	354,016	365,718
Financial assets	1,524	1,190	613	444	344	617	615	615	615	615	615
Total non-current Assets	**362,118**	**410,405**	**513,708**	**667,091**	**722,012**	**789,988**	**806,197**	**829,063**	**856,252**	**885,655**	**914,909**
Other non current Assets (liabilities)	1,287	1,447	1,761	1,790	2,100	3,110					
Inventory	131,692	145,994	182,463	238,637	257,545	291,701	342,974	378,865	409,249	429,790	438,466
Days Inventory Outstanding (DIO)	233	245	259	254	278	273	274	274	274	274	274
Trade receivables	96,371	113,726	135,634	178,129	200,018	236,761	276,929	310,355	335,395	352,386	359,659
Days Sales Outstanding (DSO)	67	75	74	73	79	80	80	80	80	80	80
Trade payables	(53,612)	(69,985)	(80,273)	(94,022)	(109,004)	(142,975)	(110,674)	(121,571)	(131,297)	(137,862)	(140,619)
Days Payable Outstanding (DPO)	46	56	55	48	55	62	61	61	61	61	61
Operating working capital	**174,451**	**189,735**	**237,824**	**322,744**	**348,559**	**385,487**	**509,229**	**567,649**	**613,347**	**644,314**	**657,506**
Other receivables (payables)	(30,861)	(39,226)	(83,775)	(45,890)	(67,902)	(75,610)	(101,846)	(113,530)	(122,669)	(128,863)	(131,501)
Net working capital	**143,590**	**150,509**	**154,049**	**276,854**	**280,657**	**309,877**	**407,383**	**454,119**	**490,677**	**515,451**	**526,004**
Risk fund	(23,795)	(27,989)	(35,385)	(50,781)	(50,657)	(44,660)	(63,572)	(71,200)	(76,896)	(80,741)	(82,356)
Staff leaving entitlement	(11,008)	(11,942)	(14,940)	(17,264)	(19,311)	(20,044)	(24,412)	(28,480)	(30,759)	(32,296)	(32,942)
Total funds	**(34,803)**	**(39,931)**	**(50,325)**	**(68,045)**	**(69,968)**	**(64,704)**	**(87,983)**	**(99,680)**	**(107,655)**	**(113,038)**	**(115,298)**
CAPITAL EMPLOYED	**472,192**	**522,430**	**619,193**	**877,690**	**934,801**	**1,038,271**	**1,125,597**	**1,183,502**	**1,239,275**	**1,288,068**	**1,325,615**
Share Capital	52,796	55,003	53,871	56,032	55,431	55,805	55,805	55,805	55,805	55,805	55,805
Reserves	286,829	328,482	349,888	443,486	524,463	568,918	681,050	793,069	920,948	1,060,343	1,207,161
Net result	51,418	43,201	56,936	117,639	93,850	134,442	160,028	182,684	199,136	209,739	213,426
Shareholders' equity	391,043	426,686	460,695	617,157	673,744	759,165	896,883	1,031,559	1,175,889	1,325,888	1,476,392
Non controlling share capital	5,833	6,263	5,855	5,471	3,794	5,564	8,969	10,316	11,759	13,259	14,764
Total equity	**396,876**	**432,949**	**466,550**	**622,628**	**677,538**	**764,729**	**905,851**	**1,041,874**	**1,187,648**	**1,339,147**	**1,491,156**
Cash & cash equivalents	**(115,083)**	**(104,794)**	**(86,654)**	**(135,132)**	**(197,891)**	**(144,938)**	**(230,493)**	**(331,773)**	**(444,083)**	**(566,306)**	**(695,787)**
Short term debt	98,698	82,582	92,237	89,645	127,180	175,420	*180,096*	*189,360*	*198,284*	*206,091*	*212,098*
Long term debt	91,701	111,693	147,060	300,549	327,974	243,060	*270,143*	*284,040*	*297,426*	*309,136*	*318,148*
Mortgages and other bank debts	190,399	194,275	239,297	390,194	455,154	418,480	450,239	473,401	495,710	515,227	530,246
Net Debt	**75,316**	**89,481**	**152,643**	**255,062**	**257,263**	**273,542**	**219,746**	**141,628**	**51,627**	**(51,078)**	**(165,541)**
FINANCING CAPITAL	**472,192**	**522,430**	**619,193**	**877,690**	**934,801**	**1,038,271**	**1,125,597**	**1,183,502**	**1,239,275**	**1,288,068**	**1,325,615**

2a. Capex

YEAR	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E
Starting Assets		**362,118**	**410,405**	**513,708**	**667,091**	**722,012**	**789,988**	**806,197**	**829,063**	**856,252**	**885,655**
Capex		72,006	133,264	195,076	98,523	115,440	63,572	71,200	76,896	80,741	82,356
Amortization / Depreciation	(19,798)	(23,719)	(29,961)	(41,693)	(43,602)	(47,464)	(47,362)	(48,335)	(49,707)	(51,338)	(53,102)
Total Assets	**362,118**	**410,405**	**513,708**	**667,091**	**722,012**	**789,988**	**806,197**	**829,063**	**856,252**	**885,655**	**914,909**

3. Cash Flow Statement

YEAR	2012	2013	2014	2015	2016	2017	2018E	2019E	2020E	2021E	2022E
EBIT * (1-Tc)		**48,783**	**64,202**	**99,068**	**97,181**	**140,499**	**163,038**	**185,849**	**202,450**	**213,184**	**216,971**
D&A		23,719	29,961	41,693	43,602	47,464	47,362	48,335	49,707	51,338	53,102
Δ in net WC		(6,919)	(3,540)	(122,805)	(3,803)	(29,220)	(97,506)	(46,736)	(36,558)	(24,774)	(10,554)
FCFO		**65,583**	**90,623**	**17,956**	**136,980**	**158,743**	**112,894**	**187,448**	**215,599**	**239,749**	**259,520**
CapEx		72,006	133,264	195,076	98,523	115,440	63,572	71,200	76,896	80,741	82,356
FCFF		**(6,423)**	**(42,641)**	**(177,120)**	**38,457**	**43,303**	**49,322**	**116,248**	**138,703**	**159,008**	**177,164**

APPENDIX 2 – FINANCIAL REPORTING QUALITY

The Beneish Manipulator-Score (m-score) is a mathematical model, which uses various financial metrics to identify the extent of a company's earnings management behavior.

