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Opinion	<b>Buy</b>
Upside (%)	109
Price (€)	11.45
Target Price (€)	23.9
Bloomberg Code	ALESA FP
Market Cap (€M)	50.5
Enterprise Value (€th)	74,466
Momentum	STRONG
Governance	4.8/10
Credit Risk	C <sub>+</sub>

#### Research Analysts

Jorge Velandia  
+33 (0) 1 70 61 10 50  
[oils@alphavalue.eu](mailto:oils@alphavalue.eu)



# Ecoslops

## The cleantech making oil residues green

### PROS

- Ecoslops makes intelligent, green and above all profitable use of wasted oil products (slops) through its proprietary pocket-size refinery technology
- Successful first Portuguese unit is a significant FCF generator two years after launch and supports the case for more similar units (two in progress in Marseille and Antwerp)
- Pint-size slops treatment unit (in a TEU container) to be prototyped this year opens extra market potential

### CONS

- Ecoslops is still a young firm and will need fresh equity even if it hopes to rely on project financing ultimately
- Business model for extra small units has yet to be ascertained
- Green credentials are obvious but difficult to encapsulate in usual carbon metrics

KEY DATA	12/17A	12/18A	12/19E	12/20E	12/21E
<b>Adjusted P/E (x)</b>	<b>-43.0</b>	<b>-35.7</b>	<b>ns</b>	<b>-28.3</b>	<b>25.2</b>
<i>Dividend yield (%)</i>	0.00	0.00	0.00	0.00	1.75
<i>EV/EBITDA(R) (x)</i>	ns	ns	ns	42.9	13.5
<b>Adjusted EPS (€)</b>	<b>-0.34</b>	<b>-0.35</b>	<b>-0.21</b>	<b>-0.41</b>	<b>0.45</b>
<i>Growth in EPS (%)</i>	n/a	n/a	n/a	n/a	n/a
<i>Dividend (€)</i>	0.00	0.00	0.00	0.00	0.20
<i>Sales (€th)</i>	6,080	7,449	10,454	15,745	35,308
<i>EBITDA/R margin (%)</i>	-5.43	-5.10	2.66	11.0	21.0
<i>Attributable net profit (€th)</i>	-1,350	-1,548	-940	-1,785	2,006
<b>ROE (after tax) (%)</b>	<b>-8.00</b>	<b>-7.06</b>	<b>-4.28</b>	<b>-7.49</b>	<b>7.41</b>
<i>Gearing (%)</i>	29.0	9.81	47.9	79.4	106

#### Conflicts of interest

Corporate broking	No
Trading in corporate shares	No
Analyst ownership	No
Advice to corporate	No
Research paid for by corporate	Yes
Corporate access	No
Brokerage activity at AlphaValue	No
Client of AlphaValue Research	No

Detailed financials at the end of this report

**Key Ratios**

		12/18A	12/19E	12/20E	12/21E
Adjusted P/E	x	-35.7	ns	-28.3	25.2
EV/EBITDA	x	ns	ns	42.9	13.5
P/Book	x	2.45	2.63	1.93	1.80
Dividend yield	%	0.00	0.00	0.00	1.75
Free Cash Flow Yield	%	-7.72	-26.0	-24.7	-23.3
ROE (after tax)	%	-7.06	-4.28	-7.49	7.41
ROCE	%	-5.62	-1.99	-1.90	3.68
Net debt/EBITDA	x	-7.84	63.6	13.7	4.81

**Consolidated P&L**

		12/18A	12/19E	12/20E	12/21E
Sales	€th	7,449	10,454	15,745	35,308
EBITDA	€th	-380	278	1,736	7,424
Underlying operating profit	€th	-1,623	-972	-1,220	3,079
Operating profit (EBIT)	€th	-1,623	-972	-1,220	3,079
Net financial expenses	€th	-290	-637	-1,234	-1,335
Pre-tax profit before exceptional items	€th	-1,914	-1,609	-2,454	1,744
Corporate tax	€th	330	668	668	262
Attributable net profit	€th	-1,548	-940	-1,785	2,006
Adjusted attributable net profit	€th	-1,548	-940	-1,785	2,006

**Cashflow Statement**

		12/18A	12/19E	12/20E	12/21E
Total operating cash flows	€th	-1,278	827	1,149	4,384
Capital expenditure	€th	-2,672	-14,922	-12,372	-14,822
Total investment flows	€th	-2,672	-14,922	-12,372	-14,822
Dividends (parent company)	€th	0.00	0.00	0.00	-200
New shareholders' equity	€th	176	35.1	6,335	94.5
Total financial flows	€th	340	9,113	25,467	565
Change in net debt position	€th	-4,271	-14,697	-6,121	-11,878
Free cash flow (pre div.)	€th	-4,240	-14,732	-12,456	-11,773

**Balance Sheet**

		12/18A	12/19E	12/20E	12/21E
Goodwill	€th	0.00	0.00	0.00	0.00
Total intangible	€th	372	372	372	372
Tangible fixed assets	€th	18,479	32,207	41,623	52,100
WCR	€th	1,371	1,597	2,853	6,155
Total assets (net of short term liabilities)	€th	26,176	40,129	50,801	64,580
Ordinary shareholders' equity (group share)	€th	22,418	21,561	26,111	28,012
Provisions for pensions	€th		0.00	0.00	0.00
Net debt / (cash)	€th	2,980	17,677	23,798	35,676
Total liabilities and shareholders' equity	€th	26,176	40,129	50,801	64,580

**Per Share Data**

		12/18A	12/19E	12/20E	12/21E
Adjusted EPS (bfr goodwill amort. & dil.)	€	-0.35	-0.21	-0.41	0.45
Net dividend per share	€	0.00	0.00	0.00	0.20
Free cash flow per share	€	-0.96	-3.35	-2.83	-2.67
Book value per share	€	5.09	4.90	5.92	6.34
Number of diluted shares (average)	Th	4,426	4,402	4,406	4,412

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## Businesses & Trends

Ecoslops renews oil residues from shipping (slops and sludge), turning them into fuels through its unique technology.

Technically a refiner, Ecoslops is attractive as its very processes amount to cleaning up efforts of oil related waste and overall lowering of carbon emissions. It is its business model paradox.

Ecoslops operates its first industrial scale treatment unit (nominal capacity of over 30kt of recycled fuel) in the port of Sinès, Portugal.

Within the Sines operating success, Ecoslops improved its refining process and, at fixed oil price and capacity, Marseille La Mède is expecting an EBITDA improvement of a 1/3rd compared to Sines and it will be even more for future plants.

The **Petroleum Residue Recycling (P2R)** unit: the company's innovation lies in combining advanced refining techniques within a small processing plant, compared to typical refineries. P2R technology, coupled with ad hoc engineering, permits the renewal of slops.

### 1) Slops market

#### 1.a. What slops are:

- sludges: a waste from the purification of fuels in engine rooms (80% of hydrocarbons);
- bilge water: a mixture of fuel oil, seawater, freshwater, cooling water, oil leaks and lube oils (10% of hydrocarbons);
- slops: ballast water used in older tankers to stabilise the ship by replacing oil when they don't carry payload; also, tank-washing water (20% of hydrocarbons). Furthermore, refineries and pipelines are also a source of slops.

The world fleet generates more than 100m tons of oil residues. These wastes are rich in residues and heavy metals and therefore represent an environmental challenge.

The International Convention MARPOL 73/78, which forbids dumping, led to establishing waste collection capabilities in the ports. However, a number of ports are still not compliant and unequipped. Most of the time, slops are resold on the cheap for combustion (e.g. to cement plants and steel mills).

Ecoslops' process starts by separating water from sediments and hydrocarbons. Water undergoes conventional processing and is released. Hydrocarbons go through vacuum distillation at high temperature: the process yields c. 65% of fuels (in Sines' instance) and 35% of light bitumen.

### A steady growth in the availability of Slops

- Steady growth of global maritime traffic: TMVA 1997-2017e = +3 % / +4 %  
Vessels use heavy fuel oil (70% of fuel) or distillates (Marine Diesel Oil/Marine Gas Oil) - more expensive

### Vessels produce residues rich in hydrocarbons : 100+ MT/year



Source: Company

### 1.b. Slops, products and the oil price

Traditionally, slops were decanted by collectors and the hydrocarbons were bought as fuel by industries such as cement plants and steel mills. However, the low oil prices have driven buyers to consume virgin, purer fuels (i.e. products free of heavy metal sediments, sulphur, etc.), which imply lower pollution processing costs and hence prove more convenient overall.

As a result, collectors have lost their traditional outlet. The stocks of slops are building up in ports, testing the limits of storage infrastructures. Ships cannot discharge and collection fees are on the rise.

Slops prices have a non-linear relation to oil, where the sensitivity varies depending on the price level. When crude price is high (say Brent above \$80/bbl), slops are considered as a competitive fuel by cement and steel plants, as the costs to reduce pollution from the dirty feedstock are justified by saving on price vs. cleaner, more expensive fuels (mainly refined oil products). Hence, crude and slops prices are more closely correlated.

At lower oil prices (e.g. at \$45/bbl) alternative, cleaner fuels are more attractive to the energy-demanding industries, and slops stocks tend to accumulate due to a reduced number of economically viable disposal options. At the same time, the price of slops is less sensitive to crude oil as it is less of a competitor to refined products and is largely influenced by collection and disposal costs.

This poses a sort of “inflection range” where traditional slops consumers become buyers.

### 1.c. Regulation framework MARPOL 73/78 convention

The International Convention MARPOL 73/78 provides a framework for managing maritime waste. The convention has been established by the International Maritime Organization (IMO) and is the international reference for maritime environmental regulation. It has been ratified by all countries playing a role in global shipping, which forces all vessels to comply.

It allows dumping of limited quantities of waste. The remainder must be collected by port infrastructures, with port authorities charging a fee.

The convention only affects the unloading of waste in ports and dumping limits; it

doesn't concern onshore waste processing or recycling.

The global port network still lacks reception facilities that are up to the task to collect ship residues. To achieve this, ships need a way to deposit their wastes on shore and conditions to access the facilities should pose no deterrent (whether practical or economical). The issue of processing waste after collection represents a hurdle for port authorities: they need a provider able to recycle hydrocarbon residues in a sustainable – environmentally and economically – way.

Ecoslops offers an integrated solution to port authorities, allowing them to comply with the MARPOL requirements while recycling residues on shore.

### **European Union: Directive No. 59/2000**

The European Union is at the forefront in implementing the MARPOL requirements: EU policy is traced by the Directive No. 59/2000 regulating port waste management. The EMSA (European Maritime Safety Agency) was set up as a means to control illegal dumping in the sea. The Directive applies to all EU ports and all vessels, regardless of their flag, stopping at an EU port. Ports are required to provide facilities adapted to the port's size, vessel class and types of waste in order to avoid undue delays to the ships, under penalty of compensation.

### **The Basel Convention and the EC Regulation No. 1013/2006**

Hydrocarbon residues fall under the notification process described in the regulations as "hazardous waste to be recovered." This implies that Ecoslops must comply with a number of rules when transporting and importing slops.

#### **1.d. Segments and players**

Ecoslops operates in two markets:

- **Collection of hydrocarbon residues** is mostly a local market. Ecoslops may get involved in some ports (as in Sines, Marseille and in 2021 Anvers). Apart from the large ports, most of the providers are local SMEs operating in a single port. They work with a processing plant which receives the residues after collection. Tools employed are relatively simple and low-value-added: pumping on trucks or barges, storage and separation facilities.
- **Hydrocarbon residues processing** also is heterogeneous. Industrial waste specialists are important players. The segment of maritime hydrocarbon residues is just a secondary, if not marginal, business to them: e.g. VEOLIA, TRADEBE, URBASER, WOS, AVISTA OIL AG. Although some companies focus on the maritime segment (e.g. NATURE GROUP, SINGAPORE CLEANSEAS, GULF ENVIRONMENT FZE), they usually don't have an international scope.

