Ebioss Energy

Utilities / Bulgaria

Document generated on the 23/01/2018

Sailing on a lighter capital-intensive model

Buy	Upside potential : 305%
Target Price (6 months)	2.91
Share Price	€ 0.72
Market Capitalisation €M	15.0
Price Momentum	**NEGATIVE**
Extremes 12Months	0.68 ▸ 1.64
Bloomberg ticker	EBI SM

KEY DATA	12/15A	12/16A	12/17E	12/18E	12/19E
Adjusted P/E (x)	**-23.3**	**-11.5**	**ns**	**10.2**	**7.48**
Dividend yield (%)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
EV/EBITDA(R) (x)	ns	-19.6	7.46	4.25	3.55
Adjusted EPS (€)	**-0.05**	**-0.10**	**0.00**	**0.07**	**0.10**
Growth in EPS (%)	*n/a*	*n/a*	*n/a*	*n/a*	*36.7*
Dividend (€)	0.00	0.00	0.00	0.00	0.00
Sales (€th)	14,683	8,032	39,073	51,220	58,986
EBITDA/R margin (%)	*-2.58*	*-10.5*	*14.1*	*15.4*	*15.3*
Attributable net profit (€th)	-1,870	-4,123	-145	1,469	2,009
ROE (after tax) (%)	**-4.98**	**-11.8**	**-0.44**	**4.42**	**5.84**
Gearing (%)	*22.5*	*50.6*	*66.1*	*68.9*	*63.7*

Last forecasts updated on the 09/05/2017

Benchmarks		Values (€)	Upside	Weight
DCF		4.55	533%	35%
NAV/SOTP per share		4.09	469%	20%
EV/Ebitda	*Peers*	1.44	100%	20%
P/E	*Peers*	1.44	100%	10%
Dividend Yield	*Peers*	0.00	-100%	10%
P/Book	*Peers*	1.44	100%	5%
TARGET PRICE		2.91	305%	100%

Conflicts of interest

Corporate broking	NO
Trading in corporate shares	NO
Analyst ownership	NO
Advising of corporate (strategy, marketing, debt, etc)	NO
Research paid for by corporate	YES
Provision of corporate access paid for by corporate	NO
Link between AlphaValue and a banking entity	NO
Brokerage activity at AlphaValue	NO
Client of AlphaValue Research	NO

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10/11/2017 2017 guidance dropped after timing issues; RTO transaction in progress

Earnings/sales releases

Fact

EBIOSS has reported half-year revenues that contracted 42% to €1.77m as strategic measures had been taken by the company that delayed the invoicing and consolidation of many projects which are either under negotiation or in advanced stages of development.

The decrease in revenues also generated a decrease in cost of goods sold (COGS), which have been under control as they contracted by 47.4% to €1.96m. However, an increase of +11.97% in employee benefits, added to a +48% yoy increase in depreciation expenses and a +49% increase in other expenses, have pushed operating profit further into red territory to €-3.5m. In addition, a +106% increase in financial expenses has reduced profit before tax by 22.8% to €-4.3m. With €-1m in losses being attributable to minority interests, then the group posted a net income loss of €-3.22m in the first half of the year (down 34.7%).

As a result, given the negotiation delays and the lack of visibility in terms of the expected contract signatures, the group has decided to drop its current business plan and extend the timeline for the capital increase that was supposed to be completed by 12 December 2017.

Moreover, EBIOSS Energy is currently in a Reverse Takeover (RTO) negotiations whereby its Irish subsidiary EQTEC plc, held at 50.03% by the company, would buy the Spanish engineering arm for gasification projects (EQTEC Iberia) held also by EBIOSS at 67%. The agreement for the negotiations had been signed on July 2017 and since that date the EQTEC plc shares have been frozen.

Analysis

Financial situation

Despite the weak P&L performance, operating cash flows remained relatively stable (+1.5%), but are still in negative territory at €-3.548m. Investment was cut by 61% to €330k, while net cash flows from financing activities increased by €3.95m, mainly driven by the €1.14m capital increase and €3.85m from the issue of corporate bonds, which allowed free cash flows to be stable at +€35k. As a result, net debt increased to €27.4m (+36.8% ytd), while equity levels contracted by €3.7bn to €29.19m (-11.3% ytd).

The lowering of the yearly objectives can be explained by the weak degree of fulfillment of previous expectations both at the revenue and operating profit level with only 4% of expected revenues achieved and -97% in operating profit (FY17 now expected with €38.7m in revenues and €3.6m in operating profit).

The timing delays on the projects under development is in part related to EBIOSS's strategic partner China Energy, as the latter has not completed the necessary financial structuring of two different projects in the UK that have a combined investment of €211m. The expected closure of the financing structure is now expected to be achieved in March 2018, the date at which EBIOSS's engineering arm EQTEC Iberia would start to invoice the services provided for the projects.

Once the financing of the UK projects is achieved, further projects under negotiation with various strategic partners are expected to advance according to previous expectations. However, this implies that both our 2018 and 2019 forecasts are most likely to be postponed.

The Reverse Takeover Action (RTO)

In February 2017, EBIOSS Energy bought a 51% stake in the Irish company (React Energy plc) through a debt conversion. React was then renamed EQTEC Plc, which would focus on project development in the UK for either electricity or heat generation through waste gasification technology. Following this, EQTEC Plc had

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two capital increases for €985,000, while EBIOSS converted €920,717 from debt into shares. Following the transactions, EBIOSS holds 50.03% of EQTEC plc.

This transaction allowed EBIOSS to enter the English capital market while having a pipeline of projects in the country. EQTEC Plc currently has three different projects in the country with a total 28MW of combined capacity split between Newry (4MW), Enfield (12MW) and Claycross (12MW).

If the RTO transaction goes forward, EBIOSS would combine both its gasification subsidiaries under one umbrella, whereby the Irish subsidiary (EQTEC plc) would be owner of the engineering arm, providing vertical integration. Such an integration may provide a consolidation of the know-how under a single subsidiary, providing more effective pricing models and cost optimisation compared to competitors within the sector. The reverse takeover transaction is expected to be completed by the end of November 2017.

Impact

We will integrate the results into our model with a most likely downgrade in our target price and recommendation following the drop in 2017 objectives due to the postponement of expected contracts. This should put pressure as well on our 2018 and 2019 objectives, which are likely to be revised downwards due to timing issues.

Nonetheless, we put on hold our update of the target price and recommendation until more visibility is given in the RTO transaction to integrate the financial impact the new structure would have on EBIOSS's valuation.

09/05/2017 **2016 results within expectations. Strong recovery for 2017: recent developments provide visibility**

Change in Target Price — € 3.32 vs 2.38 — +39.9%

Following the decision taken at the shareholders meeting and applied in April 2017, the group has changed its share capital nominal value from Bulgarian lev to euro. This measure has generated a euro to Bulgarian lev ratio of 1:1.955. The measure has reduced the number of outstanding shares from 40.91m to 29.91m which has supported our per share valuation metrics.

The recent news coming from the signing of the UK project is a positive for investors as it confirms the positive trend in the business plan. It also provides greater visibility in the strong expectations for the coming years in terms of revenue and earnings growth.

Change in EPS

2017 : € 0.00 vs 0.00 — ns
2018 : € 0.07 vs 0.04 — +95.6%

The 2016 results were broadly in line with our expectations, hence, no major changes were needed to our estimates. We maintain top- and bottom-line earnings forecasts for the coming years (2017 and 2018) in addition to the inclusion of 2019 into our model. However, the reverse split decision taken in 2017 with a lower number of shares outstanding has a positive effect on our EPS from 2017 onwards.

Change in NAV — € 4.23 vs 1.97 — +115%

After the 2016 results and the inclusion of EQTEC PLC into the Ebioss holding structure, we have updated our SOTP valuation. The higher earnings expected in the coming years support a higher valuation.

Following this, and given that the company's current model is based on a less capital-intensive structure and the recent confirmation of completing of the business plan with the signing of the UK project, we have updated our valuation model with a less cautious approach, as we have applied multiples closer to comparable peers. The positive effect generated by this is supported by a lower number of shares outstanding, creating as a result an upward revision in our NAV expectations.

Change in DCF — € 4.67 vs 3.92 — +19.1%

Following the publication of the 2016 results, we have added the 2019 forecasts into our model. The good earnings trend should have a positive effect on the group's operating cash flows and, consequently, on our DCF valuation. Moreover, the lower number of shares outstanding has generated a positive effect on per share values, increasing also our DCF valuation.