Information for Credit Risk Analysis and Beneish Score	2014	2015	2016	2017
INPUT VARIABLES				
Cash and Cash equivalents	87,159	135,130	197,891	144,938
Net Receivables	135,634	178,129	200,018	236,761
Current Assets	422,588	574,068	674,280	697,112
Other assets	1,995	1,209	1,654	3,367
Other intangible assets	24,649	33,193	30,039	38,096
Goodwill	279,373	347,388	390,708	429,442
Total Assets	963,163	1,270,073	1,424,240	1,517,674
Average Total Assets		1,116,618	1,347,157	1,470,957
Current Liabilities	226,623	256,834	307,738	394,784
Total Liabilities	496,613	647,445	746,702	752,945
Average Total Liabilities		572,029	697,074	749,824
Working Capital		317,234	366,542	302,328
Retained Earnings	305,587	422,170	505,927	582,132
SG&A	-80,517	-105,670	-108,973	-124,534
Operating Income	104,367	136,896	153,533	198,912
EBITDA		178,782	153,533	198,912
EBIT		104,367	136,896	153,533
Net cash provided by operating activities		160,192	94,473	135,723
Market Value of Equity		1,550,856,000	1,657,630,000	2,831,760,000

Earnings Manipulation Predictors (Beneish index)					
INPUTS	Acronym	Coefficients	2015	2016	2017
Days Sales in Receivables Index	DSRI	0.92	0.986	1.089	1.005
Gross Margin Index	GMI	0.528	1.021	0.971	0.974
Asset Quality Index	AQI	0.404	0.947	0.986	1.045
Sales Growth Index	SGI	0.892	1.332	1.031	1.177
Depreciation Index	DEPI	0.115	1.187	1.032	0.999
SG&A Index	SGAI	-0.172	0.985	1.000	0.971
Leverage Index	LVGI	-0.327	0.989	1.028	0.946
Total Accruals to Total Assets	TATA	4.67	-0.033	0.000	0.000
	constant	-4.84			
M-SCORE (8-VARIABLE MODEL)			-2.333	-2.397	-2.290
Probability of manipulation			0.981%	0.826%	1.100%
			if M>-2.22, firm is likely to be a manipulator		
RESULT: the likelihood of manipulation of earning is very low					

APPENDIX 3 - FINANCIAL HEALTH

To predict the likelihood that a business will go bankrupt within the next two years the Altman Z-score can be used. We computed the Z-score for Interpump and can assume a very low probability of financial distress:

ALTMAN Z-SCORE			
Risk Factors	**2015**	**2016**	**2017**
X1 = (Working Capital / Total Assets)	0.25	0.26	0.20
X2 = (Retained Earnings / Total Assets)	0.33	0.36	0.38
X3 = (Earnings Before Interest and Taxes / Total Assets)	0.08	0.11	0.13
X4 = (Market Value of Equity / Book Value of Total Liabilities)	2.40	2.22	3.76
X5 = (Sales/ Total Assets)	0.70	0.65	0.72
1.2 X1 + 1.4 X2+ 3.3 X3 + 0.6 X4 + 0.999 X5	**3.18**	**3.14**	**4.18**
Bankruptcy Probability	**1.47%**	**1.61%**	**0.07%**
Interpretation:			
Company is healthy and there is low bankruptcy potential in the short term		Z-score >3.00	
Gray area—company is exposed to some risk of bankruptcy; caution is advised		2.99 > Z-score > 1.80	
Company is in financial distress and there is high bankruptcy potential in short term		1.80 > Z-score	

APPENDIX 4 – FORECAST ASSUMPTIONS

Forecast Assumptions						
	Assumptions	*FY18E**	*FY19E*	*FY20E*	*FY21E*	*FY22E*
Sales	*% growth*	17.0%	12%	8%	5%	2%
COGS	*% sales*	36.0%	35.5%	35.5%	35.5%	35.5%
Service Costs	*% sales*	16.0%	15.5%	15.5%	15.5%	15.5%
Personnel Costs	*% sales*	24.0%	25.0%	25.0%	25.0%	25.0%
Other Operating Expense	*% sales*	1.0%	1.0%	1.0%	1.0%	1.0%
Days in Inventory Outstanding	*% COGS*	274 days	274 days	274 days	274 days	274 days
Days in Sales Outstanding	*%sales*	80 days	80 days	80 days	80 days	80 days
Days in Payables Outstading	*% COGS*	61 days	61 days	61 days	61 days	61 days
Other Receivables and Payables	*%Net WC*	20.0%	20.0%	20.0%	20.0%	20.0%
CapEx	*%sales*	5.0%	5.0%	5.0%	5.0%	5.0%
Depreciation & Amortization	*% avg. non-current assets*	6.0%	6.0%	6.0%	6.0%	6.0%
Financial Assets	*fixed at (€)*	615,000	615,000	615,000	615,000	615,000
Staff Leaving Indemnities	*%personnel cost*	8%	8%	8%	8%	8%
Risk Funds	*% sales*	5.0%	5.0%	5.0%	5.0%	5.0%
Payout Ratio	*% net income*	30.0%	30.0%	30.0%	30.0%	30.0%
Tax Rate	*% sales*	6.2%	6.4%	6.4%	6.4%	6.4%
Long-Term Debt	*% capital employed*	40.0%	40.0%	40.0%	40.0%	40.0%
Cash and Cash Equivalents	**PLUG**	-	-	-	-	-

APPENDIX 5 – DUPONT ANALYSIS

Dupont Decomposition							
	2016	2017	2018E	2019E	2020E	2021E	2022E
Operating Efficiency							
Net Sales	922,818	1,086,547	1,271,435	1,424,007	1,537,927	1,614,824	1,647,120
Net Income	94,473	135,723	160,028	182,684	199,136	209,739	213,426
Profit margin	10.24%	12.49%	12.59%	12.83%	12.95%	12.99%	12.96%
Asset use efficiency							
Net Sales	922,818	1,086,547	1,271,435	1,424,007	1,537,927	1,614,824	1,647,120
Average Assets	1,347,157	1,470,957	1,286,514	1,341,448	1,408,628	1,490,342	1,552,973
Total asset turnover	0.69	0.74	0.99	1.06	1.09	1.08	1.06
Financial Leverage							
Average Assets	1,347,157	1,470,957	1,286,514	1,341,448	1,408,628	1,490,342	1,552,973
Average Equity	650,083	721,134	835,290	973,863	1,114,761	1,263,397	1,415,151
Avg. Assets/Avg. Equity	2.07	2.04	1.54	1.38	1.26	1.18	1.10
ROE	14.53%	18.82%	19.16%	18.76%	17.86%	16.60%	15.08%
ROA	7.01%	9.23%	12.44%	13.62%	14.14%	14.07%	13.74%
ROIC	13.4%	10.0%	12.9%	14.2%	15.4%	16.1%	16.30%

APPENDIX 6 – RISK-FREE RATE & WACC

We started the estimation of weighted average cost of capital by computing the risk-free rate. It was derived by taking the YTM of 10-year treasury bonds of all the main countries Interpump is operating. Subsequently, we computed the weighted sum of each county's YTM with the respective revenue exposure, which lead us to a risk-free rate of 1.63%.