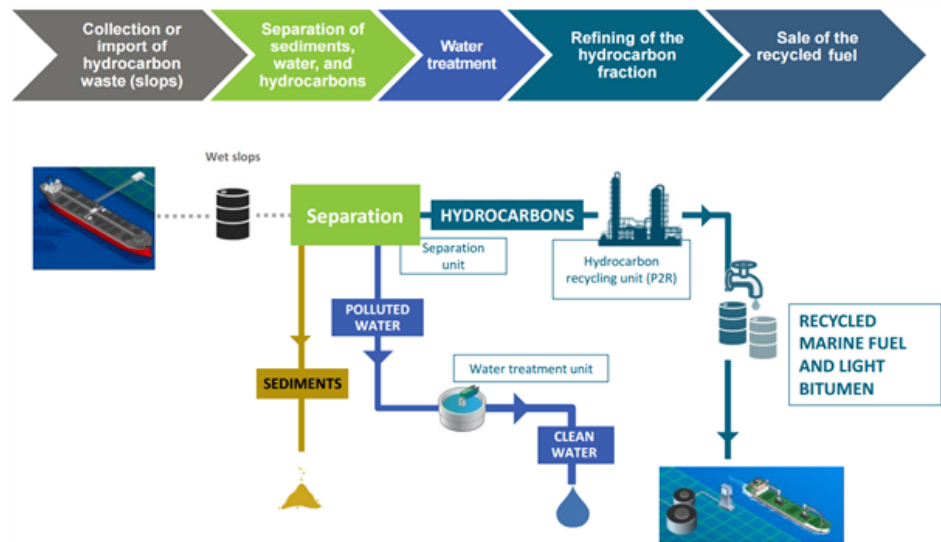
In 2017, Ecoslops announced its will to increase the weight of onshore slops (lower flashpoint) in the mix because of their better quality and lightness.

Technologies are simple (chiefly separators and centrifuges) and companies aren't able to sell renewed fuels. The hydrocarbons are mostly sold as fuel to energy-consuming industries such as cement plants.

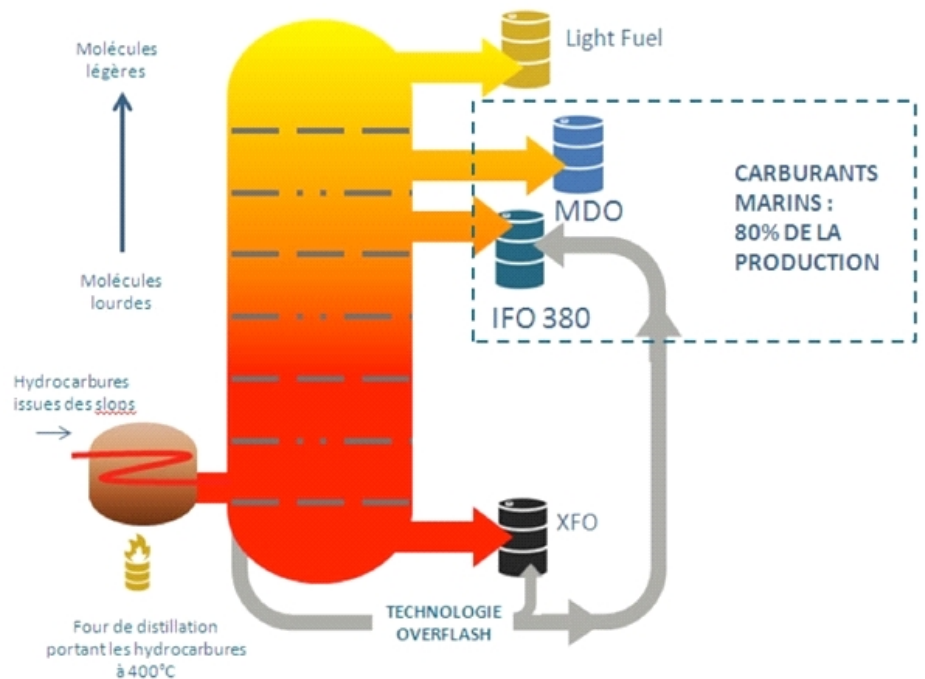
**2) The P2R column and products slate**

Ecoslops aims at collecting and recycling residues and hydrocarbon-content blends starting with separating water, sediments and hydrocarbons. Water is cleaned before release, while hydrocarbons are processed in an ad hoc unit. Here, hydrocarbons are refined, yielding fuels.

Ecoslops deploys a unique reprocessing facility: for the time being, it is the only one able to process the residues to produce commercial fuels. The P2R technology is at the core of Ecoslops' value added.



Source: Company



Source: Company

The P2R distillation column is built out of standard components but constructed and operated with unique and exclusive engineering capabilities. The product slate depends on the feedstock (i.e. the blend of residues processed) and, in our example, is mostly composed of:

- Light Fuel Oil (LFO), part of which fuels the plant (c. 10% yield in Sines);
- Diesel, for sale (c. 35%);
- Intermediate Fuel Oil (mainly IFO 180) for sale (c. 25%);
- Extra Fuel Oil (XFO), a light bitumen used as or a component for bituminous industrial coatings (c. 30%).

Again, the above is for illustrative purposes, as the product slate varies depending on feedstock.

All the refinery's products have a commercial value, including the light bitumen (XFO), which is sold to Soprema, a supplier of waterproofing systems to the construction sector.

At a prototype stage in 2019, the so-called Mini P2R distillation column is a small refining unit (size of a container) built to meet the slops collection volumes of medium-sized ports. Mini P2Rs are geared to refine lighter slops so that their refining output is composed of:

- Diesel, for sale (c. 60%);
- Intermediate Fuel Oil (mainly IFO 180) for sale (c. 40%);

### **3) Projects**

**3.a. First plant: Sines This port is developing quickly under the influence of shipping player MSC, which uses it as a regional hub, and the local oil and petrochemical sectors, led by Galp Energia and Repsol. The port includes three terminals: the oil terminal, containers and LNG.**

In Sines, Ecoslops both collects and processes slops.

#### **Concession**

Ecoslops has a contract conferring exclusive rights for the collection of hydrocarbon waste within the sub-concession agreement, signed in 2012 with the port authority, lasting for 15 years.

In this context, Ecoslops provides utilities to the port:

- steam (oil terminal);
- compressed air (oil terminal);
- water distribution to the entire port;
- waste management to the entire port (both solid and liquid); Ecoslops has exclusivity.

Tariffs should broadly cover opex (or almost all of it) for the Sines utilities business.

#### **Refinery**

The Sines plant started its first stage of operations in summer 2015. It has 130t/day of nominal processing capacity.



Feedstock is procured through:

- sludge collection (notably from MSC vessels);
- slops collection in the port's oil terminal;
- importing hydrocarbon residues from other regional ports.

Ecoslops has a contract with MSC (Mediterranean Shipping Company, the second largest shipowner of container vessels) which incentivises MSC to unload slops in Sines by lowering collection costs.

This allows Ecoslops to:

- secure slops supply in Sines;
- lower its feedstock cost basis (vs. buying slops externally).

### 3.b. Second plant: Marseille La Mède

In September 2016, Ecoslops and Total signed a MoU to launch a new slops refining unit within Total's refinery in La Mède. The plant will regenerate slops from Marseille's and neighboring ports.

The unit will use the existing infrastructures on-site (water treatment, steam, power, natural gas, loading station) and will supply Total in naphtha oil.

The investment will focus on the P2R asset and storage facilities.

Ecoslops is building and will operate the unit, hence focusing on its core competences; Total will supply services and the utilities

#### Refinery

The Marseille plant will start its first stage of operations at the end of 2019. It has 130t/day of nominal processing capacity. Feedstock is procured through:

- slops collection in the port's oil terminal via Fluxel;
- importing hydrocarbon residues from other regional ports via Ortex.

Ecoslops has a contract with Fluxel (operator of the oil ports of Fos and Lavéra) which incentivises boats to unload slops in Marseille by lowering collection costs.

This allows Ecoslops to:

- secure slops supply in Marseille;
- lower its feedstock cost basis (vs. buying slops externally).

### 3.c. Prospective projects

Ecoslops aims at developing two new projects, Antwerp and Suez, and Mini P2R implantations, by 2021.

It plans to build one in Antwerp with a bigger nominal capacity at 200t/day.

The mooted Suez Canal one may be a standard one or a Mini P2R depending on more exhaustive market assessment of the slops available.

**Antwerp Northern Europe constitutes a basket of opportunities for Ecoslops. Altogether, an estimated 250,000t/year are collected in Antwerp, Rotterdam, Amsterdam and Hamburg.**

These residues were traditionally used as fuel by German industries. Changes in

these industries' feedstock policies, coupled with the lower oil price (which makes it convenient to buy less polluting alternatives to slops), brought a glut in slops. Ecoslops could offer a solution.

In June 2017, Ecoslops signed a memorandum of understanding (MoU) with the Port of Antwerp and ATPC (Antwerp Terminal and Processing Company), refiner and storage provider for the VTTI Group (Vitol Tank Terminals International).

The building permit will be delivered over 2020 and construction will begin for an opening by 2021. Expected capacity will be over 60kt a year, about twice the capacity of Sines.

### **Mini P2R**

The smaller local refining unit is a new business model of Ecoslops being prototyped since 2018. Ecoslops intends to operate, sell, lease and offer services and maintenance solutions over a flexible refining unit (the size of a standard container box) which can manage 4kt to 6kt a year.

The prototype which should be ready to be tested at a client's facility by the end of 2019 will allow to gauge the efficiency of the process on specific slops. Its small size means that it is suited for a large number of medium-sized ports, opening a much wider potential market than the original unit. With many of these medium-sized ports being distant from refineries, the resale value of refined products on site is expected to be high with strong margins.

Financing of the first units is expected to be 20% equity, although the business models can be varied, i.e. ownership may not be optimal depending on funding, tax, regulatory constraints.

We assumed in our modelling that

- a first Mini P2R is sold in 2020
- 2 Mini P2Rs are sold in 2021

Units are a €3.5m capex effort. We assumed a 4kt/year output.

### **Suez project**

Ecoslops with French government support signed a Memorandum of Understanding with Suez Canal Economic Zone for the realisation of a detailed feasibility study (statutory, technical, financial and commercial aspects of the project) which should be finalised in mid-2019.

The potential of recovery of oil residues transiting by the Suez Canal is estimated at more than 40,000 tons a year. Nearby Alexandria port with more than 5,000 stopovers a year may be a proper candidate as well.

Management will take the opportunity to operate its Mini P2R and, if there is a real opportunity, then build a P2R unit.

### **4) Growth runway**

In 2022, Ecoslops should refine c. 210kt per year. This represents c. 0.2% of the world's slops production and underlies a huge growth runway for the firm, which proposes a proven green solution to this by-product of global maritime trade.

Therefore, there is a wide scope to expand the project pipeline beyond the next two units we are accounting for based on current visibility.

Longer-term projects could be large (as in Antwerp); we see ports in Singapore, Tokyo and the US as prospects.

### Ecological impact

Ecoslops ordered a study in 2018 conducted by Carbon 4 which evaluates its ecological efficiency in Marseille.

The results are the following:

- 3x less CO2 released than traditional refining process
- On a 30kt annual production, Ecoslops saves 22,000t of CO2, the equivalent in CO2 consumption of 11,000 European households.