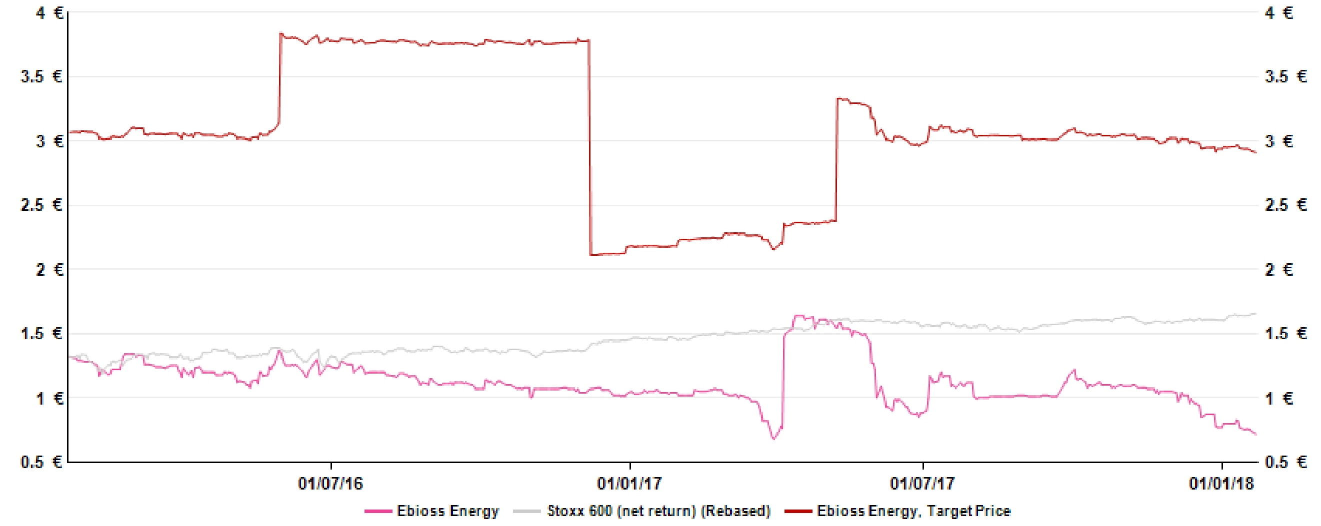
Body of research

Ebioss Energy (Buy)

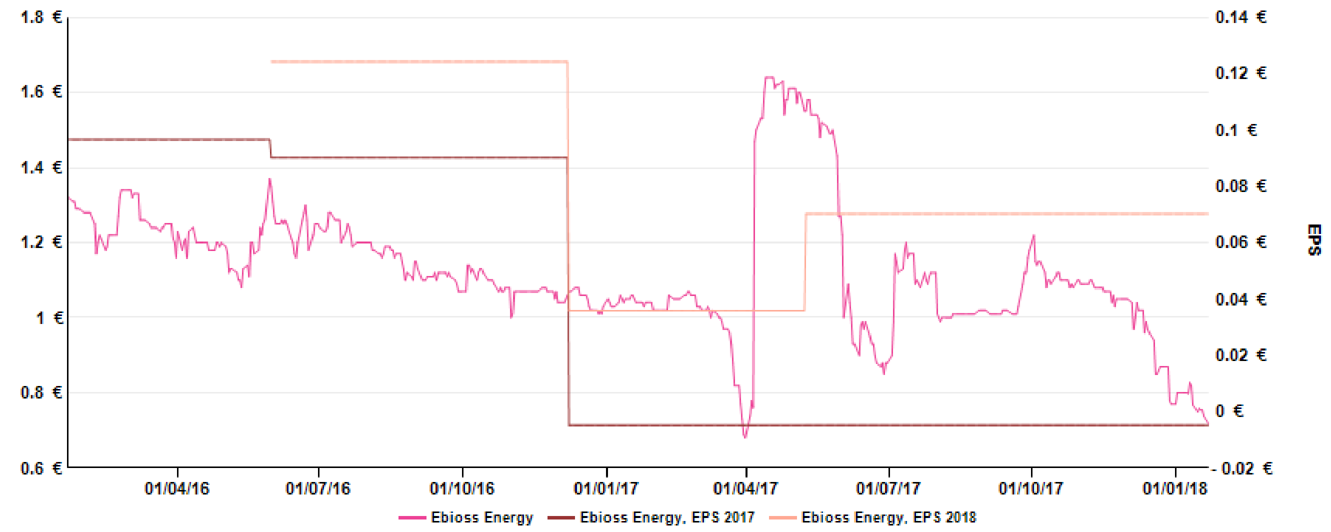
Alternative Energy / Bulgaria

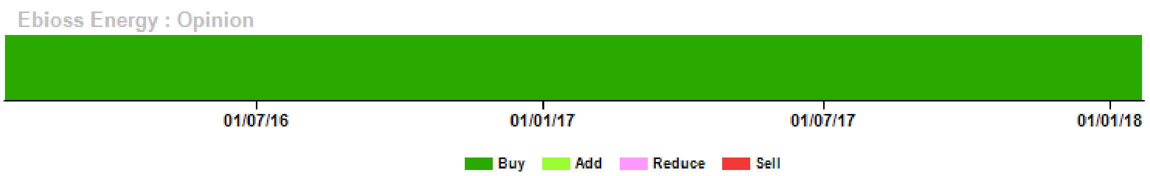
Target Price & Opinion

Stock Price and Target Price



Earnings Per Share & Opinion





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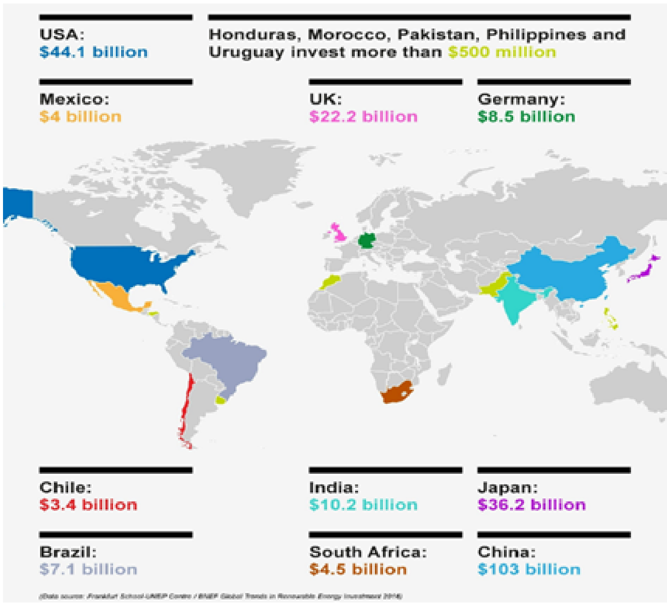
The renewable energy business is a sector that's seeing worldwide growth but more specifically within the European Union, which is seeking to move towards a low carbon economy. By using more renewable sources to meet its energy needs, the EU would reduce its dependence on fossil fuels, decrease its exposure to commodity price fluctuations and geopolitical issues, while generating sustainable energy production.

To this end, the EU has set a binding target of 20% of the final energy consumption to be generated from renewable sources by 2020. To achieve this, individual EU countries have committed to reaching their own national renewable targets ranging from 10% in Malta to 49% in Sweden, with France targeting 23% and Italy 26%.

Moreover, renewables should continue to play an important role in the EU beyond 2020 given that the member countries have already agreed to target at least 27% of final energy consumption coming from renewables by 2030. Based on the latest available data from EuroStat, the total share of renewable energy in the EU was 14.1% in 2012, up from 8.7% in 2005; but there is still a long road ahead. Furthermore, the greatest growth potential in the renewable sector will be driven by countries outside the EU as the developed world's singularity of renewable investment is turning now into a worldwide revolution.

New investment in renewable energy:



Source: UN

The most popular sources of renewable energy are wind and solar, but they have two main issues: their energy cannot be stored and is intermittent. However, contrary to wind and solar energy, biomass can be stored at times of low energy demand and is easily restarted when needed, playing an important role in the balancing equation of renewable energy production. Biomass is a renewable energy source derived from organic material used mainly for heating and electricity generation.

Ebioss's technology meets the guidelines on sustainability criteria required by the European Commission for biomass projects. The different raw materials used to produce energy are of sustainable origin and can even help as a solution to additional problems. For example, the use of urban waste to produce energy provides a solution to the waste disposal issue while producing a sustainable form of energy, a win-win solution.

Ebioss is a relatively new holding company, created in 2012 with the idea of increasing renewable generation in Europe, while providing a sustainable and profitable return for investors. The group was created from the merger between EQTEC Iberia and Electra holding, the former contributing the technology, patents and know-how, and the latter projects and a well-

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developed commercial network.

EQTEC Iberia was founded in 1997 based on the knowledge and more than 30 years' experience of its engineering team, focused on diverse energy projects. EQTEC has developed the leading technology available to build utility scale gasification plants for industrial level exploitation of renewable energy from diverse raw material sources.

The group's main activities are the design, EPC (Engineering, Procurement & Construction), operation, and maintenance of thermal generation power plants based on the thermo-chemic gasification of biomass and waste residues, using a proprietary patented technology EGT (EQTEC Gasification Technology).

EQTEC has developed a patented process, in which gasification has proven to be the most efficient technology with the lowest environmental impact for recovering energy from waste or any other material with a high carbon percentage. A thermochemical transformation enables the obtention of gas, in which a specific cleaning process increases the purity level in order to directly inject the gas into an adapted combustion engine (any organic or non-organic material with a thermal value above 3000Kw/th is economically usable). For the transformation process it uses multiple materials: ranging from solid municipal waste to biomass products (or even coal), providing energy with low CO_2 emissions and high energy efficiency.

Each gasification plant developed is tailor made to customer requirements: designed according to the type of raw material required for production and the end usage of the energy produced (heat, electricity, cold, etc.).

We believe the greatest upside potential comes from the usage of the "waste of the waste" as raw material for energy production. The material used comes after the separation of urban waste from what is left over after the recycling and usage of organic material; the remaining product is called Refuse Derived Fuel (RDF). RDF is produced by shredding and dehydrating the remaining solid waste, with combustible components such as plastic and biodegradable waste (with a high carbon level).

Following this, EQTEC has already designed and/or constructed multiple electricity plants worldwide ranging from 60KW to 40,000KW, although the group concentrates on medium size gasification plants (i.e. between 1 and 10MW of installed capacity). On average each gasification plant achieves energy efficiency between 75-80%.