	10-year Treasury	Rating	Exposure	weighted sum
Italy	2.87%	BBB	17.6%	0.5%
USA	2.71%	AA+	17.0%	0.5%
Canada	1.96%	AAA	10.1%	0.2%
Germany	0.21%	AAA	7.0%	0.0%
UK	1.26%	AA	5.1%	0.1%
France	0.62%	AA	4.9%	0.0%
Russia	8.19%	BBB	3.2%	0.3%
China	3.71%	A+	2.5%	0.1%
Other (average)	1.00%	-	32.6%	0.3%
Risk-free rate				1.63%

Source: Factset

The cost of debt was computed as the sum of risk-free rate plus risk spread. We relied on Damodaran (January, 2019) who suggests the spreads for non-financial firms reported in the figure of the respective section

For the estimation of cost of equity, the CAPM model was employed. We estimated the company beta by the traditional covariance/ variance method of IP stock returns versus market returns. However, the result was very low indicating a BETA of 0.57. Therefore, we decided to make use of an adjusted beta which assigns a weight of 2/3 to the company beta and a weight of 1/3 to the market beta (= 1). Our estimate of the adjusted BETA amounts therefore to 0.81. The market risk premium was taken out of a survey conducted by Pablo Fernandez (2018) and one conducted by Damodaran (2019). The market risk premium was estimated at an average of the two surveys at 7.72%. By applying the CAPM formula, we derived a cost of equity equal to 7.87%.

To conclude our WACC computation, we weighted cost of equity and cost of debt by the portion of debt which proportion on average is 40:50. We derived a WACC of 5.13% which is quite similar to the one the company indicates for both of their business segments (4.17% for water and 4.77% for hydraulics).

APPENDIX 7 – DCF VALUATION

	2018E	2019E	2020E	2021E	2022E	
EBIT*(1-T_c)	163,038	185,849	202,450	213,184	216,971	
D&A	47,362	48,335	49,707	51,338	53,102	
Δ in net WC	(97,506)	(46,736)	(36,558)	(24,774)	(10,554)	
FCFO	112,894	187,448	215,599	239,749	259,520	
CapEx	63,572	71,200	76,896	80,741	82,356	TV
FCFF	49,322	116,248	138,703	159,008	177,164	4,332,579
DCFF	46,916	105,179	119,373	130,170	137,956	3,373,752

EV	3,913,346	
Net Debt	273,542	
MVE	3,639,804	
Shares Outstanding	108,800	
Target Price	€ 33.45	
Share Price	€ 28.18	(13/02/2019)
upside	19%	

Source: Team estimates, Factset

APPENDIX 8– PEER COMPARISON

Interpump Group S.p.A. million of €	2016	2017
Sales	923	1,087
Growth %		17.7%
Gross Profit	**327**	**402**
Gross profit margin	35.4%	37.0%
Revenues per employees	0.184	0.189
EBITDA	**190**	**239**
Growth %		25.3%
EBITDA margin	20.6%	22.0%
EBIT	**147**	**191**
Growth %		30.2%
EBIT margin	15.9%	17.6%
Pretax Income	**149**	**192**
Growth %		29.4%
Pretax Income margin	16.1%	17.7%
Net Income	**94**	**134**
Growth %		43.3%
Net Income margin	10.2%	12.4%
EPS (diluted)	**0.88**	**1.25**
Research & Development	17	19
Growth %		11.60%
R&D margin	1.9%	1.8%
ROE	14.5%	18.8%
ROA	7.0%	9.2%
D/E	1.20	1.11
Net Debt/EBITDA	2.96	2.10

Alfa Laval AB million of €	2016	2017
Sales	3,762	3,665
Growth %		-2.6%
Gross Profit	**1,215**	**1,214**
Gross profit margin	32.3%	33.1%
Revenues per employees	0.222	0.210
EBITDA	**691**	**694**
Growth %		0.4%
EBITDA margin	18.4%	18.9%
EBIT	**511**	**523**
Growth %		2.3%
EBIT margin	13.6%	14.3%
Pretax Income	**349**	**452**
Growth %		29.5%
Pretax Income margin	9.3%	12.3%
Net Income	**242**	**309**
Growth %		27.8%
Net Income margin	6.4%	8.4%
EPS (diluted)	**0.58**	**0.74**
Research & Development	86	90
Growth %		5.04%
R&D margin	2.3%	2.5%
ROE	11.8%	14.7%
ROA	4.3%	5.7%
D/E	1.65	1.57
Net Debt/EBITDA	2.755	2.47

GEA Group AG million of €	2016	2017
Sales	4,492	4,605
Growth %		2.5%
Gross Profit	**1,392**	**1,435**
Gross profit margin	31.0%	31.2%
Revenues per employees	0.265	0.258
EBITDA	**467**	**457**
Growth %		-2.1%
EBITDA margin	10.4%	9.9%
EBIT	**351**	**341**
Growth %		-2.8%
EBIT margin	7.8%	7.4%
Pretax Income	**347**	**357**
Growth %		2.9%
Pretax Income margin	7.7%	7.8%
Net Income	**269.0**	**228.0**
Growth %		-15.2%
Net Income margin	6.0%	5.0%
EPS (diluted)	**1.00**	**1.00**
Research & Development	58	65
Growth %		12.07%
R&D margin	1.3%	1.4%
ROE	9.1%	8.3%
ROA	4.3%	3.8%
D/E	1.07	1.33
Net Debt/EBITDA	0.44	0.72

SPX Flow, Inc. million of €	2016	2017
Sales	1,804	1,730
Growth %		-4.1%
Gross Profit	**547**	**531**
Gross profit margin	30.3%	30.7%
Revenues per employees	0.361	0.346
EBITDA	**182**	**177**
Growth %		-2.9%
EBITDA margin	10.1%	10.2%
EBIT	**124**	**123**
Growth %		-0.9%
EBIT margin	6.9%	7.09%
Pretax Income	**-436**	**51**
Growth %		-111.8%
Pretax Income margin	-24.1%	3.0%
Net Income	**-345.1**	**41.1**
Growth %		-111.9%
Net Income margin	-19.1%	2.4%
EPS (diluted)	**-8.34**	**0.98**
Research & Development	17.5	15.4
Growth %		-12.0%
R&D margin	1.0%	0.9%
ROE	-36.4%	5.4%
ROA	-12.5%	1.8%
D/E	2.42	1.78
Net Debt/EBITDA	8.49	6.08

Bucher Industries AG million of €	2016	2017
Sales	2,184	2,385
Growth %		9.2%
Gross Profit	**522**	**487**
Gross profit margin	23.9%	20.4%
Revenues per employees	0.195	0.197
EBITDA	**286**	**325**
Growth %		13.6%
EBITDA margin	13.1%	13.6%
EBIT	**201**	**243**
Growth %		21.0%
EBIT margin	9.2%	10.2%
Pretax Income	**147**	**203**
Growth %		38.0%
Pretax Income margin	6.7%	8.5%
Net Income	**109**	**154**
Growth %		41.3%
Net Income margin	5.0%	6.5%
EPS (diluted)	**10.75**	**15.12**
Research & Development	91	99
Growth %		8.63%
R&D margin	4.2%	4.2%
ROE	8.9%	10.7%
ROA	4.5%	5.9%
D/E	1.00	0.92
Net Debt/EBITDA	-0.20	-0.59