### Divisional Breakdown Of Revenues

Sector	12/18A	12/19E	12/20E	12/21E	Change 19E/18		Change 20E/19E	
					€th	of % total	€th	of % total
<b>Total sales</b>	<b>7,449</b>	<b>10,454</b>	<b>15,745</b>	<b>35,308</b>	<b>3,005</b>	<b>100%</b>	<b>5,291</b>	<b>100%</b>
<b>Sines</b> Refining & Mktg	7,449	10,454	11,296	11,568	3,005	100%	842	16%
<b>Marseille</b> Refining & Mktg	0.00	0.00	3,660	9,606	0	0%	3,660	69%
<b>ARA</b> Refining & Mktg	0.00	0.00	0.00	10,980	0	0%	0	0%
<b>Mini P2R projects</b> Refining & Mktg	0.00	0.00	789	3,155	0	0%	789	15%
Other	0.00	0.00	0.00	0.00	0	0%	0	0%

### Key Exposures

	Revenues	Costs	Equity
Dollar	90.0%	50.0%	20.0%
Emerging currencies	0.0%	0.0%	0.0%
Long-term global warming	50.0%	50.0%	20.0%

### Sales By Geography

Portugal	100.0%
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We address exposures (eg. how much of the turnover is exposed to the \$ ) rather than sensitivities (say, how much a 5% move in the \$ affects the bottom line). This is to make comparisons easier and provides useful tools when extracting relevant data. Actually, the subject is rather complex on the ground. The default position is one of an investor managing in €. An investor in £ will obviously not react to a £ based stock trading partly in € as would a € based investor. In addition, certain circumstances can prove difficult to unravel such as for eg. a € based investor confronted to a Swiss company reporting in \$ but with a quote in CHF... Sales exposure is probably straightforward but one has to be careful with deep cyclicals. Costs exposure is a bit less easy to determine (we do not allow for hedges as they can only be postponing the day of reckoning). How much of the equity is exposed to a given subject is rarely straightforward but can be quite telling. In addition, subjects are frequently intertwined. A \$ exposure may encompass all revenues in \$ pegged currencies and an emerging currency exposure is likely to include \$ pegged currencies as well. Exposure to global warming issues is frequently indirect and may require to stretch a bit imagination.

## Money Making

Ecoslops aims at being a high value-added player: it collects hydrocarbon residues and sells renewed fuels.

Ecoslops is a play on its ability to grow the volume of value-added products:

- 1) business development (expanding the asset base with new projects);
- 2) availability of slops;
- 3) smooth running of the plant;
- 4) commercial conditions in buying and collecting slops;
- 5) fuel product prices.

The company has climbed a steep learning curve during the ramp-up of its Sines plant. Such an engineering development and industrial optimisation have taken several years. Ecoslops is the only player mastering this know-how and is partnered with Heurtey Petrochem, the downstream engineering specialist.

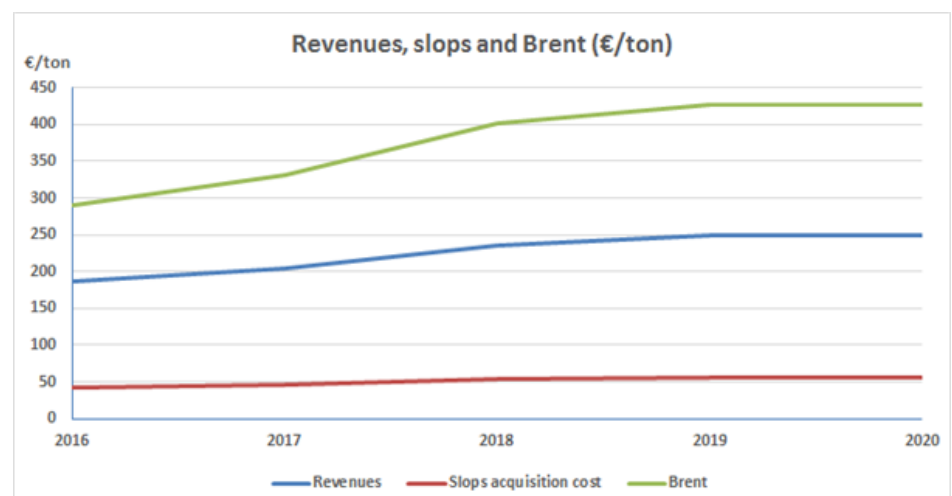
This, coupled with a track record (being able to show a successful project in operation), represents a strong moat and contributes to position Ecoslops as the solution of choice to the slops conundrum across global ports.

The effective roll-out of upcoming units should confirm Ecoslops's proposition and enhance its attractiveness, while benefiting from the acquired experience.

## P&L

We base our revenue estimates on the expected evolution of product prices, which is linked to AlphaValue's crude oil (Brent) price forecasts and on a standard product slate.

The price paid for slops is also affected by the oil price, in a non-linear manner: we assume a lesser sensitivity to oil at lower prices, as the slops are less of a convenient option for cement plants and steel mills to buy as heating fuel.



*Source: AlphaValue estimates*

EBITDA sensitivities to oil price for a standard size project (100t/day)								
Brent (\$/bbl)	45	50	55	60	65	70	75	80
EBITDA (€m)	2,1	2,4	2,7	3,0	3,3	3,6	4,0	4,5

Source: AlphaValue estimates

Opex depends on local economics affecting the cost structure of the project (e.g. likely different labour costs in Portugal vs. Marseille). We expect c.€2.5m for a standard unit. A larger plant offers economies of scale, as in the case of the Antwerp project, where nominal capacity is assumed at 200t/day.

Assuming Ecoslops is the only shareholder of projects (actual ownership structure may vary), the EBITDA should turn seamlessly into cash flow.

The profitability of its project depends on a number of variables, and most notably the price of oil, slops and oil products.

### Capex

A “standard” project of the size of Sines or Marseille (25-30kt / year) requires set-up investments of around €15m (or generally in a \$12-18m range).

The bulk of the investments should occur in 2019-21 (as we assume the build-up of two plants and some mini P2Rs).

We expect each P2R project to require six-twelve months of studies, 12 months for construction.

We allowed for the addition of 1 Mini P2R from 2020 and 2 in 2021 with capex at €3.5m per unit.

### Return on capital

Capacity ramp-up and estimates of Brent at \$70/bbl should result in a ROCE of around 25% in 2022. The ROE would stand at c. 40%, boosted by a 41% EBIT margin, 84% asset rotation and a 1.9x financial leverage.

### Divisional EBITDA/R

	12/18A	12/19E	12/20E	12/21E	Change 19E/18		Change 20E/19E	
					€th	of % total	€th	of % total
<b>Total</b>	<b>-380</b>	<b>278</b>	<b>1,736</b>	<b>7,424</b>	<b>658</b>	<b>100%</b>	<b>1,458</b>	<b>100%</b>
<b>Sines</b>	1,500	2,828	3,424	3,472	1,328	202%	596	41%
<b>Marseille</b>	0.00	-300	730	3,131	-300	-46%	1,030	71%
<b>ARA</b>	0.00	0.00	0.00	2,490	0	0%	0	0%
<b>Mini P2R projects</b>	0.00	0.00	333	1,331	0	0%	333	23%
Other/cancellations	-1,880	-2,250	-2,750	-3,000	-370	-56%	-500	-34%

### Divisional EBITDA/R margin

	12/18A	12/19E	12/20E	12/21E
<b>Total</b>	<b>-5.10%</b>	<b>2.66%</b>	<b>11.0%</b>	<b>21.0%</b>
<b>Sines</b>	20.1%	27.0%	30.3%	30.0%
<b>Marseille</b>			19.9%	32.6%
<b>ARA</b>				22.7%
<b>Mini P2R projects</b>			42.2%	42.2%

## Valuation

Ecoslops is a play on its ability to build and operate new projects and on the refining margin it can capture as it renews slops into fuels.

We expect the company to build three new plants (investing over 2019-21)

- Marseille (standard nominal capacity, i.e. 130 tons per day);
- Antwerp (larger, at 200t/d);
- For each Mini P2R (20t/d).

We then apply AlphaValue's deck of estimates on refined products and slops prices.

Our valuation approach to Ecoslops emphasises intrinsic methods: the DCF and the SOTP.

### SOTP

We value production units on an EV/EBITDA basis as the Sines plant's solid operations in 2018 highlight its effective cash generation; delivering top-line growth of 23% yoy despite only 9 months of real activity in 2018.

The same technique is used for projects in the pipeline as the technology is the same. The EV/EBITDA multiple is lower to recognise the time element.

The value associated with the Mini P2R units has been segregated in the NAV as it is likely to involve a different business model. Modelling the profits per Mini P2R unit has been discounted back at 12% as a dividend flow from the firm using the same assumptions in terms of product realisation prices as for the P2R. This works out as a NPV of €1.3m per unit, assuming ownership and an 80% debt funding at 8%. So that the first four units may well be worth a combined €5m. Like any modelling that looks like a licence to print money, it is better to wait for the prototype to deliver before going for more ambitious schemes.

### DCF

Our DCF is articulated around the company's plan to add two plants to its portfolio:

- stabilisation of Sines: the unit has climbed a steep learning curve up to 2017;
- starting the new projects with capex in 2019-21 amounting to €43m, and expanding mini P2R local sales and implantation;
- refining capacity ramp-up should result in runs at c. 210,000t/year in 2022.

Given the project's dependency on cash flows, we input our estimates on an annual basis until 2021. In the following years, the annualised growth rates applied to EBITDA and capex are geared solely to the existing visible capex plans (3 units + Mini P2R).

Our estimates are based on AlphaValue's expectations on commodity prices (Brent crude oil, fuel products and slops).

### Peers

The peers metrics are attributed a marginal weight in our valuation, as the company's projects are in their start-up stage or yet to be contracted.

We use a mix of pure refiners (Neste, which innovated on the refining theme, Saras and Hellenic Petroleum), Portuguese oil company (with a tilt on downstream) Galp Energia, and Acciona (renewable energy constitutes the core of profits for the Spanish player that operates wind farms).

### Valuation Summary

Benchmarks		Values (€)	Upside	Weight
DCF		19.8	73%	40%
NAV/SOTP per share		36.5	219%	40%
P/E	Peers	5.73	-50%	5%
EV/Ebitda	Peers	3.11	-73%	5%
P/Book	Peers	15.6	37%	5%
Dividend Yield	Peers	3.93	-66%	5%
<b>Target Price</b>		<b>23.9</b>	<b>109%</b>	

### Comparison based valuation

Computed on 18 month forecasts	P/E (x)	Ev/Ebitda (x)	P/Book (x)	Yield(%)
Peers ratios	22.5	10.3	2.53	3.12
Ecoslops's ratios	ns	17.3	1.85	1.07
Premium	0.00%	0.00%	0.00%	0.00%
<b>Default comparison based valuation (€)</b>	<b>5.73</b>	<b>3.11</b>	<b>15.6</b>	<b>3.93</b>
Neste	25.1	18.8	4.28	1.99
Galp Energia	23.0	6.86	2.34	7.08
Acciona	17.3	8.27	1.35	3.60
Hellenic Petroleum	12.5	5.19	0.62	3.19
Saras	14.4	3.01	0.54	3.83

## DCF Valuation Per Share

WACC	%	8.64	Avg net debt (cash) at book value	€th	20,737
PV of cashflow FY1-FY11	€th	114	Provisions	€th	187
FY11CF	€th	16,579	Unrecognised actuarial losses (gains)	€th	0.00
Normalised long-term growth "g"	%	2.00	Financial assets at market price	€th	0.00
ESG weighted "g"	%	1.95	Minorities interests (fair value)	€th	0.00
Terminal value	€th	247,648	Equity value	€th	87,272
PV terminal value	€th	108,083	Number of shares	Th	4,412
PV terminal value in % of total value	%	99.9	Implied equity value per share	€	19.8
Total PV	€th	108,197			

## Assessing The Cost Of Capital

Synthetic default risk free rate	%	3.50	Company debt spread	bp	600
Target equity risk premium	%	5.00	Marginal Company cost of debt	%	9.50
Tax advantage of debt finance (normalised)	%	30.0	<b>Company beta (leveraged)</b>	<b>x</b>	<b>1.13</b>
Average debt maturity	Year	5	Company gearing at market value	%	35.0
Sector asset beta	x	0.96	Company market gearing	%	25.9
Debt beta	x	1.20	<b>Required return on geared equity</b>	<b>%</b>	<b>9.17</b>
Market capitalisation	€th	50,481	Cost of debt	%	6.65
Net debt (cash) at book value	€th	17,677	<b>Cost of ungeared equity</b>	<b>%</b>	<b>8.29</b>
Net debt (cash) at market value	€th	13,198	WACC	%	8.64