Based on proprietary technology (EGT), the group has had a running plant in operation since 2011 with over 45,000 continuous working hours, a clear example of the expertise and know-how of its development and engineering team. This plant is the first gasification project in the world to obtain such performance and proven track record (a 6MW cogeneration plant with integrated gasification installed in Campo Criptana, Ciudad Real, Spain). The technology used in the plant is the so-called "1st generation technology" with the ability to use 1 ton/h of material. Since, capacity and efficiency have been improved: 3rd generation units can reach a processing rate of 3 tons/h and have the ability to adapt to different raw materials with the same machine (multi-residue).

After 18 years of R&D and over €8m invested in the 3rd generation gasifier, Ebioss now offers a standardized product that can be delivered in large numbers to customers' worldwide without the need for expensive customization and costly adjustments. A 3rd generation unit is currently under construction in Bulgaria: a multi-fuel EQTEC gasifier delivering up to 6MWe of electricity output with a single RDF unit. Ebioss's objective is to commercialize the new standard 3rd generation technology on a wide scale, implemented in diverse projects worldwide.

Leading Technology:
EQTEC currently has two patents to protect its gasification technology: "the method for solid organic materials gasification reactor and employee", and "the process for the development of a stream of gas from a gasifier, tars thermal cracking and renovated with steam and employee reactor". Both patents were registered in the second half of 2014 under the industrial property of the Spanish Patent and Trademark Office.

EBIOSS's exclusive patented technology has attracted the attention of many large energy companies such as EDF and Engie (formerly GDF) in France, and General Electric internationally, amongst others.

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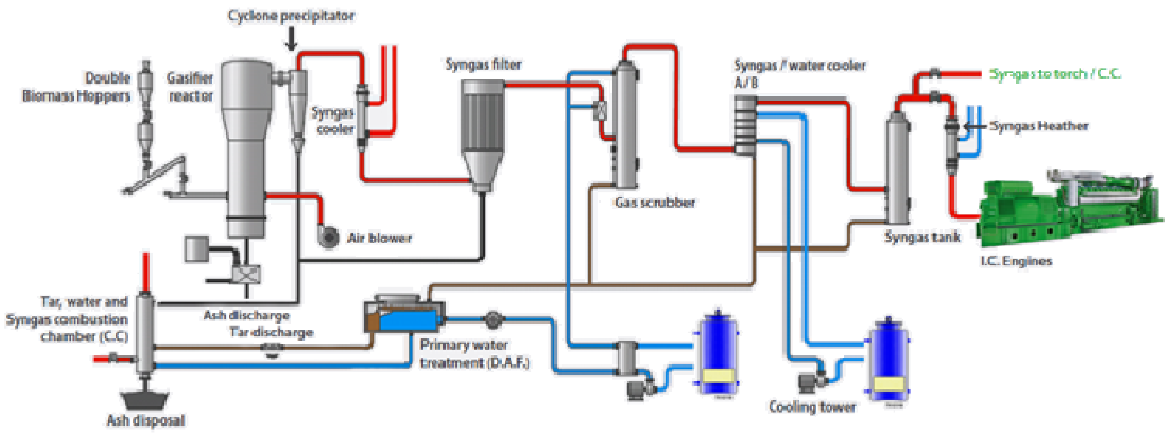
EGT process for electricity generation



The purification process developed by the group enables a higher purification level far above competition to be obtained, where similar gas treatments achieve 40-50% purity while EGT obtains up to 99.9%. Moreover, the gases produced in the EGT process can be directly injected into a modified combustion engine which, once linked to an alternator, is able to produce both electricity and thermal energy. For this, the group has developed a partnership with General Electric, as the American group produces specially-designed gasification engines: the Jernbacher (J620 or J640).

Moreover, EQTEC has developed the EQTEC KINETIC MODEL platform (EKM): a powerful simulation tool based on a computer-aided kinetic model able to predict the results of the thermochemical process of degradation of the waste from the Gasifier (EQTEC gasifier technology) allowing to establish optimal conditions for the gasification of each waste in terms of their chemical composition.

EKM simulation combines both equilibrium models (Methods Stoichiometric and Thermodynamic Equilibrium) as dynamic models which include “finite” kinetic reactions for the stages of pyrolysis, gasification and for the combustion of gaseous species and char, integrating these DSC Analysis of an agricultural waste (cereal) processes consecutively as occur in an actual installation.

For the first three years following the construction, delivery and “up and running” status of a gasification power plant, Ebioss itself performs the required maintenance of the plant, considered this as an after-sales service generating additional revenues. Following this date (3 years after commissioning), it is up to individual clients and plants to determine if they would like to continue with the maintenance services provided or if their own operators are able to run the power plant by themselves (and have the additional time required to do so).

Each power plant comes with a software monitoring and platform system that enables it to function without the continued presence of operating staff. Furthermore, the technology allows a plant design based on a reduced workforce: 3 operating workers (1 engineer and 2 operators) are enough to maintain the gasification plant running at full power capacity; with 12 workers the plant can be producing electricity 24/7.

Moreover, the plants can be constructed in a way that most of the pieces are installed in pairs (as is the case with their own 3rd-generation Bulgarian plant). Even if this process slightly increases the development costs, it provides certainty that the plant can be kept running by providing flexibility and a back-up plan (i.e. in the event a component needs maintenance, the secondary piece can take over its functions).

In addition to this, a monitoring software (EMP) is able to provide real-time adjustments to optimize both the process and the gas composition after the thermochemical reaction has been performed. The monitoring platform of each gasification plant also offers the opportunity to control the power plant from remote locations, i.e. both the Bulgarian and Italian gasification plants can be controlled from the Barcelona engineering headquarters.

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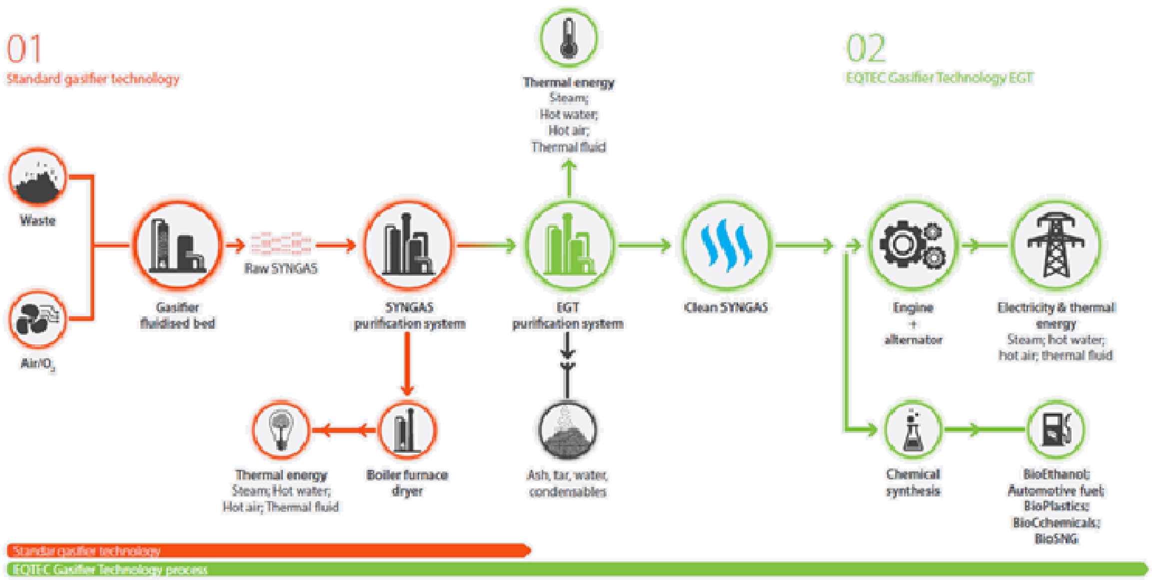
The purity level achieved is dependent on the material used, which then determines the cleaning process required and the necessary steps for this. Each client determines what will be the end purpose of the energy produced, as not all processes require the same purity level. The highest level achieved in the gasification process can go up to 99.9%, which is the case when gas is directly injected into an internal combustion engine.

Applications of Syngas with EGT



On average the number of cleaning processes varies between 7 and 10 steps, although it depends on the material used for the reaction and the end purpose. The complete cleaning purification process is called "synthesis gas purification system" (Syngas). The Syngas system is what makes Ebioss' plants unique and far ahead of the competitor proposition.

Bulgarian Operations:
Ebioss's growth objectives include vertical integration driven by the inclusion of a biomass gasification plant and a material distribution facility. As such, the group is looking to produce high efficiency pellets based on agricultural waste coming from regional products (cereals and wheat leftovers).

Ebioss's pelletizer plant in Stroevo (Bulgaria), will have the necessary equipment to mass produce high-quality biomass material to fuel its 3rd generation gasification plant (6 tons/hr). Any over-capacity not used in-house in the gasification plants, can either be send to the Italian production plant or sold to external customers. The company currently has a 15-year contract with the largest straw provider in Bulgaria and is currently working on the conclusion of additional contracts for different types of fuel.

The inclusion of the distribution plant generates vertical integration while limits exposure to raw material delays and low-quality products. Low-quality products have negatively affected the group in the past, more specifically its Italian gasification plant, revealing the need for high-quality pellets at affordable prices. A low-quality product with a high moisture level (added to a lower thermal value) can make a gasification plant less efficient. In a constant production process, high moisture material can leave small residues in the feeding part of the distribution machine, requiring the process to be stopped for cleaning purposes. The biomass distribution part of the business enables Ebioss to obtain a material in line with their own specifications, to optimally produce energy in a constant manner.