Sulzer AG million of €	2016	2017
Sales	2,640	2,746
Growth %		4.0%
Gross Profit	**807**	**844**
Gross profit margin	30.6%	30.7%
Revenues per employees	0.188	0.186
EBITDA	**267**	**253**
Growth %		-5.1%
EBITDA margin	10.1%	10.1%
EBIT	**160**	**140**
Growth %		-12.3%
EBIT margin	6.1%	5.1%
Pretax Income	**88**	**113**
Growth %		28.5%
Pretax Income margin	3.3%	4.1%
Net Income	**54**	**75**
Growth %		38.4%
Net Income margin	6.8%	2.7%
EPS (diluted)	**1.58**	**2.18**
Research & Development	66	73
Growth %		11.4%
R&D margin	2.5%	2.7%
ROE	3.4%	4.4%
ROA	1.3%	1.9%
D/E	1.38	1.42
Net Debt/EBITDA	0.12	0.80

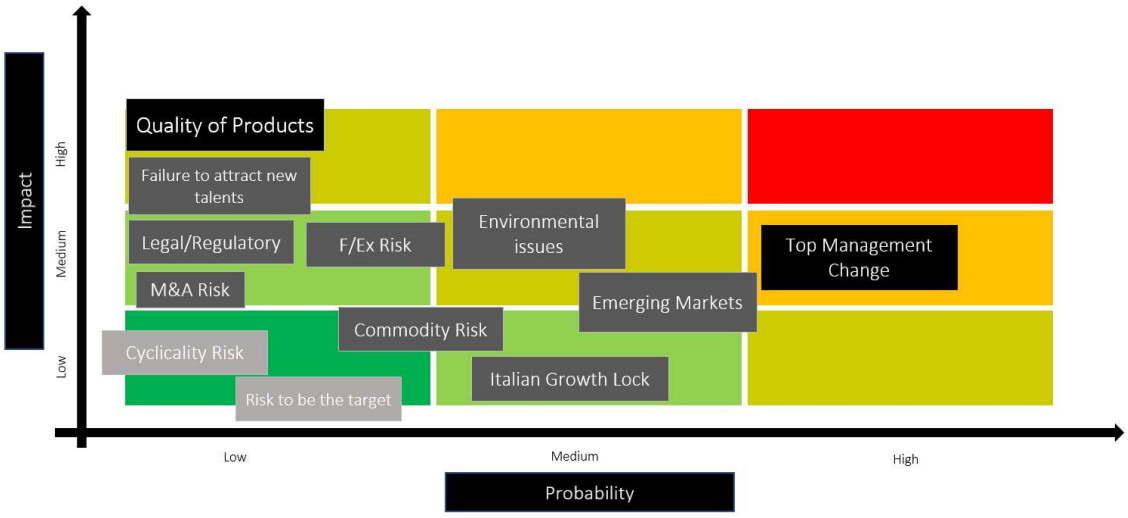
Eaton Corp. Plc million of €	2016	2017
Sales	17,851	18,807
Growth %		5.4%
Gross Profit	**5,851**	**5,998**
Gross profit margin	32.8%	33.5%
Revenues per employees	0.186	0.186
EBITDA	**3,078**	**3,090**
Growth %		0.4%
EBITDA margin	17.2%	17.4%
EBIT	**2,238**	**2,256**
Growth %		0.8%
EBIT margin	12.5%	12.9%
Pretax Income	**1,923**	**1,934**
Growth %		0.6%
Pretax Income margin	10.8%	16.5%
Net Income	**1,737**	**1,785**
Growth %		2.71%
Net Income margin	9.7%	14.6%
EPS (diluted)	**3.81**	**3.82**
Research & Development	532	564
Growth %		5.9%
R&D margin	3.0%	2.9%
ROE	12.3%	18.5%
ROA	6.1%	9.5%
D/E	0.98	0.83
Net Debt/EBITDA	3.15	1.81

Parker-Hannifin Corp. million of €	2016	2017
Sales	10,241	10,627
Growth %		3.8%
Gross Profit	**2,336**	**2,573**
Gross profit margin	22.8%	23.9%
Revenues per employees	0.209	0.177
EBITDA	**1,406**	**1,558**
Growth %		10.8%
EBITDA margin		
EBIT	**1,129**	**1,292**
Growth %		14.5%
EBIT margin	11.0%	12.0%
Pretax Income	**1,005**	**1,197**
Growth %		19.2%
Pretax Income margin	9.8%	11.0%
Net Income	**727**	**846**
Growth %		16.33%
Net Income margin	7.1%	8.2%
EPS (diluted)	**5.31**	**5.83**
Research & Development	324	337
Growth %		3.9%
R&D margin	13.7%	14.9%
ROE	16.7%	20.6%
ROA	6.7%	7.4%
D/E	1.63	1.94
Net Debt/EBITDA	1.60	3.60

APPENDIX 9– PEERS SELECTION

Industry Peers	Business segment	Size (EV)	Revenue CAGR	EBITDA Margin	Dividend Yield
ALFA LAVAL	Food & Water	☹	😐	☺	☺
GEA Group	Equipment	☺	☹	😐	☹
SPXFLOW	Food & Beverage	☺	☹	😐	😐
BUCHER	Hydraulics	☺	😐	☺	☺
SULZER	Pumps Equipment	☺	☹	😐	☹
EATON	Hydraulics	☹	😐	☺	😐
Parker	Diversified Industrials	☹	😐	☺	☺

APPENDIX 10 – Risk Matrix



APPENDIX 11 – M&A PROCESS

STEP 1

Purpose of acquisition: look for potential M&A subsidiaries through an industrial magnifying glass. The purpose is the expansion of products range, reinforcement of competitive position and enhancement of distribution.

Target identification: The due diligence is the key point of this phase. The potential target should be well-run and privately-owned. They select companies which have similar industrial sector and avoid those with turnaround or restructuring stories.

STEP 2

The target selection is followed accurately based on historical performance analysis.

After a target selection, the firm **typical multiples paid** are:

- Commercial companies: max **5x EV/EBITDA**
- Manufacturing companies: **max 7x EV/EBITDA**

The transaction procedure is concluded through the acquisition of control stake with agreements like put/call options to acquire minority in future or payment in IPG shares.

STEP 3

Integration: They allow the acquired company to become a bigger version of what it is, not a small-scale version of Interpump. The goal is to write the future together. Moreover, they follow a **soft integration** strategy without replacing executive managers, processes and IT system. Changes are made only in special cases. For example the costs are no centralized since they do not want to damage the company's success factor.

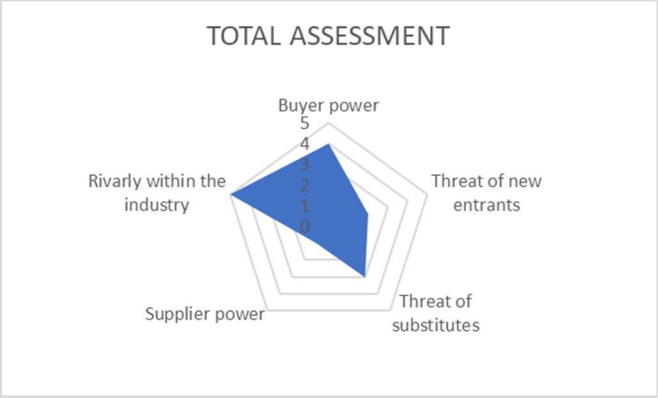
The benefits of this approach is an immediate **improvement of EBITDA**.