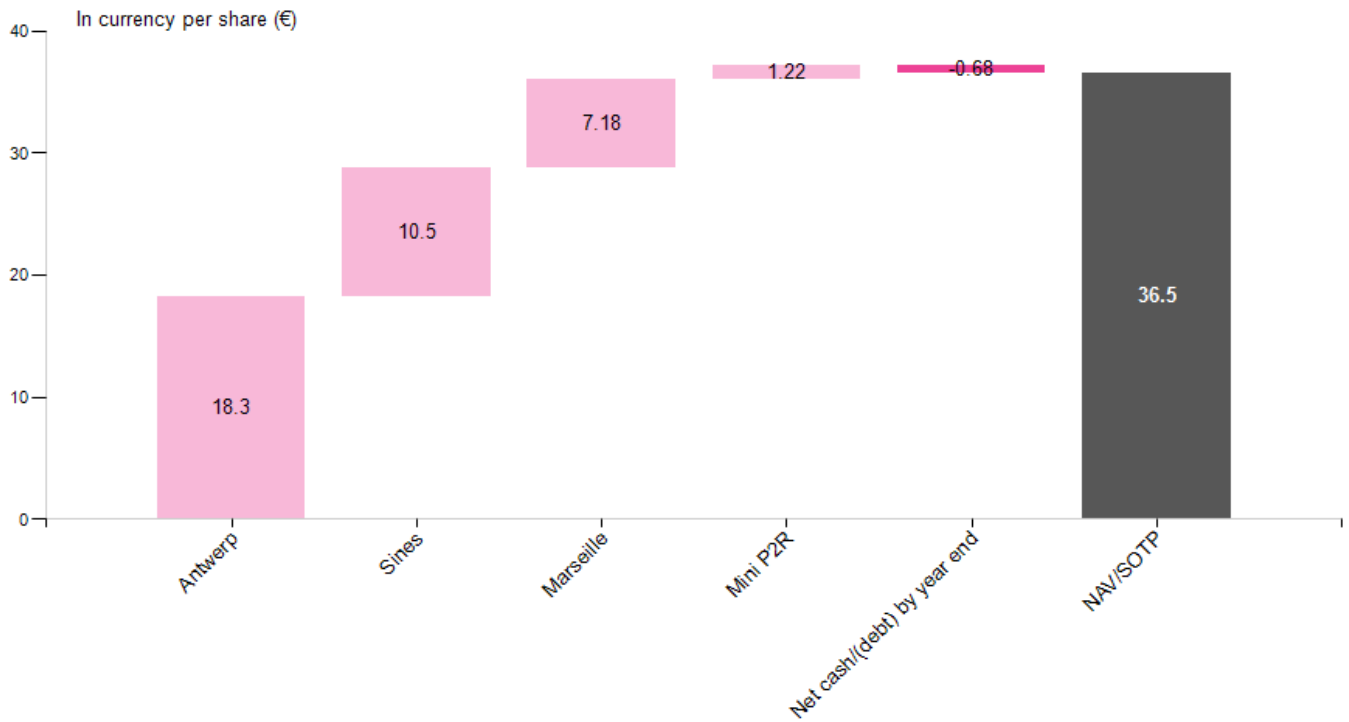
## DCF Calculation

		12/18A	12/19E	12/20E	12/21E	Growth	12/22E	12/29E
Sales	€th	7,449	10,454	15,745	35,308	12.0%	39,545	87,421
EBITDA	€th	-380	278	1,736	7,424	14.0%	8,464	21,178
EBITDA Margin	%	-5.10	2.66	11.0	21.0		21.4	24.2
Change in WCR	€th	-906	-226	-1,256	-3,302	0.00%	-3,302	-3,302
Total operating cash flows (pre tax)	€th	-1,608	158	481	4,122		5,162	17,876
Corporate tax	€th	330	668	668	262	0.00%	262	262
<b>Net tax shield</b>	<b>€th</b>	<b>-87.1</b>	<b>-191</b>	<b>-370</b>	<b>-401</b>	<b>0.00%</b>	<b>-401</b>	<b>-401</b>
Capital expenditure	€th	-2,672	-	-	-	-25.0%	-	-1,484
Capex/Sales	%	-35.9	-143	-78.6	-42.0		-28.1	-1.70
Pre financing costs FCF (for DCF purposes)	€th	-4,037	-	-	-		-6,093	16,254
Various add backs (incl. R&D, etc.) for DCF purposes	€th							
<b>Free cash flow adjusted</b>	<b>€th</b>	<b>-4,037</b>	<b>14,286</b>	<b>11,593</b>	<b>10,838</b>		<b>-6,093</b>	<b>16,254</b>
<b>Discounted free cash flows</b>	<b>€th</b>	<b>-4,037</b>	<b>14,286</b>	<b>10,671</b>	<b>-9,182</b>		<b>-4,752</b>	<b>7,094</b>
Invested capital	€	20.2	34.2	44.8	58.6		44.0	5.87



## NAV/SOTP Calculation

	% owned	Valuation technique	Multiple used	Valuation at 100% (€th)	Stake valuation (€th)	In currency per share (€)	% of gross assets
Antwerp	100%	EV/EBITDA	6.2	80,600	80,600	18.3	49.1%
Sines	100%	EV/EBITDA	7.5	46,500	46,500	10.5	28.3%
Marseille	75.0%	EV/EBITDA	6.5	42,250	31,688	7.18	19.3%
Mini P2R	100%	DCF		5,400	5,400	1.22	3.29%
Other							
<b>Total gross assets</b>					<b>164,188</b>	<b>37.2</b>	<b>100%</b>
Net cash/(debt) by year end					-2,980	-0.68	-1.81%
Commitments to pay					0.00	0.00	0.00%
Commitments received							
NAV/SOTP					161,208	36.5	98.2%
<b>Number of shares net of treasury shares - year end (Th)</b>					<b>4,412</b>		
<b>NAV/SOTP per share (€)</b>						<b>36.5</b>	
<b>Current discount to NAV/SOTP (%)</b>						<b>68.7</b>	



## Debt

Ecoslops issued a €5.5m ORNANE convertible bond in February 2016. The options were exercised by September 2017.

We expect the group to structure its next projects through ad-hoc subsidiaries, with a mix of 60% bank debt (either at the group or subsidiary level), 15% mezzanine funds and 25% equity.

Ecoslops issued new equity in October 2017 to fund its development: €4.98m at €13.0 per share (a 21.2% discount vs. the closing price of the day before the capital increase was announced). The capital increase received strong demand (213% subscription rate).

Following the approval of an €18m loan by the European Investment Bank in February 2019, and with the first tranche of €10m arriving in mid-2019, the company now has sufficient resources to fund new projects, eliminating the need for further capital increases in the near future.

Ecoslops could associate with equity partners at the subsidiary level, in the same way as the announcement in April 2019 with Total acquiring a 25% stake in Ecoslops Provence (the Ecoslops' subsidiary charged with operating the La Mède complex project). However, we do not include this in our estimates for future projects. Anyway, project launches should entail an increase in the group's complexity including, quite possibly, the introduction of joint ventures.

Ecoslops should issue around €30m of project debt over 2020-21.

Detailed financials at the end of this report

### Funding - Liquidity

		12/18A	12/19E	12/20E	12/21E
EBITDA	€th	-380	278	1,736	7,424
Funds from operations (FFO)	€th	-679	415	1,171	6,351
<b>Ordinary shareholders' equity</b>	<b>€th</b>	<b>22,418</b>	<b>21,561</b>	<b>26,111</b>	<b>28,012</b>
Gross debt	€th	12,500	22,215	42,580	44,585
+ Gross Cash	€th	9,520	4,538	18,782	8,909
<b>= Net debt / (cash)</b>	<b>€th</b>	<b>2,980</b>	<b>17,677</b>	<b>23,798</b>	<b>35,676</b>
Gearing (at book value)	%	9.81	47.9	79.4	106
Adj. Net debt/EBITDA(R)	x	-7.84	63.6	13.7	4.81
Adjusted Gross Debt/EBITDA(R)	x	-33.3	80.6	24.6	6.03
Adj. gross debt/(Adj. gross debt+Equity)	%	36.0	51.0	62.1	61.5
Ebit cover	x	-5.59	-1.53	-0.99	2.31
FFO/Gross Debt	%	-5.37	1.85	2.74	14.2
FFO/Net debt	%	-22.8	2.35	4.92	17.8
FCF/Adj. gross debt (%)	%	-33.6	-65.8	-29.1	-26.3
(Gross cash+ "cash" FCF+undrawn)/ST debt	x	0.88	-1.70	1.05	-0.48
"Cash" FCF/ST debt	x	-0.71	-2.46	-2.08	-1.96

## Worth Knowing

### Ecoslops' history

Ecoslops' Petroleum Residue Recycling (P2R) process was co-invented by Michel Pingeot (at the time Chairman of Heurtey Petrochem), Jean-Claude Company and Pascal Bonfils. The engineering, tests and feasibility studies from 2006 to 2009 led to the setting up of a pilot plant on a 1:42 scale.

Ecoslops was founded in 2010 to deploy the technology on an industrial scale.

In 2012, the company signed a 15-year sub-concession contract in Sines (Portugal) with port utilities provider CLT (subsidiary of Galp Energia). In 2013, the group started to build its industrial-scale plant – first product sales were in 2015.

In 2016, Ecoslops and Total signed an agreement to implant on the site of Total La Mède, a refining unit facility to regenerate hydrocarbon residues stemming from sea transport.

In 2017, Ecoslops signed a Memorandum of Understanding with the Suez Canal Economic Zone for the realisation of a detailed feasibility study (statutory, technical, financial and commercial aspects of the project) which should be finalised in mid-2019. It has close relationships and support from French authorities to fulfill its goal.

### Fuel oil

Fuel oil can be categorised into three groups:

- LFO (Light Fuel Oil): used by some small engines or vessels in environmentally-sensitive areas. It is a light distillate and looks clear and bright. It is a residue-free clean fuel.
- HGO (Heavy Gasoil) may contain residue fuel in small amounts and looks dark or black.
- IFO (Intermediate Fuel Oil), more viscous than Light Fuel Oil. The product's name varies based on the company. Maximum viscosity at 50°C is usually referred to as "IF"; hence, for instance, IFO180 has maximum viscosity of 180 centistocks at 50°C. These residual, more viscous, fuels are cheap and abundant and used in large diesel engines.

### Shareholders

Name	% owned	Of which % voting rights	Of which % free to float
J4A Holdings II	10.9%	10.9%	0.00%
Gemmes Ventures	8.88%	8.88%	0.00%
BNP Paribas Developpement	7.79%	7.79%	0.00%
Pingeot Family	6.79%	6.79%	0.00%
Favier Family	5.10%	5.10%	0.00%
soprema	3.00%	3.00%	3.00%
<b>Apparent free float</b>			<b>60.5%</b>

## Governance & Management

The Board of Directors blends operational and strategic know-how, providing a material contribution to both the business development and risk management capabilities of the group.

Independent members have backgrounds in project management and financing, long-standing relationships with public institutions (both domestic and European) and sector knowledge in the Oil & Gas downstream space.