It is worth mentioning that the dependency of Ebioss on the Bulgarian business has decreased due to the internationalization of the company. It is expected to represent 6.53% of the total income in 2016 and 6.81% for 2017.

Urban Waste:
In line with Ebioss's expansion to complete the value chain around urban solid waste, in 2014 the group acquired a majority stake in a company called TNL SA (up to 53% of the shares). TNL is a specialist in waste management solutions. The

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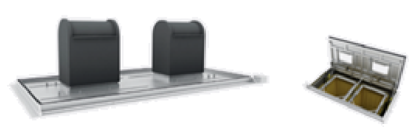
acquisition was made with the objective of strategically positioning Ebioss in the first stage of the municipal solid waste value cycle.

TNL is a global technology and innovation company with its headquarters in Portugal, with a market presence dating back over 10 years in waste services, focused on developing underground solutions for waste collection. The group is currently a leader in buried waste containers, already serving clients in 20 different countries; a useful client portfolio for their own gasification power plants.

TNL products:



Through TNL, Ebioss offers both infrastructure and consultancy services to clients ranging from a broad portfolio of waste equipment and storage facilities, added to management solutions systems. The goal is to provide clients with a "more intelligent" way of collecting urban solid waste. Active cooperation between the company, municipalities, and waste collection organizations enables Ebioss to provide custom-made solutions to meet the specificities and requirements of individual cities: improve the waste management system by using data collection (information) and specifically adapted equipment (technology).

TNL can be considered a center of innovation in its field as it has decided to invest more than €1million per year in R&D, holding more patents than any other company in the sector. Following the development idea, the group has created the "itWaste" technology: an integrated waste management solution that works as decision support for collecting companies.

ItWaste not only achieves resource optimization, but also obtains a substantial operational cost reduction as it gives clients real-time updated information on the waste collection equipment. The improvement is obtained as the collection management system provides both historical and real time information from each piece of equipment, sending data on the fill levels of each storage unit with collection prevention alarms: allocating collection workers where they are needed the most.

Waste collection and effective waste management is a strategic business for Ebioss as it ensures fuel provisioning for its gasification power plants using either RDF or organic material, while providing a full service package to municipalities around urban waste collection: solutions to waste collection management problems and to the proper usage and disposal of the solid wastes collected.

Holding Structure:
As a results of its diversification and value chain integration, through both acquisition and development, Ebioss Energy has constructed a strong holding portfolio, which can be summarized as follows:

- Karlovo and Heat: 100% stake
- Syngas Italy : 100% stake
- EQTEC: 48% stake up to 2014 increasing to 51% from 2015 onwards
- Biomass Distribution: 100% stake
- TNL SA: 53% from 2014 onwards
- Ebioss: 100% stake

Karlovo and Heat are two separate subsidiaries of the group, that are compounded under one for valuation purposes as both have the same purpose and a similar profile. Both companies were incorporated on 6 January 2011 with the purpose of the construction of a 5MW biomass gasification power plant in Bulgaria. Upon commissioning of the power plants, Ebioss

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will operate and fully own the facility. Under the new business model following the changes in the Renewable Energy Act (REA) in Bulgaria, the power plants are no longer covered by a fixed tariff scheme but would be used to internally produce the required energy (electricity and heat) to supply its pelletizer unit (biomass distribution).

Syngas Italy is a subsidiary acquired after the agreement reached on 3 April 2014 for 100% of the shares of Sorgenia Bionenergy S.P.A. in Italy (later renamed Syngas Italy). The company was acquired for €650,000 with its main activity being the development of biomass power plants, the first located in the municipality of Castiglione d'Orcia in the Tuscany region. The 1MW power plant is already in operation and started to sell electricity on 31 March 2015. The company has a fixed tariff of €279/MWh with expected yearly electricity production of 5,000 hours.

A higher level of hourly electricity production is expected in the Bulgarian power plants (7,500hr) than in the Italian plant (5,000hr), mainly driven by vertical integration with the raw materials production added to the double component approach installed on the Bulgarian units to avoid prolonged stoppages for maintenance purposes.

Divisional Breakdown Of Revenues

	Sector	12/16A	12/17E	12/18E	12/19E	Change 17E/16		Change 18E/17E	
						€th	of % total	€th	of % total
Engineering	Alternative Energy	2,683	25,350	32,840	38,640	22,667	73%	7,490	62%
Bulgarian operations	Alternative Energy	267 (1)	4,762 (1)	11,349 (1)	11,872	4,495	14%	6,587	54%
Italian operations	Alternative Energy	161	851	851	851	690	2%	0	0%
Urban waste services	Alternative Energy	4,920	9,110	7,180	8,623	4,190	13%	-1,930	-16%
Other		(2)	-1,000 (2)	-1,000 (2)	-1,000	-1,000	-3%	0	0%
Total sales		**8,031**	**39,073**	**51,220**	**58,986**	**31,042**	**100%**	**12,147**	**100%**

1. Due to a regulatory change on the Bulgarian REA, the biomass units are no longer covered by the Feed-in-Tariffs. The energy produced should be used for own use on the pelletiser plant.
2. Intra-group eliminations

Key Exposures

	Revenues	Costs	Equity
Dollar	20.0%	5.0%	2.0%
Emerging currencies	5.0%	10.0%	5.0%
Long-term global warming	30.0%	10.0%	10.0%

Sales By Geography

Bulgaria	20.0%
Spain	5.0%
Portugal	15.0%
Italy	5.0%
Other	55.0%

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.

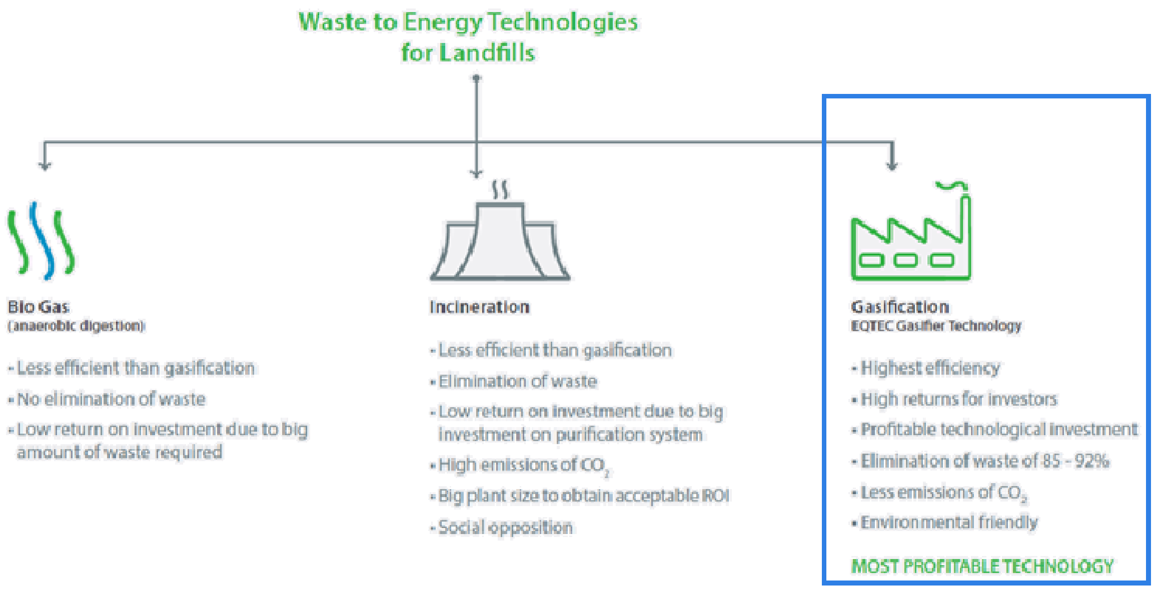
Money Making

Ebioss Energy is a holding group with headquarters in Sofia (Bulgaria). It concentrates on the investment, development and operation of urban solid waste projects supported by value creation on the energy sector.

The gas-to-energy model of the group combined with waste elimination (with the use of Refuse Derived Fuel (RDF) as fuel for clean energy) is a solution combining technology, investment opportunities, and growth. Municipal solid waste is a market with huge potential, driven by urban growth in developing economies. The constant production of solid waste in major cities makes it a non-cyclical and stable market, which added to the gasification technology solution provides a stable source of economically-efficient and environmentally-friendly energy fuel.

The World Bank forecasts that by 2025 municipal solid waste will increase by 72%. Current oversaturated waste disposal infrastructures would not be able to cover the required needs, which added to inefficient methods make the problem worse. Estimates expect the world urban population to increase from 3bn in 2010 to around 7.6bn by 2025, which will make the total waste generation increase from 3.5m tons/day to 6.1m tons/day. Moreover, a study provided by the Steinbeiss Europe Zentrum Institute (SEZ) has estimated that the business potential of RDF usage as an energy source in Europe is €36bn; that is, without taking into account all the potential coming from developing economies, with increasing urban areas and a rising demography.

The increasing supply of urban solid waste makes Ebioss's proposal a viable solution with its gasification technology, as it eliminates between 85-92% of RDF. RDF used for the gasification process is an energy source with a very high calorific power, high efficiency and positive returns to investors.