APPENDIX 12 – HISTORICAL M&A TRANSACTIONS

YEAR	TARGET COMPANY	SEGMENT	PRICE ($mil)	DEAL TYPE	RATIONALE
01/01/1999	Interclean Assistance Sa	Cleaning	9,59	Minority Stake	
12/01/1999	La Floor di Padova	Cleaning		Majority Stake	*Leading player in professional floor scrubbers*
25/01/1999	Sirio SRL	Cleaning	1,62	Merger	
01/11/1999	Euromop SpA	Cleaning		Majority Stake	*Strengthening of the leading position in the professional cleaning sector with the leading player in the European service trolley market*
04/11/1999	Muncie Power Products Inc	Hydraulics	25,99	Majority Stake	
01/12/1999	Soteco Spa	Cleaning		Majority Stake	
01/08/2000	Hydrometal Srl	Cleaning		Merger	*Completion of the product line of Euromop SpA and strengthens their leadership in this niche market*
07/09/2000	Ready System SRL	Cleaning		Majority Stake	
08/12/2000	Teknova SRL	Cleaning	2,67	Merger	
14/12/2000	Pulex Srl	Cleaning	3,72	Majority Stake	*Extension of its own offer in the cleaning equipment sector and to reach significant distribution synergies on the international markets*
10/07/2001	Hydroven Srl	Hydraulics	1,19	Majority Stake	*Fortify its position in the oleodynamic sector to design customised control units and circuits*
04/03/2002	Gansow GmbH & Co. KG	Cleaning	3,20	Merger	*A further major step towards strengthening its world leadership in the professional cleaning sector which will enhance the effective penetration of the main European market*
04/06/2004	Transferoil S.p.A.	Cleaning		Sale	*Dismission of the cleaning sector to focus their attention on the core business*
06/04/2005	Hammelmann GmbH	Water jetting	117,47	Merger	*Increase its competitive position in the water jetting sector, becoming the worldwide leader in the very high-pressure plunger pumps. The Group obtains access to the sophisticated very high-pressure technologies*
31/01/2007	NLB Corp.	Water jetting	62,40	Majority Stake	*Focus on highly profitable, hi-tech sectors by strengthening its global leadership in the field of high-pressure pumps and systems. The strategy is to focus their portfolio on highly profitable sectors with a high level of technology and considerable barriers to entry*
30/10/2008	Contarini Leopoldo SRL	Hydraulics		Majority Stake	
08/10/2008	Cover SRL	Hydraulics		Majority Stake	*Growth in the hydraulic cylinders*
07/07/2009	Hydro Service Penta SpA	Hydraulics	25,34	Majority Stake	*Further strengthening of the cylinder hub to assume international leadership*
18/04/2011	American Gorwood Corp.	Hydraulics	6,80	Majority Stake	*Strongly complementary business of the hydraulic sector*
27/09/2011	Unielectric	Electric Motors		Sale	*The Group has sold its stake because it no longer considers the electric motors investment strategic*
31/01/2012	Galtech SRL	Hydraulics	4,62	Majority Stake	*Highly complementary operations with the hydraulic sector*
18/01/2012	MTC SRL	Hydraulics	3,98	Merger	*Highly complementary operations of the hydraulic sector and strengthen its market position by extending its range of products*
16/02/2012	Takarada Industria e Comercio Ltda.	Hydraulics	15,76	Merger	*Point of departure toward the Brazilian market where huge investments in infrastructure are planned over the next few years because of the Football World Cup and the Olympic Games*
06/05/2013	Hydrocontrol SpA	Hydraulics	43,60	Merger	*Enter the segment of valves and distributors which are highly complementary with the hydraulic sector*
08/01/2014	I.M.M. Hydraulics SpA	Hydraulics	25,46	Majority Stake	*Enhance its position in the earth moving and agricultural machinery market. Moreover, it enables distribution synergies, as IMM may use the Group's distribution network existent all over the world*
15/01/2015	Walvoil SpA	Hydraulics	141,21	Merger	*Extraordinary strategic value investment. It expands its presence in area of agricultural application and reinforces its presence in international markets thanks to the production and business in the US, India, China, Brazil and South Korea and distribution companies in France and Australia*

17/03/2015	INOXIHP Srl	Water jetting	9,15	Majority Stake	*Reinforce its position in the steel industry to exploit production and distribution synergies*
28/08/2015	Osper Indústria de Peças Automotivas Ltda.	Hydraulics	9,15	Merger	*Strengthen their presence in the Brazilian market with the aim to merge it with Takarada, and Walvoil do Brasil. The goal is to concentrate the productions in one factory, with important industrial synergies, becoming a global player and a point of reference in the hydraulic Brazilian market*
22/05/2015	Bertoli Srl	Water jetting	8,35	Merger	*Interpump enters in the market of pumps for the food sector by reinforcing its worlwide leadership in the sector of high-pressure plunger pumps*
22/01/2016	Endeavour International Ltd.	Hydraulics	1,41	Merger	*A manufacturing company of crimping systems. It will equip all its international branches of the facilities for the distribution of crimped hydraulic hose and after sale service*
05/05/2016	Tubiflex SpA	Hydraulics	31,08	Majority Stake	*The main industrial applications are: aerospace, shipbuilding, railways, conditioning, medical equipment, energy generation, steelworks and petrochemical. With the acquisition it reinforces its presence in the wide market of hoses, adding flexible metal hoses to flexible rubber hoses that are produced by IMM group*
08/07/2016	Tekno Tubi Srl	Hydraulics	4,54	Merger	*Further strengthening in the pipes and hoses market, adding rigid pipes to the flexible rubber hoses already produced by subsidiary IMM and flexible metal hoses manufactured by Tubiflex*
01/08/2016	Mega Pacific Pty Ltd.	Hydraulics	9,02	Majority Stake	*A giant leap forward in the Oceanian countries*
25/01/2017	Bristol Hose Ltd.	Hydraulics	0,7	Merger	*The operation is part of a micro-acquisition program, aimed at reinforcing direct presence in various markets, while increasing the service component which can now include on-site delivery and repairs*
03/02/2017	Inoxpa Grup SL	Water jetting	97,26	Merger	*It widens and integrates the products of the Water-Jetting division, which will now be able to supply, besides Bertoli, branded homogenizers, a wide range of pumps, valves, mixers, processing systems and accessories, entirely manufactured in stainless steel and compliant with the strict requirements of the food industry*
12/06/2017	Mariotti & Pecini SRL	Water jetting	9,95	Majority Stake	*Another step in the strengthening of the presence in the food processing, cosmetical and pharmaceutical industries. The components developed by Mariotti & Pecini are also suitable for special applications in the presence of pressure/temperature constraints or dangerous fluids; moreover, thanks to the Magna-Safe® magnetic drive technology*
03/10/2017	Fluid System 80 Srl	Hydraulics	1,06	Merger	*This acquisition strengthens its positioning in the hydraulic power pack market, where the Group is present since 2001 with the Hydroven brand*
31/03/2018	GS-Hydro Holding Oy	Hydraulics	10,81	Merger	*The acquisition has great potential for synergies, and the addition of piping systems represents a widening in the hoses and fittings business. GS-Hydro revolutionized the piping industry with the invention of "non-welded" pipe assembly technology*
02/08/2018	Ricci Engineering Srl	Water jetting	0,70	Merger	*Acquire the technical expertise of Mr. Ricci, who will keep on coordinating the activities in the water jetting sector*
12/12/2018	Fluinox Procesos SL	Water jetting	10,80	Merger	*Their specific expertise in the treatment of pastes and powders represents a perfect integration to the fluid-handling skills and product range of Inoxpa*