### Governance score

Company (Sector)



4.8 (6.7)

Independent board










Yes

Parameters	Company	Sector	Score	Weight
Number of board members	9	11	8/10	5.0%
Board feminization (%)	0	31	1/10	5.0%
Board domestic density (%)	88	66	3/10	10.0%
Average age of board's members	N/A	61	0/10	5.0%
Type of company : Small cap, controlled			4/10	10.0%
Independent directors rate (%)	55	42	6/10	20.0%
One share, one vote			✓	10.0%
Chairman vs. Executive split			✗	0.0%
Chairman not ex executive			✗	5.0%
Full disclosure on mgt pay			✗	5.0%
Disclosure of performance anchor for bonus trigger			✗	5.0%
Compensation committee reporting to board of directors			✗	5.0%
Straightforward, clean by-laws			✓	15.0%
<b>Governance score</b>			<b>4.8/10</b>	<b>100.0%</b>

### Management

Name	Function	Birth date	Date in	Date out	Compensation, in k€ (year)	
					Cash	Equity linked
Vincent FAVIER	M  CEO		2015		(2018)	(2018)
Pascal BONFILS	M  Senior Executive		2010		(2018)	(2018)
Sophie DUFOSSÉ	F  Senior Executive		2012		(2018)	(2018)

### Board of Directors

Name	Indep.	Function	Completion of current mandate	Birth date	Date in	Date out	Fees / indemnity, in k€ (year)	Value of holding, in k€ (year)
Vincent FAVIER	M  ✗	President/Chairman of th...	2022		2015		(2018)	
Pierre-Etienne BINDSCHEDLER	M  ✗	Member	2018		2016			
Jean-Claude COMPANY	M  ✓	Member	2018		2010		(2018)	
Olivier FORTESA	M  ✗	Member	2019		2014			
Pascal FOULON	M  ✓	Member	2019		2015			
Lionel HENRY	M  ✓	Member	2020		2015			
Mark INCH	M  ✓	Member	2018		2015			
Olivier LE BIHAN	M  ✓	Member	2018		2015			
Philippe MONNOT	M  ✗	Member	2018		2010			

## Social

Company (Sector)

# 5.7

(6.0)

### Quantitative metrics (67%)

Set of staff related numerical metrics available in AlphaValue proprietary modelling aimed at ranking on social/HR matters

Parameters	Score	Weight
Staffing Trend	9/10	20%
Average wage trend	7/10	35%
Share of added value taken up by staff cost	1/10	25%
Share of added value taken up by taxes	1/10	20%
Wage dispersion trend	0/10	0%
Pension bonus (0 or 1)	0	
<b>Quantitative score</b>	<b>4.7/10</b>	<b>100%</b>

### Qualitative metrics (33%)

Set of listed qualitative criterias and for the analyst to tick

Parameters	Score	Weight
Accidents at work	10/10	25%
Human resources development	6/10	35%
Pay	7/10	20%
Job satisfaction	7/10	10%
Internal communication	10/10	10%
<b>Qualitative score</b>	<b>7.7/10</b>	<b>100%</b>

AlphaValue analysts tick boxes on essential components of the social/HR corporate life. Decision about ticking Yes or No is very much an assessment that combines the corporate's communication on relevant issue and the analyst's better judgment from experience.

### Qualitative score

Parameters	Yes  / No 	Weight
<b>Accidents at work</b>		<b>25%</b>
Set targets for work safety on all group sites?		10.0%
Are accidents at work declining?		15.0%
<b>Human resources development</b>		<b>35%</b>
Are competences required to meet medium term targets identified?		3.5%
Is there a medium term (2 to 5 years) recruitment plan?		3.5%
Is there a training strategy tuned to the company objectives?		3.5%
Are employees trained for tomorrow's objectives?		3.5%
Can all employees have access to training?		3.5%
Has the corporate avoided large restructuring lay-offs over the last year to date?		3.5%
Have key competences stayed?		3.5%
Are managers given managerial objectives?		3.5%
If yes, are managerial results a deciding factor when assessing compensation level?		3.5%
Is mobility encouraged between operating units of the group?		3.5%
<b>Pay</b>		<b>20%</b>
Is there a compensation committee?		6.0%
Is employees' performance combining group AND individual performance?		14.0%
<b>Job satisfaction</b>		<b>10%</b>
Is there a measure of job satisfaction?		3.3%
Can anyone participate ?		3.4%
Are there action plans to prop up employees' morale?		3.3%
<b>Internal communication</b>		<b>10%</b>
Are strategy and objectives made available to every employee?		10.0%
<b>Qualitative score</b>	<b>7.7/10</b>	<b>100.0%</b>

## Staff & Pension matters

The company employed 49 people in 2017, of whom 42 in Portugal. We expect the group to raise its overall headcount as it adds new units to its portfolio, while it constantly adapts to keep opex in check.

## Recent updates

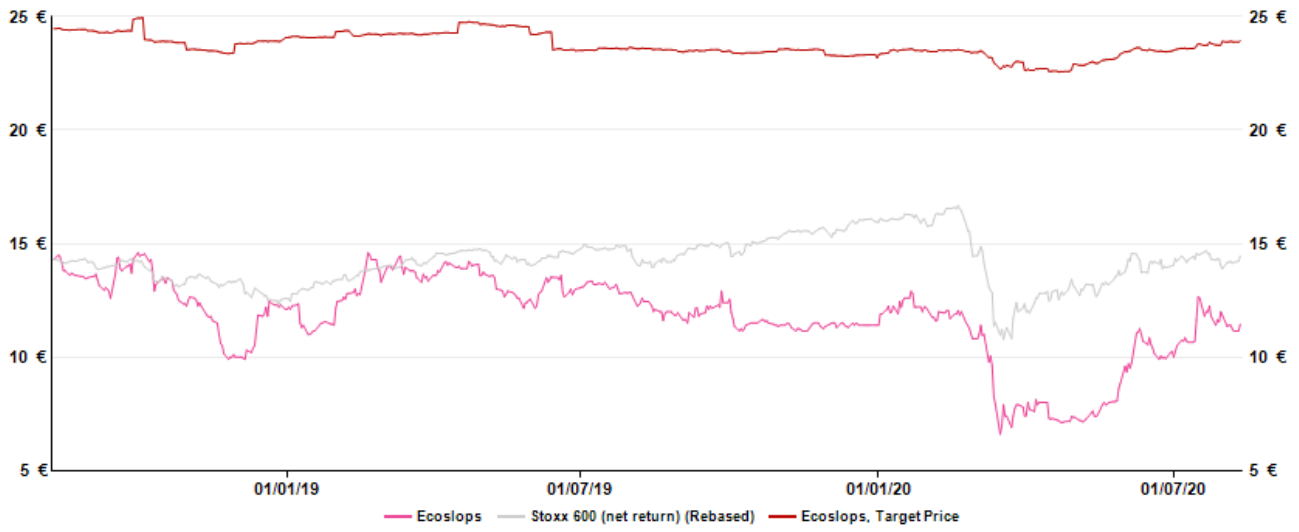
26/09/2019

### Marginal changes to our DCF following the H1 19 release

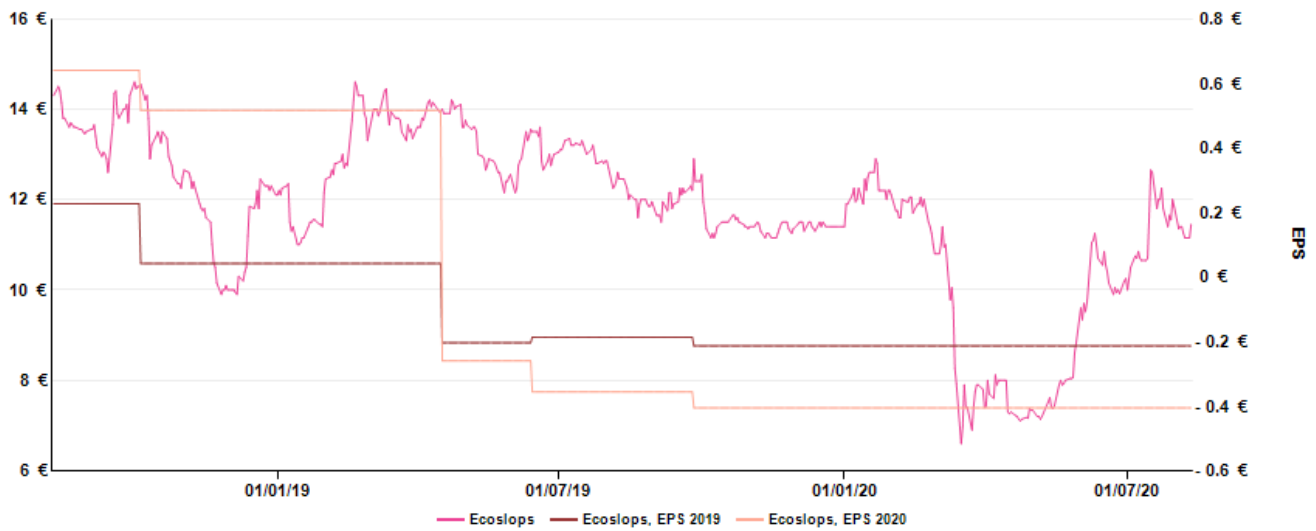
<b>Change in EPS</b>	2019 : € -0.21 vs -0.19	ns
	2020 : € -0.41 vs -0.36	ns

Minor adjustments to our estimates to: 1/ account for the reduced ASP/t during the first half due to lower € Brent prices, and 2/ push back the expected entry into operation of the Marseille refining unit from H1 20 to H2 20. The changes have a limited impact on our EPS estimates and thus a marginal change in our target price.

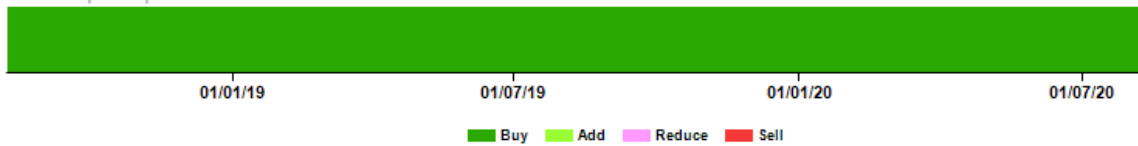
## Stock Price and Target Price



## Earnings Per Share & Opinion

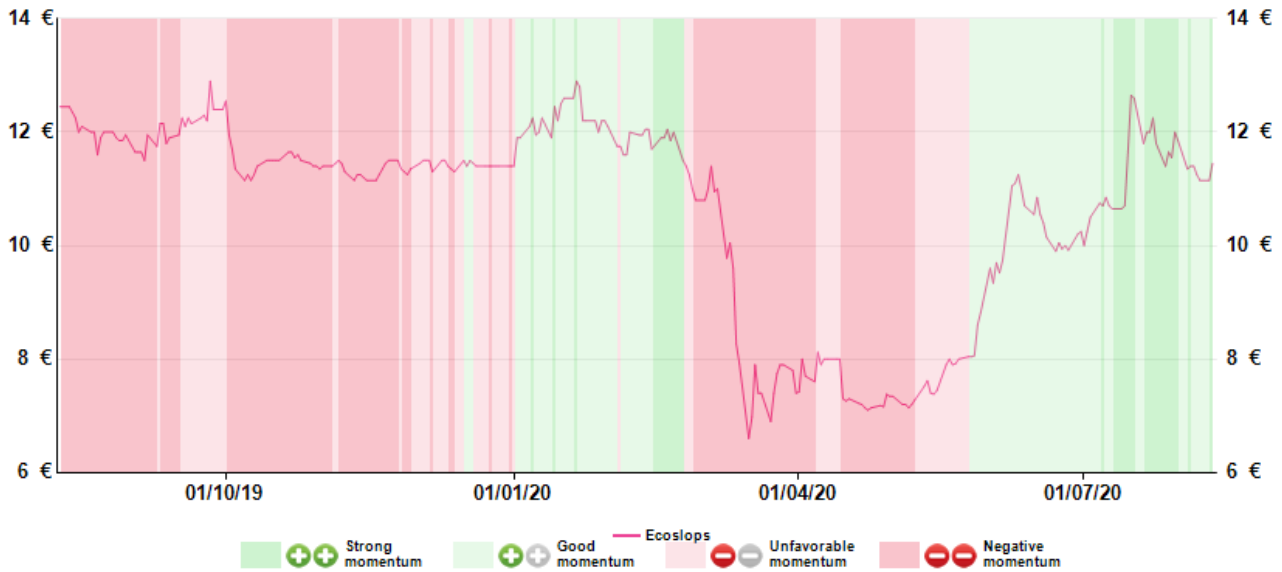


### Ecoslops : Opinion





## Momentum





Momentum analysis consists in evaluating the stock market trend of a given financial instrument, based on the analysis of its trading flows.