Out of the all the possible waste disposals methods used for gasification processes, RDF is the one with the highest thermal value due to its high petroleum levels (from unused plastic and rubber), providing elevated energy production: with 1 ton of RDF producing up to 6MW of electricity (third generation technology). The usage of gasification with RDF as a fuel provides investors the possibility of a double source of income: energy sales and a tipping fee. Moreover, the usage of RDF as an energy source provides a type of renewable energy with little dependency on feed-in-tariffs and regulatory changes as it is part of a solution to a currently increasing waste management problem.

As a result of the diversification strategy of the group around the whole urban solid waste economic cycle, Ebioss has achieved a well-balanced portfolio for future growth. Electricity generation from Italian gasification power plants can be used as a support, providing a stable source of revenues and cash flow, with high profit margins (23%), due to the generous subsidies obtained on its tariff agreements (€279/MWh); although it is based on a subsidy-driven model, highly exposed to changes on tariff agreements or subsidy policies.

Money Making

Given the recent regulatory changes, Bulgarian energy production would be used to support the biomass material production mainly by internal transactions between the subsidiaries: one provides the required raw materials for its gasification purposes while the other provides the heat and electricity required for production. Hence, it is almost a cash neutral strategy for the combined holding (without the capital investment required); however, the increased pellet production after the regulatory changes would be enough to cover the group's production needs, with the oversupply sold to traders and biomass production units. The Bulgarian combined operations could be used by Ebioss as a showroom for a self-sufficient plant with third-generation technology.

Future growth for Ebioss comes mainly from the gasification and urban waste division, as both units have the greatest growth potential with a broader international footprint. The margins on both divisions are closer that of consultancy groups and tech companies (with 15% and 14% EBITDA margins respectively). Note nonetheless that both divisions have a lighter profile in terms of capital investment, fixed assets and debt requirements, with a higher footprint on goodwill and intangible assets.

Transitional process and geographical diversification

We believe 2016 should be considered within the transitional period for Ebioss, with the start of its future growth potential:

- The necessary investment (through equity and not debt) has been done and can be used as a showroom for future projects;
- It holds the leading position in the sector with a patented technological process to protect it, supported by a proven track record;
- International partnership with worldwide renowned energy companies have been built and are getting stronger by the day;
- Consolidation of an international pipeline of projects in the UK, France, Croatia, Hungary, the Middle East, South-East Asia, Qatar and the Emirates should translate into positive financial performance for the coming years;
- A two-year agreement with China Energy Engineering Corporation for exclusive usage of Ebioss's technology on its project pipeline and 75% of the required investment, with at least 50% of the required equity.

The gasification technology proposed would not only help utility companies with a clean source of energy provided at constant levels (without the variability of solar or wind power), but also helps municipalities with waste management solutions which are an increasing world issue. From our point of view, interesting synergies can be achieved between EQTEC and TNL within the holding group as it would allow Ebioss to benefit from a broader client portfolio, while providing more complete investment proposals around waste management solutions.

Hence, it can be said that the transitional process between the end of the first phase (consolidation) and the start of the second one (international development and growth) is currently underway. The group comes from a solid base in Bulgaria and Spain, with an efficient track record and proven technology (phase one). The beginning of the geographical expansion with an important market share position would allow the group to establish itself with a diversified international footprint (phase two), fuelling future growth development. Furthermore, contrary to other mature markets, urban waste collection management is growing with a steady (and even growing) source of raw materials for electricity generation.

Up to now, the company's main sources of revenue have been Bulgaria (86%) and Spain (14%), although it has decreased its exposure through a more diversified evolution for global growth: revenue is already expected from Portugal and Italy, beside the established operations in the Bulgarian and Spanish markets, with possible expansion into additional countries depending on the contracts signed that are currently in the pipeline (the UK, United Arab Emirates, Croatia, Brazil). Revenue expansion should continue with a more international presence (France, Jordan, Thailand).

All in all, we believe there is substantial growth potential for Ebioss given the diverse solutions it provides to both public and private players on multiple issues concerning the urban waste cycle. This may be the beginning of a great success story.

Money Making

Divisional EBITDA/R

	12/16A	12/17E	12/18E	12/19E	Change 17E/16 €th	Change 17E/16 of % total	Change 18E/17E €th	Change 18E/17E of % total
Engineering	-100	3,802	3,420	4,096	3,902	62%	-382	-16%
Bulgarian operations	-421	2,404	4,772	4,891	2,825	45%	2,368	98%
Italian operations	-19.0	123	120	117	142	2%	-3	0%
Urban waste services	-303	1,010	1,505	1,807	1,313	21%	495	21%
Other/cancellations	(2)	-1,844 (2)	-1,908 (2)	-1,869	-1,844	-29%	-64	-3%
Total	-843	5,495	7,909	9,042	6,338	100%	2,414	100%

2. Intra-group eliminations

Divisional EBITDA/R margin

	12/16A	12/17E	12/18E	12/19E
Engineering	-3.73%	15.0%	10.4%	10.6%
Bulgarian operations	-158%	50.5%	42.0%	41.2%
Italian operations	-11.8%	14.5%	14.1%	13.7%
Urban waste services	-6.16%	11.1%	21.0%	21.0%
Total	-10.5%	14.1%	15.4%	15.3%

Debt

Following approval from the extraordinary shareholders' meeting held on 16 February 2015, the Board of Directors authorised the issuance of debt up to €30.6m in the next three years, with the short-term objective to issue €16m of bonds focused on financing growth, the level required to continue with the group's business plan.

Any delay in the issuance of new debt to finance the group's business plan would have a negative effect as it would hinder the group's positioning in multiple investments as some projects require a deposit before being accepted and some others require capital to enter as a minority shareholder (between 5% and 10%).

Of the €16m objective, the group has already issued €3m in bonds in a 5-year Bulgarian private placement at a 7% interest rate. The placement was followed by a second bond issuance for €2m with similar characteristics to the first one: a 5-year maturity (April 2021) and a 7% interest rate. An issuance of a further €4-5m is expected in the near future via a public placement in Luxembourg and around €7m in 5-year convertible bonds (hybrids), with a call-up period set for three years after the issuance.

Previous to the bond issuance, the group had all of its debt structured on bank loans with a total of €8.33m, with €1.21m in short-term debt (up to 1 year) and €7.12m in long-term loans with interest rates fluctuating between 3.22% and 8%.

The current low interest rate environment, added to the ECB initiative to give away money almost for free, translates into the best opportunity for Ebioss to raise the required capital to finance all of its different growth projects. Within the current context, the group may benefit from relatively low interest rates for its size; private investors should find this highly attractive as a 5-year 7% bond looks pretty compelling in the current low rate, high volatility environment.

Funding - Liquidity

		12/16A	12/17E	12/18E	12/19E
EBITDA	€th	-3,214	5,494	7,880	9,046
Funds from operations (FFO)	€th	-5,309	3,280	4,666	5,149
Ordinary shareholders' equity	**€th**	**32,895**	**32,741**	**33,785**	**34,983**
Gross debt	€th	21,099	26,290	28,130	31,830
o/w Less than 1 year - Gross debt	€th	3,086	2,215	3,215	3,615
o/w 1 to 5 year - Gross debt	€th	3,528	4,590	4,430	5,730
of which Y+2	€th	1,024	754	894	1,194
of which Y+5	€th	2,504	3,836	3,536	4,536
o/w Beyond 5 years - Gross debt	€th	14,485	19,485	20,485	22,485
+ Gross Cash	€th	1,023	3,059	4,796	10,598
= Net debt / (cash)	**€th**	**20,076**	**23,231**	**23,334**	**21,232**
Issued bonds	€th	12,254	17,254	18,254	20,254
Other financing	€th	8,845	9,036	9,876	11,576
Gearing (at book value)	%	50.6	66.1	68.9	63.7
Adj. Net debt/EBITDA(R)	*x*	*-6.25*	*4.23*	*2.96*	*2.35*
Adjusted Gross Debt/EBITDA(R)	*x*	*-6.61*	*4.81*	*3.59*	*3.54*
Adj. gross debt/(Adj. gross debt+Equity)	*%*	*39.2*	*44.7*	*45.6*	*47.8*
Ebit cover	*x*	*-3.75*	*2.75*	*4.17*	*4.86*
FFO/Gross Debt	*%*	*-25.0*	*12.4*	*16.5*	*16.1*
FFO/Net debt	*%*	*-26.4*	*14.1*	*20.0*	*24.2*
FCF/Adj. gross debt (%)	*%*	*-35.5*	*-11.9*	*-0.37*	*6.57*
(Gross cash+ "cash" FCF+undrawn)/ST debt	*x*	*-2.11*	*-0.04*	*1.46*	*3.51*
"Cash" FCF/ST debt	*x*	*-2.17*	*-1.42*	*-0.03*	*0.58*

Valuation

We have based our valuation on the latest business plan provided by the group, given that the nature of the business model provides some certainty on the future income received, driven by the projects under development, although further growth is highly dependent on the company's ability to capitalise the multiple projects it has in the pipeline.

Our valuation is a blend of several different metrics. The DCF calculation is based on current and future projects and assumptions in terms of the leading position of its market share and future capacity installed. The margin estimated for 2019 onwards has been normalised such that the medium-term margin calculations reflect the exposure to all sectors within the waste value chain in which Ebioss operates.

Following this, our DCF model assumes a normalised CAGR of 5% (above that of comparative companies) as Ebioss is currently evolving with a privileged position in a developing market, while peers are in highly competitive and mature markets. Future growth might be far greater but we prefer a more cautious approach for the moment until the project pipeline starts to transform itself into reality (as projects take between 18 and 24 months to be completed) and momentum is gained.