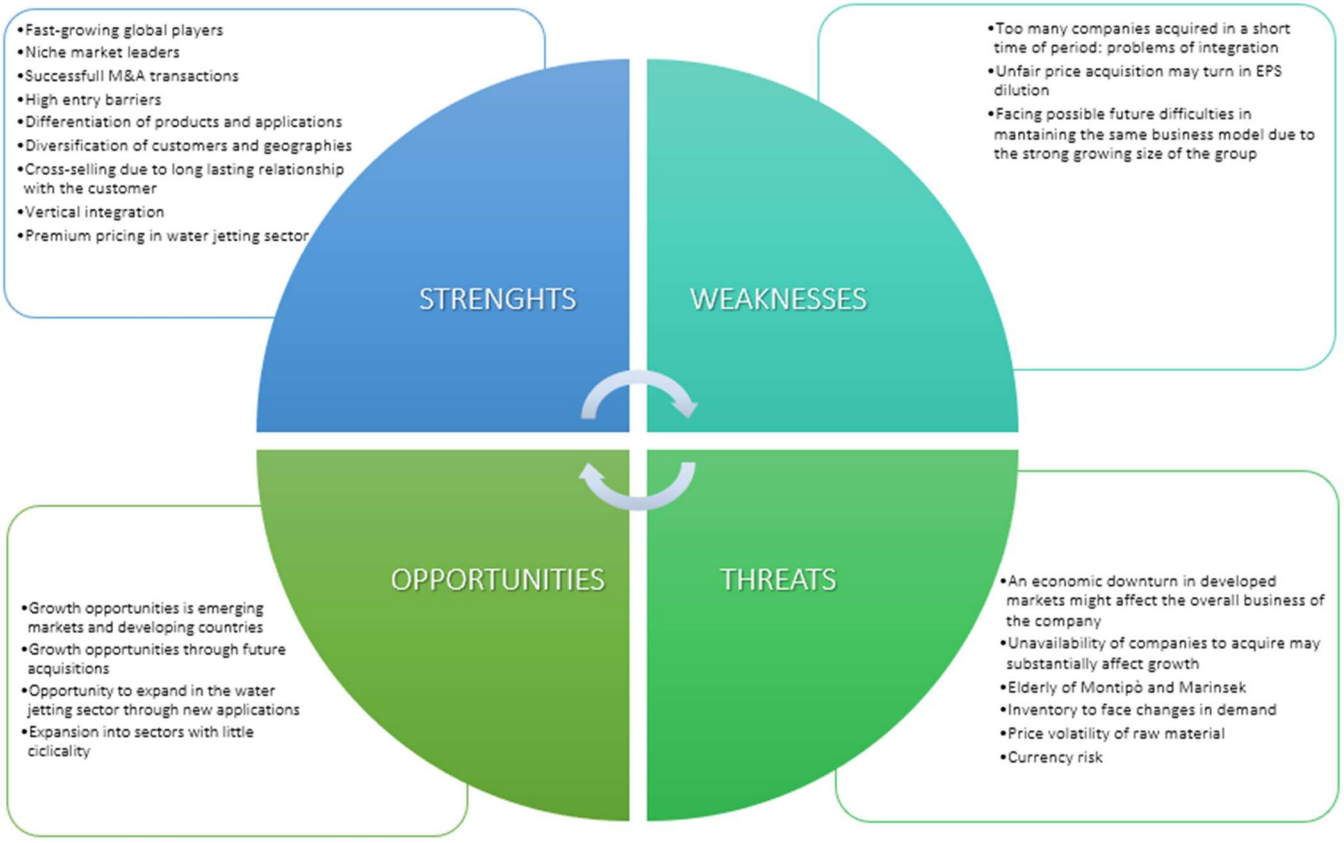
APPENDIX 13 – PORTER'S FIVE FORCES



Main Categories	Subcategories	Assessment
Bargaining power of buyers	Buyer concentration	Main customers are fragmented, less than 1% weight of revenue on consolidated balance. In the water-jetting sector the buyers are very diversified representing the niche market paying a premium-price. Hydraulics customers are diversified, and they have to pay a price which is determined by the market.
	Product differentiation	Interpump supplies customized products to buyers in the hydraulic sector, on which they depend on. No one else can produce the same customized products maintaining the level of quality high with a sustainable cross-selling strategy.
	Buyers' profit margin	Neutralized from a completely opportunistic approach, there is no segment that attracts marginal customers or has less margin. The water-jetting has a higher impact on the EBITDA due to higher margins and 1/3 of revenues come from after-sales (maintenance, parts & service). In the hydraulic sector the products have only a functional value without added value.
	Use of multiple sources	Given Interpump expertise in this niche market companies have a hard time finding different sources for these specific components.
	Importance to buyers	Pumps are the most essential machinery required for every home, office and industry use. Industries are greatly dependent on pumps in moving fluids such as gases or liquids. The way each of the water pump works is dependent on their design and specific characteristics having a wide range of applications.
	Buyers' volume	Products are, to a large degree, mission-critical to buyers. Interpump does not only produce products itself but also components for other buyers' products
Threat of substitutes	Number of substitutes	For standardized products high. Interpump might lose market share for the commodities products due to their focus on customized and specialized products. Customers, however, seem to be satisfied with Interpump's products and services, where the risk for substitutes is medium-low.
	Revative price	Pricing issues are minor as users' main concern is product quality rather than product price depending on the business sector.
	Relative quality	Interpump's expertise and high-quality products are one of their key advantages. Customers are extremely demanding.
	Incentive to substitute	Customers seem to be satisfied with Interpump's products and services. Their long-lasting relationship with the company is an indicator on their loyalty and their satisfaction.
	Concentration	Interpump and its 4 major competitors play a huge role in the market. Closest competitors in water-jetting sector are GEA Group AG and Alpha Laval AB; Sulzer AG and Eaton Corp. Plc for the hydraulic sector.
	Size of Competitors	Interpump's market share in the hydraulic sector is smaller than the one of its competitors but Interpump is the leader in HPP and VHPP in the water jetting sector counting a huge market full of opportunities for acquisitions and therefore for growth.
	Industry Growth	Industry is expected to have a moderate growth of 1.8% CAGR from 2018-2023
	Product Differentiation	A part of the product mix is standardized (with low differentiation) while another part of the product mix is customized (with high differentiation) or even highly specialized and designed together with the customers in order to facilitate the integration into their systems. Interpump is well known for high customized products and for working closely together with customers to deliver individually needed products.