The main indicators used in our momentum tool are simple moving averages over three time frames: short term (20 trading days), medium term (50 days) and long term (150 days). The positioning of these moving averages relative to each other gives us the direction of the flows over these time frames.


For example, if the short and medium-term moving averages are above the long-term moving average, this suggests an uptrend which will need to be confirmed. Attention is also paid to the latest stock price relative to the three moving averages (advance indicator) as well as to the trend in these three moving averages - downtrend, neutral, uptrend - which is more of a lagging indicator.

The trend indications derived from the flows through moving averages and stock prices must be confirmed against trading volumes in order to confirm the signal. This is provided by a calculation based on the average increase in volumes over ten weeks together with a buy/sell volume ratio.

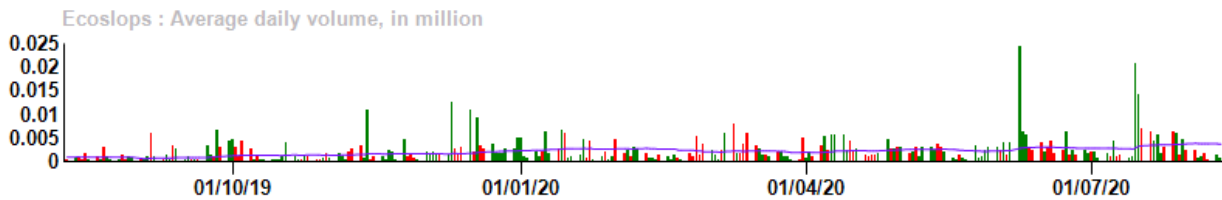
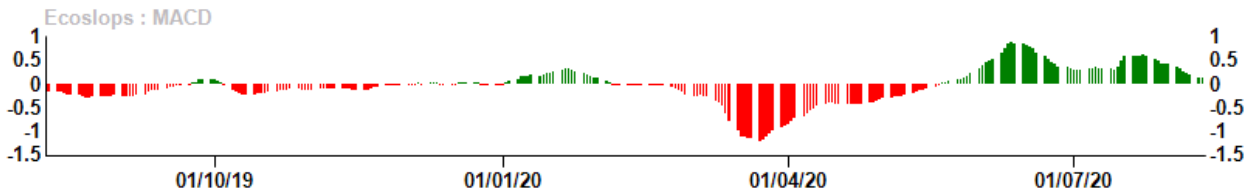
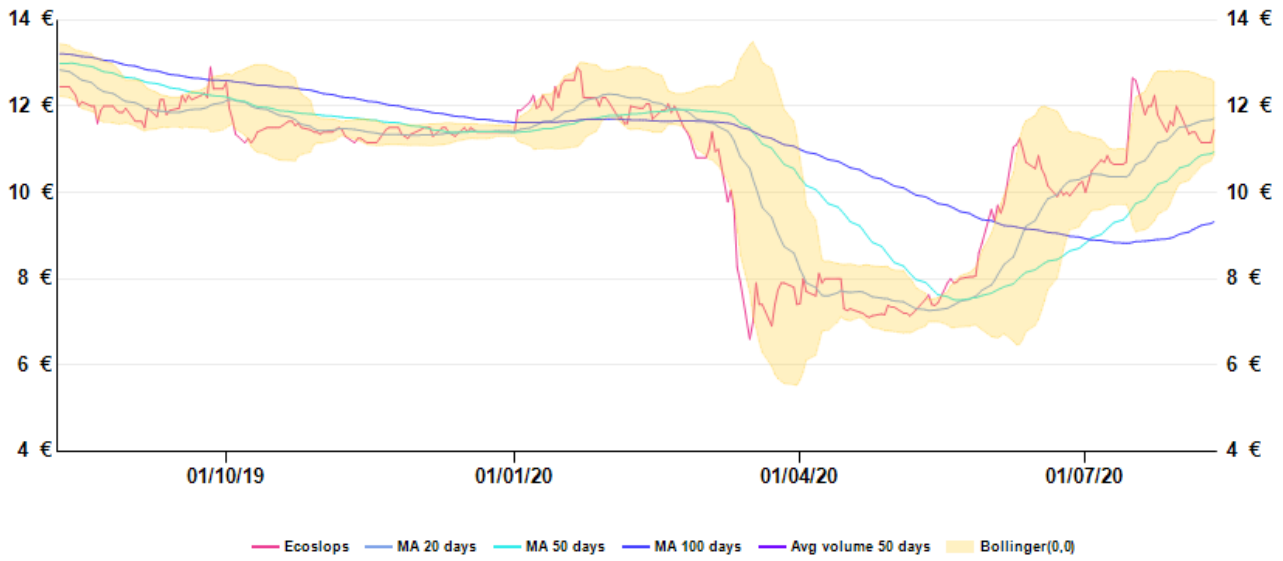
 : Strong momentum corresponding to a continuous and overall positive moving average trend confirmed by volumes

 : Relatively good momentum corresponding to a positively-oriented moving average, but offset by an overbought pattern or lack of confirmation from volumes

 : Relatively unfavorable momentum with a neutral or negative moving average trend, but offset by an oversold pattern or lack of confirmation from volumes

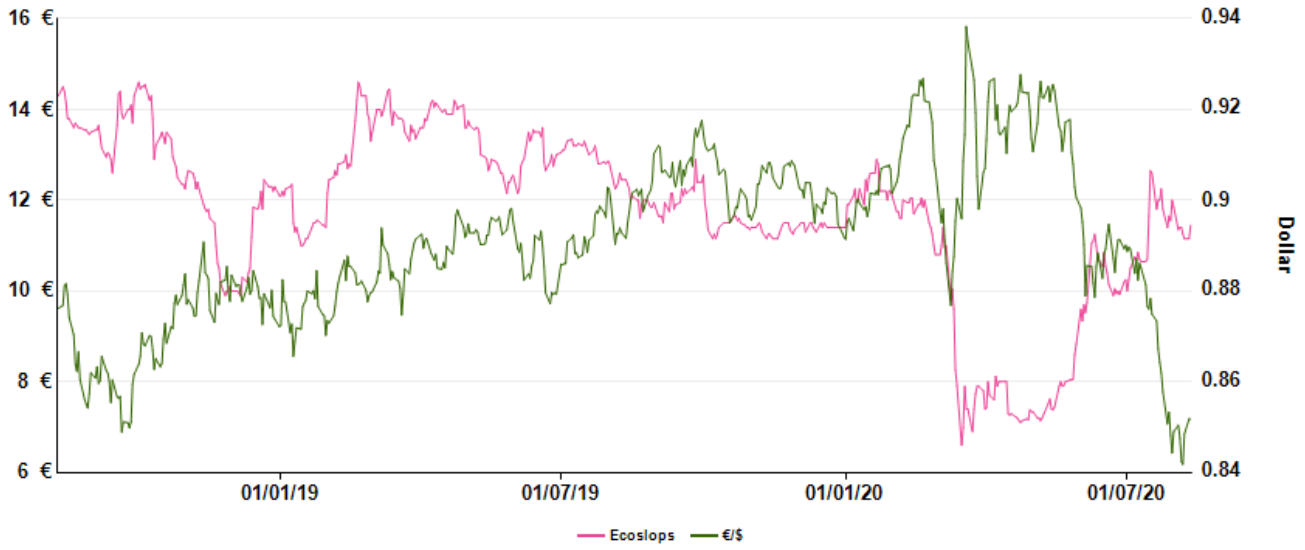
 : Strongly negative momentum corresponding to a continuous and overall negative moving average trend confirmed by volumes

## Moving Average MACD & Volume

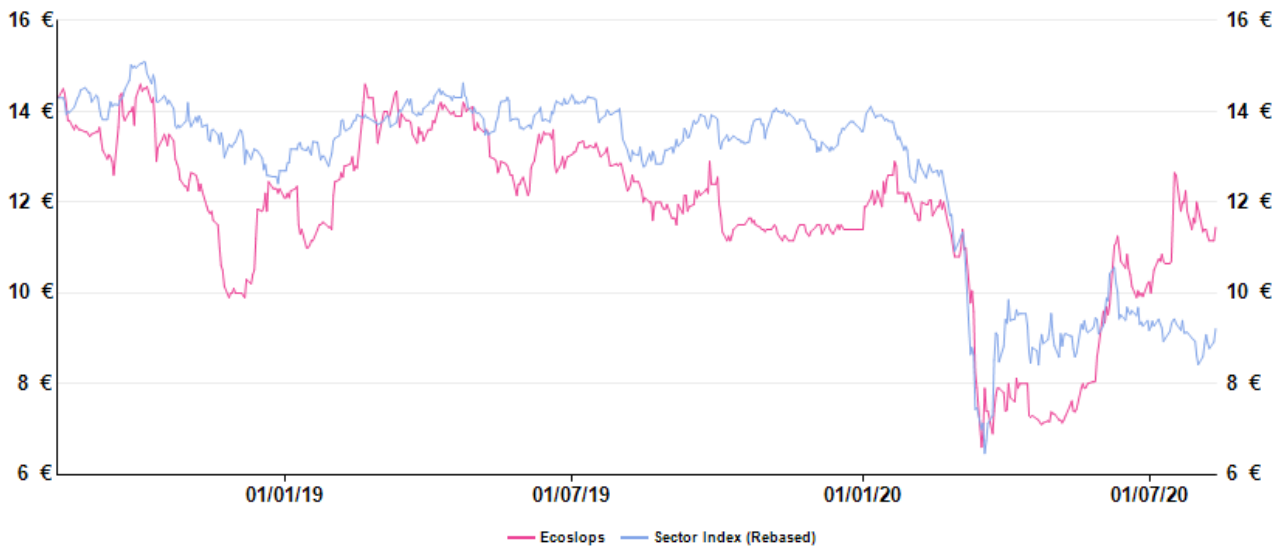


# Ecoslops (Buy)

## €/\$ sensitivity



## Sector Oils



## Detailed Financials

### Valuation Key Data

		12/18A	12/19E	12/20E	12/21E
Adjusted P/E	x	-35.7	ns	-28.3	25.2
Reported P/E	x	-35.5	-60.3	-28.3	25.2
EV/EBITDA(R)	x	ns	ns	42.9	13.5
P/Book	x	2.45	2.63	1.93	1.80
Dividend yield	%	0.00	0.00	0.00	1.75
Free cash flow yield	%	-7.72	-26.0	-24.7	-23.3
Average stock price	€	12.5	12.9	11.5	11.5