We apply a normalised CAGR (5%) as well on capital expenditures from 2019 onwards, which is above the group's investment expectations, as we believe the group may have to invest directly in some projects linked to its EGT technology (via minority equity positions), in line with the agreement with the China Energy Company, to factor the projects where third parties will not be able to cover the remaining project stakes. We maintain the firm's maintenance level of investment steadily at around €0.4m.

Within the framework of a NAV-based approach, we construct our NAV taking into account the different subsidiaries (projects) identified by the company for both current and future projects. We are cautious in our multiples compared to peers as the best profit-generating projects are currently under development and are likely to be fully operational from 2017 onwards.

Following this, it is important to note that within the framework of our NAV-based approach, the group's sum of the parts (SOTP) in 2019 already includes completion of the advanced projects in the development pipeline (contributing the full amount of the corresponding cash flows and profits of each subsidiary, the discounting factor for what would be money worth at the time and the holding's debt). Projects take on average between 18 to 24 months to be completed; hence, the billing process and record revenues can be postponed if there is a delay (even if the project is under development).

As Ebioss's business model is unique, a comparison with other companies within the AlphaValue universe is difficult. We have chosen various peers whose combination better reflects the unique world in which Ebioss is evolving. We include ERG, as it has a strong presence in renewable energies (wind and hydro). We also add Gamesa, Nordex, and Vestas, companies which are pure players in the field of renewable energies (construction of wind turbines with a maintenance service offer). Tecnicas Reunidas, which is an engineering, procurement and construction company (EPC) of oil and gas facilities. These stocks, although significantly larger, are one way or another following an economic approach similar to the one currently being pursued by Ebioss within the whole value chain of the waste business.
Nevertheless, Ebioss's leadership position within its business, a far higher market share than peers and higher growth expectations provide the company a comparative advantage. Based on this and given that the investment in capital-intensive projects is almost complete, combined with Ebioss's smaller size compared to peers and the leadership position within its sector (being the sole producer with a proven track record, technological advantage and a high market share), we apply a 40% premium to the peer multiples.

Concerning dividends, we start from a zero dividend distribution assumption and thus include no dividends in our model; however, Ebioss's management has confirmed its willingness to start a dividend distribution approach based on a payout ratio starting from 2018 as operating cash flows improve. For the time being, given that there are no clear measures yet taken on the subject, we assume a zero dividend basis, although we believe this offers some possible upward potential for investors once the payout ratio and a clear dividend policy have been implemented.

Valuation

All in all, we believe the difference between our recommendation and the current stock price is a purely driven market gap which undervalues the group, which has been negatively affected by the MAB exchange scandal. We believe the group would be able to regain its pre-Gowex valuation once markets recognise its growth potential, proven technology and leading market share position.

Valuation Summary

Benchmarks		Values (€)	Upside	Weight
DCF		4.55	533%	35%
NAV/SOTP per share		4.09	469%	20%
EV/Ebitda	*Peers*	1.44	100%	20%
P/E	*Peers*	1.44	100%	10%
Dividend Yield	*Peers*	0.00	-100%	10%
P/Book	*Peers*	1.44	100%	5%
Target Price		**2.91**	**305%**	

Comparison based valuation

Computed on 18 month forecasts	P/E (x)	Ev/Ebitda (x)	P/Book (x)	Yield(%)
Peers ratios	16.2	7.22	1.63	2.29
Ebioss Energy's ratios	11.2	4.21	0.44	0.00
Premium	40.0%	40.0%	40.0%	40.0%
Default comparison based valuation (€)	**1.44**	**1.44**	**1.44**	**0.00**
Vestas Wind Systems	12.2	5.03	2.51	2.58
Siemens Gamesa Renewable Energy	20.6	10.1	1.09	1.74
ERG	24.3	8.80	1.41	2.96
Tecnicas Reunidas	41.1	19.2	4.16	3.59
Nordex SE	31.1	5.85	1.05	0.00

DCF

DCF Valuation Per Share

WACC	%	6.56	Avg net debt (cash) at book value	€th	23,283
PV of cashflow FY1-FY11	€th	33,460	Provisions	€th	155
FY11CF	€th	6,853	Unrecognised actuarial losses (gains)	€th	0.00
Normalised long-term growth"g"	%	2.00	Financial assets at market price	€th	5,263
Terminal value	€th	150,344	Minorities interests (fair value)	€th	-200
PV terminal value	€th	79,654	Equity value	€th	95,139
PV terminal value in % of total value	*%*	*70.4*	Number of shares	Th	20,918
Total PV	€th	113,114	Implied equity value per share	€	4.55

Assessing The Cost Of Capital

Synthetic default risk free rate	%	3.50	Company debt spread	bp	250
Target equity risk premium	%	5.00	Marginal Company cost of debt	%	6.00
Tax advantage of debt finance (normalised)	%	30.0	**Company beta (leveraged)**	**x**	**1.28**
Average debt maturity	Year	5	Company gearing at market value	%	155
Sector asset beta	x	0.64	Company market gearing	%	60.7
Debt beta	x	0.50	**Required return on geared equity**	**%**	**9.90**
Market capitalisation	€th	15,019	Cost of debt	%	4.20
Net debt (cash) at book value	€th	23,231	**Cost of ungeared equity**	**%**	**6.71**
Net debt (cash) at market value	€th	21,293	WACC	%	6.56

DCF Calculation

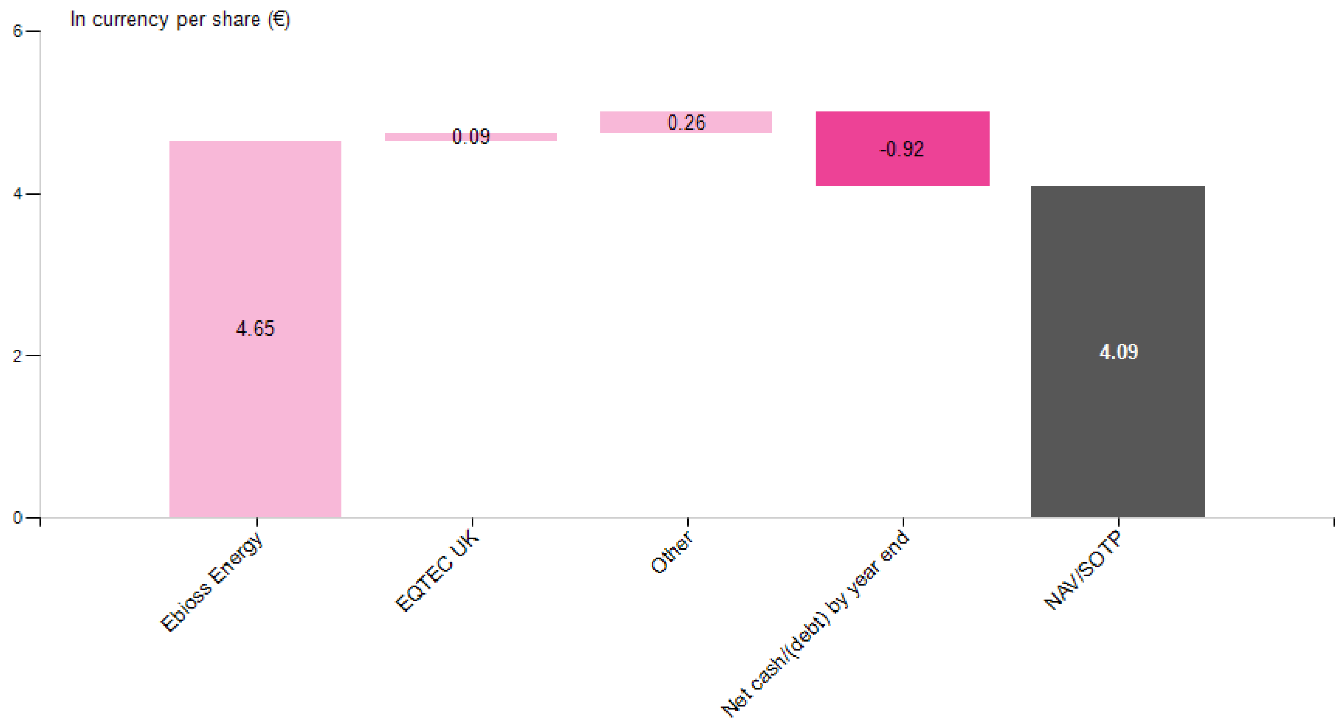
		12/16A	12/17E	12/18E	12/19E	Growth	12/20E	12/27E
Sales	€th	8,032	39,073	51,220	58,986	**5.00%**	61,935	87,148
EBITDA	€th	-3,214	5,494	7,880	9,046	**5.00%**	9,498	13,364
EBITDA Margin	*%*	*-40.0*	*14.1*	*15.4*	*15.3*		*15.3*	*15.3*
Change in WCR	€th	341	-5,435	-3,669	-1,846	**5.00%**	-1,938	-2,727
Total operating cash flows (pre tax)	€th	-5,548	133	3,237	5,700		7,560	10,637
Corporate tax	€th	732	-983	-915	-1,047	**5.00%**	-1,099	-1,547
Net tax shield	**€th**	**-299**	**-392**	**-398**	**-405**	**5.00%**	**-425**	**-598**
Capital expenditure	€th	-1,733	-1,000	-1,100	-1,200	**5.00%**	-1,260	-1,773
Capex/Sales	*%*	*-21.6*	*-2.56*	*-2.15*	*-2.03*		*-2.03*	*-2.03*
Pre financing costs FCF (for DCF purposes)	€th	-6,848	-2,242	824	3,048		4,775	6,719
Various add backs (incl. R&D, etc.) for DCF purposes	€th							
Free cash flow adjusted	**€th**	**-6,848**	**-2,242**	**824**	**3,048**		**4,775**	**6,719**
Discounted free cash flows	**€th**	**-6,848**	**-2,242**	**773**	**2,684**		**3,947**	**3,560**
Invested capital	€	49.5	52.8	54.5	53.9		56.6	79.7