Rivalry within the industry	Diversity of Competitors	Competitors mainly come from the USA, Asia and Europe.
	Strategic Stakes	As a global player in the HPP industry, the company can profit from the high growth expectations in the water-jetting segment, seen as a young and continuous growing technology with still a lot of new applications to be found. The risk resides in the hydraulic sector where there is still space for innovation but no sight of a complete
	Exit Barriers	As a global player, Interpump exit barriers are high, which means it depends only on how the market will develop.
	Scale Economies	As a niche market, the market potential is limited. Economies of Scale are neutral in terms of they are not the main concern when analyzing the industry. Products differ in quality rather than in price and intensifying production will not create any beneficial outcome – on the contrary.
Threats of new entrants	Product Differentiation	A part of the product mix is standardized (with low differentiation) while a part is customized or even highly specialized (with high differentiation) designed together with the customers in order to facilitate the integration into their systems and deliver individually needed products.
	Switching Costs	Switching costs for customers are high in terms of quality and product integration. Main customers (OEMs) are satisfied with the quality of Interpump and a new entrant would have difficulty convincing them otherwise.
	Capital requirements	Capital requirements for high pressure pumps producers are significant both in terms of manufacturing and R&D spending. A new entrant would first need to invest large amounts of time and money to initiate the production whereas Interpump Group can count on more than 40 years of experience.
	Expertise requirement	High barrier to entry as Interpump, as mentioned above has over 40 years of experience and is a global player in the high-pressure pump industry.
	Distribution channels	Interpump has a strong and long-lasting relationship with its key customers: they rely on Interpump's expertise.
	Legal and regulatory barriers	Regulatory constraints on employee safety and working environment risks as well as product standard characteristics have to be subject to specific regulations.
	Defense of market share	Interpump market size estimated is <1bn/yr in the niche of very high-pressure plunger pumps and €8 bn/yr in the flow handling Food, Cosmetics & Pharma and a fast growing global player in a huge market (estimated to euro 40 bn/yr) with countless opportunities for acquisitions.
Bargaining power of suppliers	Supplier concentration	In the Water Jetting sector, the cost of metals constituted approximately 19% of costs for the purchase of raw materials, semi-finished products and finished products in 2017. The metals utilized are primarily brass, stainless steel, aluminium and copper. The policy is to leave the cost of storage of materials to vendors. Nevertheless, the cost of metals in the Hydraulic sector constituted around 32% of purchase costs for raw materials, semi-finished products and finished products in 2017. The metals utilized are primarily steel, aluminium, mild steel and iron. The prices of these commodities, with the exception of aluminium, are not historically sensitive to significant fluctuations.
	Product differentiation	Low for raw materials, medium/high for components
	Dependence on the industry	Low for raw materials, medium/high for components

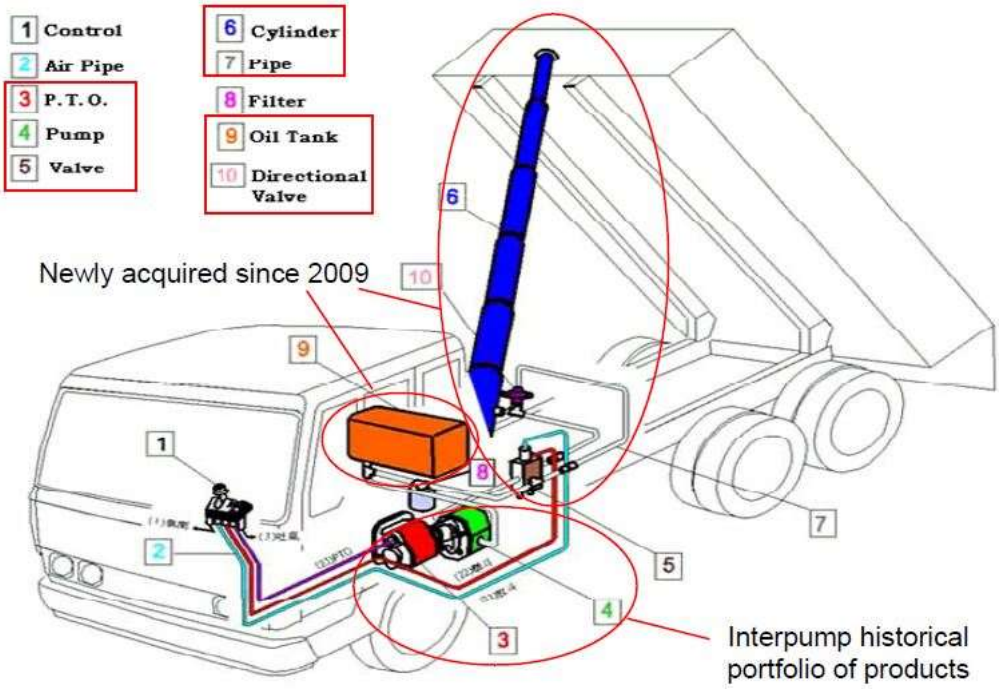
APPENDIX 14 – SWOT ANALYSIS



APPENDIX 15 – PRODUCTS

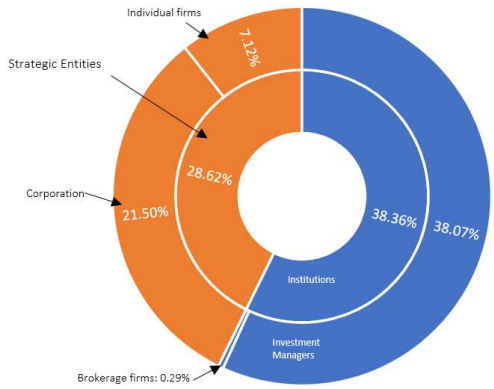
Water Jetting Sector		
Products	**Subsidiary**	**Country**
Piston Pumps 	General Pump Inc	US (Minnesota)
	Interpump Group SpA	Italy (Emilia Romagna)
	Pratisolli Pompe (Brand of IPG)	Italy (Emilia Romagna)
Flow Handling 	Bertoli (Brand of IPG)	Italy (Emilia Romagna)
	General Pump Inc	US (Minnesota)
	Hammelmann GmbH	Germany (Westfalia)
	Inoxihp Srl	Italy (Lombardy)
	NLB Corporation Inc	US (Michigan)
	Pratisolli Pompe (Brand of IPG)	Italy (Emilia Romagna)