### Consolidated P&L

		12/18A	12/19E	12/20E	12/21E
Sales	€th	7,449	10,454	15,745	35,308
Sales growth	%	22.5	40.3	50.6	124
Sales per employee	€th	152	205	207	388
Organic change in sales	%				
Purchases and external costs (incl. IT)	€th				
Staff costs	€th	-2,676	-2,785	-4,150	-4,970
Operating lease payments	€th				
Cost of sales/COGS (indicative)	€th	-5,088	-7,926	-11,338	-24,884
EBITDA	€th	-380	278	1,736	7,424
EBITDA(R)	€th	-380	278	1,736	7,424
EBITDA(R) margin	%	-5.10	2.66	11.0	21.0
EBITDA(R) per employee	€th	-7.76	5.45	22.8	81.6
Depreciation	€th	-1,205	-1,249	-2,956	-4,345
Depreciations/Sales	%	16.2	12.0	18.8	12.3
Amortisation	€th				
Additions to provisions	€th	-38.5	0.00	0.00	0.00
Underlying operating profit	€th	-1,623	-972	-1,220	3,079
Underlying operating margin	%	-21.8	-9.29	-7.75	8.72
Other income/expense (cash)	€th				
Other inc./ exp. (non cash; incl. assets revaluation)	€th				
Earnings from joint venture(s)	€th				
Impairment charges/goodwill amortisation	€th				
Operating profit (EBIT)	€th	-1,623	-972	-1,220	3,079
Interest expenses	€th	-335	-637	-1,234	-1,335
of which effectively paid cash interest expenses	€th	-307	-637	-1,234	-1,335
Financial income	€th	20.0	0.00	0.00	0.00
Other financial income (expense)	€th	25.0	0.00	0.00	0.00
Net financial expenses	€th	-290	-637	-1,234	-1,335
of which related to pensions	€th		0.00	0.00	0.00
Pre-tax profit before exceptional items	€th	-1,914	-1,609	-2,454	1,744
Exceptional items and other (before taxes)	€th	36.0	0.00	0.00	0.00
of which cash (cost) from exceptionals	€th				
Current tax	€th	-29.7	-29.7	-29.7	-436
Impact of tax loss carry forward	€th	398	398	398	398
Deferred tax	€th	-38.4	300	300	300
Corporate tax	€th	330	668	668	262
Tax rate	%	17.2	41.5	27.2	-15.0
Net margin	%	-21.3	-9.00	-11.3	5.68
Equity associates	€th	0.00	0.00	0.00	0.00
Actual dividends received from equity holdings	€th				
Minority interests	€th	0.00	0.00	0.00	0.00
Actual dividends paid out to minorities	€th				
Income from discontinued operations	€th				

## Ecoslops (Buy)

Attributable net profit	€th	-1,548	-940	-1,785	2,006
Impairment charges/goodwill amortisation	€th	0.00	0.00	0.00	0.00
Other adjustments	€th				
<b>Adjusted attributable net profit</b>	<b>€th</b>	<b>-1,548</b>	<b>-940</b>	<b>-1,785</b>	<b>2,006</b>
Interest expense savings	€th				
<b>Fully diluted adjusted attr. net profit</b>	<b>€th</b>	<b>-1,548</b>	<b>-940</b>	<b>-1,785</b>	<b>2,006</b>
<b>NOPAT</b>	<b>€th</b>	<b>-1,136</b>	<b>-680</b>	<b>-854</b>	<b>2,156</b>

**Cashflow Statement**

		<b>12/18A</b>	<b>12/19E</b>	<b>12/20E</b>	<b>12/21E</b>
<b>EBITDA</b>	<b>€th</b>	<b>-380</b>	<b>278</b>	<b>1,736</b>	<b>7,424</b>
<b>Change in WCR</b>	<b>€th</b>	<b>-906</b>	<b>-226</b>	<b>-1,256</b>	<b>-3,302</b>
<i>of which (increases)/decr. in receivables</i>	<i>€th</i>	<i>-594</i>	<i>-95.8</i>	<i>-1,277</i>	<i>-3,359</i>
<i>of which (increases)/decr. in inventories</i>	<i>€th</i>	<i>-978</i>	<i>595</i>	<i>-681</i>	<i>-1,790</i>
<i>of which increases/(decr.) in payables</i>	<i>€th</i>	<i>666</i>	<i>-724</i>	<i>702</i>	<i>1,847</i>
<i>of which increases/(decr.) in other curr. liab.</i>	<i>€th</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
Actual dividends received from equity holdings	€th	0.00	0.00	0.00	0.00
Paid taxes	€th	0.00	668	668	262
Exceptional items	€th	0.00	0.00	0.00	0.00
Other operating cash flows	€th	8.07	106	0.00	0.00
<b>Total operating cash flows</b>	<b>€th</b>	<b>-1,278</b>	<b>827</b>	<b>1,149</b>	<b>4,384</b>
<b>Capital expenditure</b>	<b>€th</b>	<b>-2,672</b>	<b>-14,922</b>	<b>-12,372</b>	<b>-14,822</b>
<i>Capex as a % of depreciation &amp; amort.</i>	<i>%</i>	<i>222</i>	<i>1,194</i>	<i>418</i>	<i>341</i>
<b>Net investments in shares</b>	<b>€th</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Other investment flows	€th	0.00	0.00	0.00	0.00
<b>Total investment flows</b>	<b>€th</b>	<b>-2,672</b>	<b>-14,922</b>	<b>-12,372</b>	<b>-14,822</b>
Net interest expense	€th	-290	-637	-1,234	-1,335
<i>of which cash interest expense</i>	<i>€th</i>	<i>-307</i>	<i>-637</i>	<i>-1,234</i>	<i>-1,335</i>
<b>Dividends (parent company)</b>	<b>€th</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>-200</b>
Dividends to minorities interests	€th	0.00	0.00	0.00	0.00
<b>New shareholders' equity</b>	<b>€th</b>	<b>176</b>	<b>35.1</b>	<b>6,335</b>	<b>94.5</b>
<i>of which (acquisition) release of treasury shares</i>	<i>€th</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
(Increase)/decrease in net debt position	€th	661	9,715	20,365	2,006
Other financial flows	€th	-190	0.00	0.00	0.00
<b>Total financial flows</b>	<b>€th</b>	<b>340</b>	<b>9,113</b>	<b>25,467</b>	<b>565</b>
Change in scope of consolidation, exchange rates & other	€th	0.00	0.00	0.00	0.00
Change in cash position	€th	-3,609	-4,982	14,244	-9,873
Change in net debt position	€th	-4,271	-14,697	-6,121	-11,878
<b>Free cash flow (pre div.)</b>	<b>€th</b>	<b>-4,240</b>	<b>-14,732</b>	<b>-12,456</b>	<b>-11,773</b>
<b>Operating cash flow (clean)</b>	<b>€th</b>	<b>-1,278</b>	<b>827</b>	<b>1,149</b>	<b>4,384</b>
<b>Reinvestment rate (capex/tangible fixed assets)</b>	<b>%</b>	<b>14.5</b>	<b>46.3</b>	<b>29.7</b>	<b>28.4</b>

**Balance Sheet**

		12/18A	12/19E	12/20E	12/21E
Capitalised R&D	€th	0.00	0.00	0.00	0.00
<b>Goodwill</b>	<b>€th</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Contracts & Rights (incl. concession) intangible assets	€th	0.00	0.00	0.00	0.00
Other intangible assets	€th	372	372	372	372
<b>Total intangible</b>	<b>€th</b>	<b>372</b>	<b>372</b>	<b>372</b>	<b>372</b>
<b>Tangible fixed assets</b>	<b>€th</b>	<b>18,479</b>	<b>32,207</b>	<b>41,623</b>	<b>52,100</b>
Financial fixed assets (part of group strategy)	€th	0.00	0.00	0.00	0.00
Financial hedges (LT derivatives)	€th	0.00	0.00	0.00	0.00
Other financial assets (investment purpose mainly)	€th	2,253	2,253	2,253	2,253
<i>of which available for sale</i>	€th	0.00	0.00	0.00	0.00
<b>WCR</b>	<b>€th</b>	<b>1,371</b>	<b>1,597</b>	<b>2,853</b>	<b>6,155</b>
<i>of which trade &amp; receivables (+)</i>	€th	1,529	1,625	2,902	6,261
<i>of which inventories (+)</i>	€th	1,460	866	1,546	3,337
<i>of which payables (+)</i>	€th	1,618	893	1,596	3,443
<i>of which other current liabilities (+)</i>	€th	0.00	0.00	0.00	0.00
Other current assets	€th	3,701	3,701	3,701	3,701
<i>of which tax assets (+)</i>	€th	1,929	1,929	1,929	1,929
<b>Total assets (net of short term liabilities)</b>	<b>€th</b>	<b>26,176</b>	<b>40,129</b>	<b>50,801</b>	<b>64,580</b>
<b>Ordinary shareholders' equity (group share)</b>	<b>€th</b>	<b>22,418</b>	<b>21,561</b>	<b>26,111</b>	<b>28,012</b>
Quasi Equity & Preferred	€th	0.00	0.00	0.00	0.00
Minority interests	€th	0.00	0.00	0.00	0.00
<b>Provisions for pensions</b>	<b>€th</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Other provisions for risks and liabilities	€th	135	187	187	187
Deferred tax liabilities	€th	0.00	0.00	0.00	0.00
Other liabilities	€th	643	705	705	705
<b>Net debt / (cash)</b>	<b>€th</b>	<b>2,980</b>	<b>17,677</b>	<b>23,798</b>	<b>35,676</b>
<b>Total liabilities and shareholders' equity</b>	<b>€th</b>	<b>26,176</b>	<b>40,129</b>	<b>50,801</b>	<b>64,580</b>
<b>Average net debt / (cash)</b>	<b>€th</b>	<b>2,199</b>	<b>10,328</b>	<b>20,737</b>	<b>29,737</b>

**EV Calculations**

		12/18A	12/19E	12/20E	12/21E
<b>EV/EBITDA(R)</b>	<b>x</b>	<b>ns</b>	<b>ns</b>	<b>42.9</b>	<b>13.5</b>
<b>EV/EBIT (underlying profit)</b>	<b>x</b>	<b>-35.8</b>	<b>-76.8</b>	<b>-61.0</b>	<b>32.6</b>
<b>EV/Sales</b>	<b>x</b>	<b>7.79</b>	<b>7.14</b>	<b>4.73</b>	<b>2.84</b>
EV/Invested capital	x	2.87	2.18	1.66	1.71
Market cap	€th	54,928	56,748	50,481	50,558
+ Provisions (including pensions)	€th	135	187	187	187
+ Unrecognised actuarial losses/(gains)	€th	0.00	0.00	0.00	0.00
+ Net debt at year end	€th	2,980	17,677	23,798	35,676
+ Leases debt equivalent	€th	0.00	0.00	0.00	0.00
- Financial fixed assets (fair value) & Others	€th			(1)	
+ Minority interests (fair value)	€th		(1)	(1)	14,000
<b>= Enterprise Value</b>	<b>€th</b>	<b>58,042</b>	<b>74,612</b>	<b>74,466</b>	<b>100,422</b>

1. Rough guess about the weight of the minority financing of the Marseilles unit.

## Per Share Data

		12/18A	12/19E	12/20E	12/21E
<b>Adjusted EPS (bfr goodwill amort. &amp; dil.)</b>	€	<b>-0.35</b>	<b>-0.21</b>	<b>-0.41</b>	<b>0.45</b>
<i>Growth in EPS</i>	%	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Reported EPS	€	-0.35	-0.21	-0.40	0.45
<b>Net dividend per share</b>	€	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.20</b>
Free cash flow per share	€	-0.96	-3.35	-2.83	-2.67
Operating cash flow per share	€	-0.29	0.19	0.26	0.99
Book value per share	€	5.09	4.90	5.92	6.34
<b>Number of ordinary shares</b>	Th	<b>4,400</b>	<b>4,403</b>	<b>4,409</b>	<b>4,416</b>
Number of equivalent ordinary shares (year end)	Th	4,400	4,403	4,409	4,416
Number of shares market cap.	Th	4,382	4,403	4,409	4,416
Treasury stock (year end)	Th	0.00	0.00	0.00	0.00
Number of shares net of treasury stock (year end)	Th	4,400	4,403	4,409	4,416
<b>Number of common shares (average)</b>	Th	<b>4,391</b>	<b>4,402</b>	<b>4,406</b>	<b>4,412</b>
Conversion of debt instruments into equity	Th	0.00	0.00	0.00	0.00
Settlement of cashable stock options	Th	0.00	0.00	0.00	0.00
Probable settlement of non mature stock options	Th	0.00	0.00	0.00	0.00
Other commitments to issue new shares	Th	0.00	0.00	0.00	0.00
Increase in shares outstanding (average)	Th	34.8	0.00	0.00	0.00
<b>Number of diluted shares (average)</b>	Th	<b>4,426</b>	<b>4,402</b>	<b>4,406</b>	<b>4,412</b>
Goodwill per share (diluted)	€	0.00	0.00	0.00	0.00
EPS after goodwill amortisation (diluted)	€	-0.35	-0.21	-0.41	0.45
EPS before goodwill amortisation (non-diluted)	€	-0.35	-0.21	-0.41	0.45
Actual payment	€				
	%	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>44.0</b>
<b>Capital payout ratio (div +share buy back/net income)</b>	%	<b>0.00</b>	<b>0.00</b>	<b>-11.2</b>	