NAV/SOTP (edit)

NAV/SOTP Calculation

	% owned	Valuation technique	Multiple used	Valuation at 100% (€th)	Stake valuation (€th)	In currency per share (€)	% of gross assets
Ebioss Energy	100%	EV/EBITDA	15	97,200	97,200 [1]	4.65	92.9%
EQTEC UK	50.0%	- Listed -		3,910	1,956	0.09	1.87%
Other					5,463 [2]	0.26	5.22%
Total gross assets					**104,619**	**5.00**	**100%**
Net cash/(debt) by year end					-19,166 [3]	-0.92	-18.3%
Commitments to pay							
Commitments received							
NAV/SOTP					85,454	4.09	81.7%
Number of shares net of treasury shares - year end (Th)					**20,918**		
NAV/SOTP per share (€)					**4.09**		
Current discount to NAV/SOTP (%)					**82.4**		

1. Adjusted for EQTEC UK earnings.
2. Financial fixed assets minus minority interests
3. Adjusted for TNL and EQTEC share



Worth Knowing

Ebioss Energy is a holding company registered in Sofia, Bulgaria. It was incorporated on 07 January 2011 as Teteven Biomass EOOD with Elektra Holding AD owning 100% of its share capital. On 28 March 2012 the name was changed from Teteven Biomass to Ebioss Energy after the fusion with EQTEC Iberia.

Despite being registered in Bulgaria, the group's management has listed the company for trading on Spain's stock market, starting trading on the MAB in 2013, based mainly on the financial expertise executive members have in the country.

Ebioss Energy is traded on the Mercado Alernativo Bursatil (MAB) in Spain, which is a stock exchange under the supervision of Bolsas y Mercados Españoles (BME), focused on small cap companies looking for growth financing. Previous to the 2014 crisis caused by the Gowex scandal, the exchange comprised 23 stocks; nevertheless, the earthquake created by the false accounting and contracts of Jenaro Garcia (Gowex CEO) has directly hit the credibility of the exchange itself, the companies traded on it and its regulator.

Even if Ebioss had nothing to do with the case, the group has been negatively impacted by the view of the MAB exchange with a substantial decrease in its stock price and market capitalisation (its share falling from €3.04 to €0.77 in only 5 months, losing 67% of its market value), although the group showed positive results and growth.

Following the Gowex scandal, Ebioss and three other companies have requested to be withdrawn from the MAB exchange traded in Madrid (Bolsa de Madrid). Due to the lack of response from the Madrid exchange and in order not to be identified with such an unrelated issue, Ebioss is considering the possibility of either a double listing or full transfer to either the Paris or London exchanges. Foreign trading will not only attract additional investors but will also help the group regain the investor confidence lost in the MAB scandal.

At the general meeting of Ebioss Energy held on 13 February 2015 a resolution was adopted for the shares of the company to be admitted for trading on the alternative stock market in Paris, France (Alternext) or on the alternative stock market in London, United Kingdom (AIM) via either a private placement, and/or a dual listing.

Moreover, following the 2013 listing on the Alternative Spanish Market (MAB) Ebioss had three capital increases: one in July 2013 for €1.8m, the second for €9.2m in November 2013 (with a 2/1 split) and the third for €15.8m in May 2014 (with a 5/1 split). All three capital increases involved share issuance and the consequent dilution.

At Ebioss's general meeting held on 10 April 2014, following the capital increases held in 2013 and 2014, the Board of Directors had to take into account the dilution weight on the stock price, by changing from €2.56 to €0.51 the nominal value of the shares of the company.

The different capital increases performed have had a significant effect on the number of shares outstanding:

• At 31 December 2012, 2.43m shares outstanding;
• At 31 December 2013, 7.05m shares outstanding;
• At 31 December 2014, 40.91m shares outstanding.

Although dilution weighed on Ebioss' stock price, at the time, the Board of Directors preferred this approach rather than debt issuance as it enabled the company to acquire with shares the different subsidiaries held by the group, which in effect explains the strong balance sheet profile of the holding company, despite the multiple acquisitions.

Unstable Bulgarian regulation:
On 6 March 2015, a change in the Bulgarian Renewable Energy Act (REA) affected the company due to the modifications applied to the operating conditions linked to renewable energy producers. The newly-amended act now states that the energy subsidiaries of the holding group (Karlovo and Heat) may produce electricity with a power capacity up to 1.5MW, using a combined cycle and where the percentage of the animal manure on the biomass used as material should not be less than 50%.

Worth Knowing

Following March's Bulgarian regulatory change, a second amendment was provided by the Bulgarian parliament on 24 July 2015: signed and approved by the president and enacted under official report. From this date onwards, the modifications to the Bulgarian Renewable Energy Act modified the feed-in-tariffs paid to biomass producers and the corresponding contracts for difference (CfD): new subsidy tariffs would be provided only to those generation units working on a combined cycle with at least 60% of animal manure (rising from 50%) on the biomass used for electricity generation.

Moreover, the greatest impact for Ebioss comes from the amendments linked to power produced from biomass sources. From the amendment onwards, the electricity producer must be from an authorized animal farmer with at least 3 years of registered practice before submitting the request for network connection. Furthermore, the electricity producer must also own a minimum number of registered animals to demonstrate a legitimate and reliable source of animal manure used as raw material.

The new regulatory measures imposed by the Bulgarian government on the REA, limit the production of biomass energy to a handful of animal farm owners, limiting the access of other investors given that these energy sources would not be covered by the feed-in-tariffs proposed by the government. In order for Ebioss to meet the requirements for its already constructed gasification power plants (Karlovo and Heat), it would need to create a joint venture with a local animal farmer. However, such an option was rapidly discarded by management as it would diversify the company into a field that is neither its strategic objective nor within its economic business cycle.

Hence, as a result of the regulatory changes and to quickly adapt to the new measures, the group has decided to implement a new usage for both Karlovo and Heat: instead of selling the electricity back to the network provider (EVN) at a regulated tariff, the cogeneration energy (electricity and heat) provided by the two units would be utilized for internal usage on the Stroevo pelletiser unit, which has been constructed adjacent to the biomass power plant. Following this approach and to optimise the usage of the electricity generated by the two gasification units, it has been decided to increase the pellet production of the biomass distribution subsidiary from 6 tons/hour to 12-14 tons/hour.

Following the new approach, the Karlovo and Heat electricity generation units and the Stroevo pelletizer unit will all be regrouped within the same business unit (i.e. the Bulgarian operations division).

Shareholders

Name	% owned	Of which % voting rights	Of which % free to float
Elektra Holding AD	36.4%	36.4%	0.00%
Sofia Biomass EOOD	7.53%	7.53%	0.00%
Sun Group Bulgaria EOOD	5.73%	5.73%	0.00%
Origina Bulgaria EOOD	1.89%	1.89%	0.00%
Antigona Bulgaria	1.25%	1.25%	0.00%
Apparent free float			**47.2%**

Financials

Valuation Key Data

		12/16A	12/17E	12/18E	12/19E
Adjusted P/E	**x**	**-11.5**	**ns**	**10.2**	**7.48**
Reported P/E	x	-11.6	-159	10.2	7.48
EV/EBITDA(R)	**x**	**-19.6**	**7.46**	**4.25**	**3.55**
P/Book	**x**	**1.45**	**0.70**	**0.44**	**0.43**
Dividend yield	**%**	**0.00**	**0.00**	**0.00**	**0.00**
Free cash flow yield	*%*	*-15.8*	*-13.7*	*-0.69*	*14.0*
Average stock price	€	1.18	1.10	0.72	0.72