Hydraulic Sector		
Products	**Subsidiary**	**Country**
Power Take-Offs	Galtech (Brand of Walvoil)	Canada (Quebec)
	Hydrocar (Brand of IPH)	Italy (Emilia Romagna)
	Interpump Hydraulics S.p.A.	Italy (Emilia Romagna)
	Mega Pacific New Zealand	New Zealand
	Mega Pacific Pty Ltd	Australia
	Muncie Power Inc.	US (Indiana)
	PZB (Brand of IPH)	Italy (Emilia Romagna)
	Takarada Industria e Comercio Lta	Brazil (RG do Sul)
Cylinders	Contarini Leopoldo S.r.l.	Italy (Emilia Romagna)
	Cover (Brand of Oleodinamica Panni)	Italy (Veneto)
	HS Penta (Brand of IPH)	Italy (Emilia Romagna)
	Modenflex Hydraulics (Brand of IPH)	Italy (Emilia Romagna)
	Oleodinamica Panni S.r.l.	Italy (Veneto)
Directional Control Valves DCV	Galtech (Brand of Walvoil)	Italy (Emilia Romagna)
	Hydrocontrol (Brand of Walvoil)	Italy (Emilia Romagna)
	Walvoil S.p.A.	Italy (Emilia Romagna)
Hoses, pipes and fitting	I.M.M. Hydraulics S.p.A.	Italy (Abruzzo)
	Tekno Tubi S.r.l.	Italy (Emilia Romagna)
	Tubiflex S.p.A.	Italy (Piemonte)
Componentry ingineering	American Mobile Power Inc.	US (Fairmount)
	Avi S.r.l.	Italy (Lombardy)
	Hydrocar (Brand of IPH)	Chile
	Hydroven S.r.l.	Italy (Veneto)
	Interpump Hydraulics S.p.A.	Italy (Emilia Romagna)
	Mega Pacific New Zealand	New Zealand
	Mega Pacific Pty Ltd	Australia
	Muncie Power Inc.	US (Indiana)
	PZB (Brand of IPH)	Italy (Emilia Romagna)
	Takarada Industria e Comercio Lta	Brazil (RG do Sul)

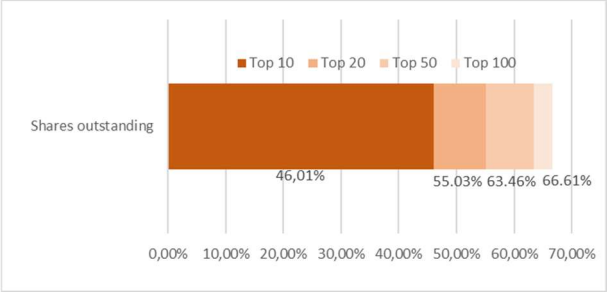


Source: Interpump Website

APPENDIX 16 –SHAREHOLDER CONCENTRATION AND COMPOSITION



Composition shareholder by type



Concentration of the top 100 shareholders. Almost half of the Interpump's ownership belongs to 10% of the major

APPENDIX 17 – COMPOSITION OF BOD

POSITION	NAME AND FUNCTION	INFORMATION
CEO CHAIRMAN	Fulvio Montipò	- 75 y.o.; Academic background in humanitarian studies - Founder of Interpump
CO-CEO DEPUTY CHAIRMAN	Paolo Marinsek	- 69 y.o.; Academic background in engineering, laurea in ingegneria aeronautica - Past work experience in the automotive industry at Fiat
CFO	Carlo Banci	- Business administration degree, CPA - Previously worked in KPMG, Holcim Group and CFO in Ciam City Cement
MEMBER BOD	Angelo Busani (Independent Director)	- 59 y.o.; Public notary - Member of BOD of Credit Suisse Fiduciari, Lina Pelle s.p.a. and many more
MEMBER BOD	Franco Garilli (Lead Independent Director)	- 68 y.o.; CPA and accounting background - Work experience in auditing sector
MEMBER BOD	Marcello Margotto (Independent Director)	- 68 y.o.; CPA and expert in taxation law
MEMBER BOD	Stefania Petruccioli (Independent Director)	- 51, y.o.; Experience in Financial Advisory services - On the BOD of RCS Mediagroup S.p.A. and De' Longhi S.p.A.
MEMBER BOD	Paola Annunziata Tagliavini (Independent Director)	- 51 y.o.; Risk Management and auditing Professor - BOD at Eurizon Capital SGR and Save Spa,
MEMBER BOD	Giovanni Tamburi (Non-Executive Director)	- 65 y.o.; Founder and president of Tamburi Invstment Partners S.p.A. - BOD of Amplifon, Azimut Benetti, Eataly, Furla, iGuzzini, Prysmian

APPENDIX 18 – CODE OF ETHICS

The Italian Legislative Decree n. 231, endorsed on June 8th, 2001, disciplines the administrative responsibilities of legal entities and of firms. It also establishes the preparation of a Code of ethics, a binding document approved by the highest management of the company and that tries to minimize the liability of the company in case of possible inappropriate conducts by employee and managers.

General Principles	The company sets its fundamental ethical principles aimed to ensure the optimal functioning, reliability and corporate image of the company. The company recognizes impartiality, honesty, propriety, confidentiality, value of human resources, fairness in the exercise of authority, responsibility and communication as its fundamental pillars to benchmark its operations, conduct and internal and external relations of intercompany relations.
Internal Control	The company adopts specific system of internal control designed to*: (i) ensure the adequacy of the business processes in terms of effectiveness, efficiency and cost control; (ii) guarantee the reliability and accuracy of accounting entries and safeguard its net assets; (iii) ensure the conformity of operating activities with both internal and external regulations; (iv) guarantee the traceability of processes and the filing of documentation; (v) guarantee the proper allocation of powers and compliance with the principles governing the segregation of duties*. Each subsidiary's operational management has responsibility over its system of internal controls over its business processes.
Criteria for Conduct - Criteria for conduct in relation to collaborators - Criteria for conduct in the pursuit of business activities	This point is subdivided into three main points. First is the transparency towards the market. The code restates the company's pursuit full decision-making transparency. Also, the company commits to ensure consistency of the disclosure made towards investors. The second point refers to the company's conduct criteria towards its collaborators. The code describes the recruitment process, the management of collaborators and also disciplines the health and safety standards for the personnel. It disciplines also confidentiality and privacy standards to which the company must adhere in the relationship with its employees. Last, the code also entails the conduct of its business activities. The code further describes guidelines to prevent corruption or any kind of opportunistic behavior from its employees. Also, the code sets some general principles for the safeguarding of the environment.
Method of Implementation	The last major point of the code describes the communication process of its ethic principles to its internal and external shareholders. Finally, it lists also possible penalties for violations of its ethics code.

APPENDIX 19 – BIBLIOGRAPHY REFERENCES

We hereby confirm that the present paper is solely our own work and that if any text passages or diagrams from books, papers, the web or other sources have been copied or in any other way used, all references have been acknowledged and can be found in the following list:

https://www.techsciresearch.com/report/global-high-pressure-pumps-market/2389.html
https://www.hauhinco.de/fileadmin/documents/pumps/VDMA_PUK_Hauhinco_High_Pressure_Pumps_Water_Hydraulics_GB.pdf
https://www.accountingtools.com/articles/the-altman-z-score-formula.html
http://investexcel.net/beneish-m-score/
http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3155709
https://seekingalpha.com/
https://www.borsaitaliana.it/borsa/azioni/elenco-completo-studi-societari.html?isin=IT0001078911&lang=it
https://www.interpumpgroup.it/uk/investor-relations.aspx

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