<b>Funding - Liquidity</b>		<b>12/18A</b>	<b>12/19E</b>	<b>12/20E</b>	<b>12/21E</b>
EBITDA	€th	-380	278	1,736	7,424
Funds from operations (FFO)	€th	-679	415	1,171	6,351
<b>Ordinary shareholders' equity</b>	<b>€th</b>	<b>22,418</b>	<b>21,561</b>	<b>26,111</b>	<b>28,012</b>
Gross debt	€th	12,500	22,215	42,580	44,585
o/w Less than 1 year - Gross debt	€th	6,000	6,000	6,000	6,000
o/w 1 to 5 year - Gross debt	€th	3,900	9,729	24,188	25,391
o/w Beyond 5 years - Gross debt	€th	2,600	6,486	12,392	13,194
+ Gross Cash	€th	9,520	4,538	18,782	8,909
<b>= Net debt / (cash)</b>	<b>€th</b>	<b>2,980</b>	<b>17,677</b>	<b>23,798</b>	<b>35,676</b>
Bank borrowings	€th	12,500	19,000	29,750	31,500
Issued bonds	€th	0.00	1,265	3,030	3,285
Financial leases liabilities	€th	0.00	0.00	0.00	0.00
Mortgages	€th	0.00	0.00	0.00	0.00
Other financing	€th	0.00	1,950	9,800	9,800
Gearing (at book value)	%	9.81	47.9	79.4	106
Adj. Net debt/EBITDA(R)	x	-7.84	63.6	13.7	4.81
Adjusted Gross Debt/EBITDA(R)	x	-33.3	80.6	24.6	6.03
Adj. gross debt/(Adj. gross debt+Equity)	%	36.0	51.0	62.1	61.5
Ebit cover	x	-5.59	-1.53	-0.99	2.31
FFO/Gross Debt	%	-5.37	1.85	2.74	14.2
FFO/Net debt	%	-22.8	2.35	4.92	17.8
FCF/Adj. gross debt (%)	%	-33.6	-65.8	-29.1	-26.3
(Gross cash+ "cash" FCF+undrawn)/ST debt	x	0.88	-1.70	1.05	-0.48
"Cash" FCF/ST debt	x	-0.71	-2.46	-2.08	-1.96

<b>ROE Analysis (Dupont's Breakdown)</b>		<b>12/18A</b>	<b>12/19E</b>	<b>12/20E</b>	<b>12/21E</b>
Tax burden (Net income/pretax pre excp income)	x	0.81	0.58	0.73	1.15
EBIT margin (EBIT/sales)	%	-21.8	-9.29	-7.75	8.72
Assets rotation (Sales/Avg assets)	%	29.9	31.5	34.6	61.2
Financial leverage (Avg assets /Avg equity)	x	1.14	1.51	1.91	2.13
<b>ROE</b>	<b>%</b>	<b>-7.06</b>	<b>-4.28</b>	<b>-7.49</b>	<b>7.41</b>
ROA	%	-8.03	-2.84	-2.72	5.25

<b>Shareholder's Equity Review (Group Share)</b>		<b>12/18A</b>	<b>12/19E</b>	<b>12/20E</b>	<b>12/21E</b>
Y-1 shareholders' equity	€th	21,418	20,046	21,561	26,111
+ Net profit of year	€th	-1,548	-940	-1,785	2,006
- Dividends (parent cy)	€th	0.00	0.00	0.00	-200
+ Additions to equity	€th	176	35.1	6,335	94.5
o/w reduction (addition) to treasury shares	€th	0.00	0.00	0.00	0.00
- Unrecognised actuarial gains/(losses)	€th	0.00	0.00	0.00	0.00
+ Comprehensive income recognition	€th		2,420	0.00	0.00
<b>= Year end shareholders' equity</b>	<b>€th</b>	<b>20,046</b>	<b>21,561</b>	<b>26,111</b>	<b>28,012</b>



## Staffing Analytics

		12/18A	12/19E	12/20E	12/21E
Sales per staff	€th	152	205	207	388
Staff costs per employee	€th	-54.6	-54.6	-54.6	-54.6
Change in staff costs	%	-4.42	4.08	49.0	19.7
Change in unit cost of staff	%	-4.42	0.00	0.00	0.00
Staff costs/(EBITDA+Staff costs)	%	117	90.9	70.5	40.1

Average workforce	unit	49.0	51.0	76.0	91.0
Europe	unit	49.0	49.0	69.0	79.0
North America	unit	0.00	0.00	0.00	0.00
South Americas	unit	0.00	0.00	0.00	0.00
Asia	unit	0.00	0.00	0.00	0.00
Other key countries	unit	0.00	0.00	0.00	0.00
<b>Total staff costs</b>	<b>€th</b>	<b>-2,676</b>	<b>-2,785</b>	<b>-4,150</b>	<b>-4,970</b>
Wages and salaries	€th	-2,676	-2,785	-4,150	-4,970
of which social security contributions	€th	-929	-967	-1,440	-1,725
Equity linked payments	€th				
Pension related costs	€th		0.00	0.00	0.00

## Divisional Breakdown Of Revenues

		12/18A	12/19E	12/20E	12/21E
<b>Total sales</b>	<b>€th</b>	<b>7,449</b>	<b>10,454</b>	<b>15,745</b>	<b>35,308</b>
Sines	€th	7,449	10,454	11,296	11,568
Marseille	€th	0.00	0.00	3,660	9,606
ARA	€th	0.00	0.00	0.00	10,980
Mini P2R projects	€th	0.00	0.00	789	3,155
Other	€th	0.00	0.00	0.00	0.00

## Divisional Breakdown Of Earnings

		12/18A	12/19E	12/20E	12/21E
<b>EBITDA/R Analysis</b>					
Sines	€th	1,500	2,828	3,424	3,472
Marseille	€th	0.00	-300	730	3,131
ARA	€th	0.00	0.00	0.00	2,490
Mini P2R projects	€th	0.00	0.00	333	1,331
Other/cancellations	€th	-1,880	-2,250	-2,750	-3,000
<b>Total</b>	<b>€th</b>	<b>-380</b>	<b>278</b>	<b>1,736</b>	<b>7,424</b>
EBITDA/R margin	%	-5.10	2.66	11.0	21.0

## Revenue Breakdown By Country

		12/18A	12/19E	12/20E	12/21E
Portugal	%	100	100		
France	%		0.00		
Belgium	%		0.00		
Egypt	%		0.00		
Other	%	0.00	0.00		

## ROCE/CFROIC/Capital Invested

		12/18A	12/19E	12/20E	12/21E
ROCE (NOPAT+lease exp.*(1-tax))/(net) cap employed adjusted	%	-5.62	-1.99	-1.90	3.68
CFROIC	%	-21.0	-43.1	-27.8	-20.1
Goodwill	€th	0.00	0.00	0.00	0.00
Accumulated goodwill amortisation	€th	0.00	0.00	0.00	0.00
All intangible assets	€th	372	372	372	372
Accumulated intangible amortisation	€th	0.00	0.00	0.00	0.00
Financial hedges (LT derivatives)	€th	0.00	0.00	0.00	0.00
Capitalised R&D	€th	0.00	0.00	0.00	0.00
PV of non-capitalised lease obligations	€th	0.00	0.00	0.00	0.00
Other fixed assets	€th	18,479	32,207	41,623	52,100
Accumulated depreciation	€th	0.00	0.00	0.00	0.00
WCR	€th	1,371	1,597	2,853	6,155
Other assets	€th	0.00	0.00	0.00	0.00
Unrecognised actuarial losses/(gains)	€th	0.00	0.00	0.00	0.00
<b>Capital employed after deprec. (Invested capital)</b>	<b>€th</b>	<b>20,223</b>	<b>34,176</b>	<b>44,847</b>	<b>58,626</b>
Capital employed before depreciation	€th	20,223	34,176	44,847	58,626

## Divisional Breakdown Of Capital

		12/18A	12/19E	12/20E	12/21E
Sines	€th	18,382	18,382	18,382	18,382
Marseille	€th	2,358	13,000	13,000	13,000
ARA	€th	0.00	0.00	15,000	15,000
Mini P2R projects	€th	0.00	0.00	2,250	5,750
Other	€th	-518	2,794	-3,785	6,494
<b>Total capital employed</b>	<b>€th</b>	<b>20,223</b>	<b>34,176</b>	<b>44,847</b>	<b>58,626</b>

## Fundamental Opinion

It is implicit that recommendations are made in good faith but should not be regarded as the sole source of advice.

Recommendations are geared to a “value” approach.

Valuations are computed from the point of view of a **secondary market minority holder** looking at a medium term (say 6 months) performance.

Valuation tools are built around the concepts of **transparency**, all underlying figures are accessible, and **consistency**, same methodology whichever the stock, allowing for differences in nature between financial and non financial stocks. A stock with a target price below its current price should not and will not be regarded as an Add or a Buy.

Recommendations are based on target prices with no allowance for dividend returns. The thresholds for the four recommendation levels may change from time to time depending on market conditions. Thresholds are defined as follows, ASSUMING long risk free rates remain in the 2-5% region.

Recommendation	Low Volatility 10 < VIX index < 30	Normal Volatility 15 < VIX index < 35	High Volatility 35 < VIX index
Buy ●	More than 15% upside	More than 20% upside	More than 30% upside
Add ■	From 5% to 15%	From 5% to 20%	From 10% to 30%
Reduce ■	From -10% to 5%	From -10% to 5%	From -10% to 10%
Sell ●	Below -10%	Below -10%	Below -10%

There is deliberately no “neutral” recommendation. The principle is that there is no point investing in equities if the return is not at least the risk free rate (and the dividend yield which again is not allowed for).

Although recommendations are automated (a function of the target price whenever a new equity research report is released), the management of AlphaValue intends to maintain global consistency within its universe coverage and may, from time to time, decide to change global parameters which may affect the level of recommendation definitions and /or the distribution of recommendations within the four levels above. For instance, lowering the risk premium in a gloomy context may increase the proportion of positive recommendations.

## Valuation

Valuation processes have been organized around transparency and consistency as primary objectives.

Stocks belong to different categories that recognise their main operating features : Banks, Insurers and Non Financials.

Within those three universes, the valuation techniques are the same and in relation to the financial data available.

The weighting given to individual valuation techniques is managed centrally and may be changed from time to time. As a rule, all stocks of a similar profile are valued using equivalent weighting of the various valuation techniques. This is for obvious consistency reasons.

Within the very large universe of Non Financials, there are in effect 4 sub-categories of weightings to cater for subsets: 1) 'Mainstream' stocks; 2) 'Holding companies' where the stress is on NAV measures; 3) 'Growth' companies where the stress is on peer based valuations; 4) 'Loss making sectors' where peers review is essentially pointing nowhere (ex: Bio techs). The bulk of the valuation is then built on DCF and NAV, in effect pushing back the time horizon.

Valuation Issue	Normal industrials	Growth industrials	Holding company	Loss runners	Bank	Insurers
DCF	35%	35%	10%	40%	0%	0%
NAV	20%	20%	55%	40%	50%	15%
PE	10%	10%	10%	5%	10%	20%
EV/EBITDA	20%	20%	0%	5%	0%	0%
Yield	10%	10%	20%	5%	10%	15%
Book	5%	5%	5%	5%	10%	10%
Banks' intrinsic method	0%	0%	0%	0%	10%	0%
Embedded Value	0%	0%	0%	0%	0%	40%
Mkt Cap/Gross Operating Profit	0%	0%	0%	0%	10%	0%