Consolidated P&L

		12/16A	12/17E	12/18E	12/19E
Sales	€th	8,032	39,073	51,220	58,986
Sales growth	*%*	*-45.3*	*386*	*31.1*	*15.2*
Sales per employee	*€th*	*47.2*	*206*	*259*	*288*
Organic change in sales	*%*				
Purchases and external costs (incl. IT)	€th	-8,435	-30,664	-38,872	-44,821
Staff costs	€th	-2,811	-2,915	-4,468	-5,119
Operating lease payments	€th				
Cost of sales/COGS (indicative)	€th				
EBITDA	€th	-3,214	5,494	7,880	9,046
EBITDA(R)	€th	-3,214	5,494	7,880	9,046
EBITDA(R) margin	*%*	*-40.0*	*14.1*	*15.4*	*15.3*
EBITDA(R) per employee	*€th*	*-18.9*	*28.9*	*39.8*	*44.1*
Depreciation	€th	-527	-1,900	-2,360	-2,488
Depreciations/Sales	*%*	*6.56*	*4.86*	*4.61*	*4.22*
Amortisation	€th				
Underlying operating profit	€th	-3,741	3,594	5,520	6,558
Underlying operating margin	*%*	*-46.6*	*9.20*	*10.8*	*11.1*
Other income/expense (cash)	€th	-1,247			
Other inc./ exp. (non cash; incl. assets revaluation)	€th				
Earnings from joint venture(s)	€th				
Impairment charges/goodwill amortisation	€th	[3]	[3]		
Operating profit (EBIT)	€th	-4,988	3,594	5,520	6,558
Interest expenses	€th	-1,097	-1,305	-1,325	-1,350
of which effectively paid cash interest expenses	*€th*	*-152*			
Financial income	€th	99.0			
Other financial income (expense)	€th				
Net financial expenses	€th	-998	-1,305	-1,325	-1,350
of which related to pensions	*€th*		*0.00*	*0.00*	*0.00*
Pre-tax profit before exceptional items	€th	-5,986	2,289	4,195	5,208
Exceptional items and other (before taxes)	€th				
of which cash (cost) from exceptionals	*€th*				
Current tax	€th	732	-983	-915	-1,047
Impact of tax loss carry forward	€th				
Deferred tax	€th				
Corporate tax	€th	732	-983	-915	-1,047
Tax rate	*%*	*12.2*	*42.9*	*21.8*	*20.1*
Net margin	*%*	*-65.4*	*3.34*	*6.40*	*7.05*
Equity associates	€th	-8.00			
Actual dividends received from equity holdings	*€th*				
Minority interests	€th	1,139	-1,451	-1,811	-2,152
Actual dividends paid out to minorities	*€th*				
Income from discontinued operations	€th				
Attributable net profit	€th	-4,123	-145	1,469	2,009
Impairment charges/goodwill amortisation	€th	0.00	0.00	0.00	0.00
Other adjustments	€th				
Adjusted attributable net profit	€th	-4,123	-145	1,469	2,009
Interest expense savings	€th				

3. Due to a regulatory change, there has been a decrease in the allowed MW installed (Karlovo and Heat) and this is no longer covered by feed-in-tariffs. The energy produced will be used for own consumption.

Financials

Fully diluted adjusted attr. net profit	€th	-4,123	-145	1,469	2,009
NOPAT	€th	-2,627	2,516	3,864	4,590

Cashflow Statement

		12/16A	12/17E	12/18E	12/19E
EBITDA	€th	-3,214	5,494	7,880	9,046
Change in WCR	€th	341	-5,435	-3,669	-1,846
of which (increases)/decr. in receivables	*€th*	*-1,280*	*-10,138*	*-6,381*	*-3,579*
of which (increases)/decr. in inventories	*€th*	*401*	*-2,234*	*-1,196*	*-765*
of which increases/(decr.) in payables	*€th*	*1,220*	*6,901*	*3,907*	*2,498*
of which increases/(decr.) in other curr. liab.	*€th*	*0.00*	*36.0*	*0.00*	*0.00*
Actual dividends received from equity holdings	€th	0.00	0.00	0.00	0.00
Paid taxes	€th	-84.0	-983	-915	-1,047
Exceptional items	€th				
Other operating cash flows	€th	-1,859	74.0	-974	-1,500
Total operating cash flows	€th	-4,816	-850	2,322	4,653
Capital expenditure	€th	-1,733 (4)	-1,000	-1,100	-1,200
Capex as a % of depreciation & amort.	*%*	*329*	*52.6*	*46.6*	*48.2*
Net investments in shares	€th	525			
Other investment flows	€th	-885			
Total investment flows	€th	-2,093	-1,000	-1,100	-1,200
Net interest expense	€th	-998	-1,305	-1,325	-1,350
of which cash interest expense	*€th*	*-152*	*-1,305*	*-1,325*	*-1,350*
Dividends (parent company)	€th				
Dividends to minorities interests	€th	0.00	0.00	0.00	0.00
New shareholders' equity	€th	-372			
of which (acquisition) release of treasury shares	*€th*				
(Increase)/decrease in net debt position	€th	5,153	5,191	1,840	3,700
Other financial flows	€th	-27.0			
Total financial flows	€th	4,602	3,886	515	2,350
Change in cash position	€th	-2,307	2,036	1,737	5,803
Change in net debt position	€th	-7,460	-3,155	-103	2,103
Free cash flow (pre div.)	€th	-7,547	-3,155	-103	2,103
Operating cash flow (clean)	€th	-4,816	-850	2,322	4,653
Reinvestment rate (capex/tangible fixed assets)	*%*	*6.70*	*3.99*	*4.66*	*5.41*

4. High investment required for the construction of its own gasification power plants, which later can be used as a showroom for future clients.

Ebioss Energy (Buy)

Alternative Energy / Bulgaria

Financials

Balance Sheet

		12/16A	12/17E	12/18E	12/19E
Goodwill	€th	4,684	4,194	4,194	4,190
Other intangible assets	€th	11,889	10,640	10,080	9,520
Total intangible	€th	16,573	14,834	14,274	13,710
Tangible fixed assets	€th	25,862	25,037	23,626	22,200
Financial fixed assets (part of group strategy)	€th	811	1,265	1,265	810
Other financial assets (investment purpose mainly)	€th	1,625	1,500	1,500	1,500
of which available for sale	*€th*	*725*	*750*	*750*	*750*
WCR	€th	6,268	11,703	15,372	17,218
of which trade & receivables (+)	*€th*	*10,386*	*20,524*	*26,905*	*30,484*
of which inventories (+)	*€th*	*1,613*	*3,847*	*5,043*	*5,807*
of which payables (+)	*€th*	*5,667*	*12,568*	*16,475*	*18,973*
of which other current liabilities (+)	*€th*	*64.0*	*100*	*100*	*100*
Other current assets	€th	2,832	3,008	3,158	3,316
of which tax assets (+)	*€th*	*1,985*	*2,000*	*2,200*	*2,400*
Total assets (net of short term liabilities)	€th	53,971	57,347	59,196	58,755
Ordinary shareholders' equity (group share)	€th	32,895	32,741	33,785	34,983
Minority interests	€th	-379	-200	380	720
Provisions for pensions	€th	0.00	0.00	0.00	0.00
Other provisions for risks and liabilities	€th	149	155	161	170
Deferred tax liabilities	€th	1,134	1,300	1,400	1,500
Other liabilities	€th	96.0	120	135	150
Net debt / (cash)	€th	20,076	23,231	23,334	21,232
Total liabilities and shareholders' equity	€th	53,971	57,347	59,196	58,755
Average net debt / (cash)	€th	16,633	21,654	23,283	22,283

EV Calculations

		12/16A	12/17E	12/18E	12/19E
EV/EBITDA(R)	**x**	**-19.6**	**7.46**	**4.25**	**3.55**
EV/EBIT (underlying profit)	**x**	**-16.8**	**11.4**	**6.07**	**4.90**
EV/Sales	**x**	**7.83**	**1.05**	**0.65**	**0.54**
EV/Invested capital	x	1.27	0.78	0.61	0.60
Market cap	€th	47,861	23,038	15,019	15,019
+ Provisions (including pensions)	€th	149	155	161	170
+ Unrecognised actuarial losses/(gains)	€th	0.00	0.00	0.00	0.00
+ Net debt at year end	€th	20,076	23,231	23,334	21,232
+ Leases debt equivalent	€th	0.00	0.00	0.00	0.00
- Financial fixed assets (fair value) & Others	€th	4,832	5,263	5,368	5,026
+ Minority interests (fair value)	€th	-379	-200	380	720
= Enterprise Value	**€th**	**62,875**	**40,961**	**33,526**	**32,115**

Ebioss Energy (Buy)

Alternative Energy / Bulgaria

Financials

Per Share Data

Per Share Data		12/16A	12/17E	12/18E	12/19E
Adjusted EPS (bfr gwill amort. & dil.)	**€**	**-0.10**	**0.00**	**0.07**	**0.10**
Growth in EPS	*%*	*n/a*	*n/a*	*n/a*	*36.7*
Reported EPS	€	-0.10	-0.01	0.07	0.10
Net dividend per share	**€**	**0.00**	**0.00**	**0.00**	**0.00**
Free cash flow per share	€	-0.19	-0.10	0.00	0.10
Operating cash flow per share	€	-0.12	-0.03	0.11	0.22
Book value per share	€	0.81	1.57	1.62	1.67
Number of ordinary shares	**Th**	**40,912**	**20,918**	**20,918**	**20,918**
Number of equivalent ordinary shares (year end)	Th	40,912	20,918	20,918	20,918
Number of shares market cap.	Th	40,912	20,918	20,918	20,918
Treasury stock (year end)	Th	306			
Number of shares net of treasury stock (year end)	Th	40,606	20,918	20,918	20,918
Number of common shares (average)	**Th**	**40,292**	**30,762**	**20,918**	**20,918**
Conversion of debt instruments into equity	Th				
Settlement of cashable stock options	Th				
Probable settlement of non mature stock options	Th				
Other commitments to issue new shares	Th				
Increase in shares outstanding (average)	Th	0.00	0.00	0.00	0.00
Number of diluted shares (average)	**Th**	**40,292**	**30,762**	**20,918**	**20,918**
Goodwill per share (diluted)	€	0.00	0.00	0.00	0.00
EPS after goodwill amortisation (diluted)	€	-0.10	0.00	0.07	0.10
EPS before goodwill amortisation (non-diluted)	€	-0.10	0.00	0.07	0.10
Actual payment	€				
Preferential dividend	€	0.00	0.00	0.00	0.00
Payout ratio	**%**	**0.00**	**0.00**	**0.00**	**0.00**
Capital payout ratio (div +share buy back/net income)	**%**	**0.00**	**0.00**	**0.00**	

Funding - Liquidity

Funding - Liquidity		12/16A	12/17E	12/18E	12/19E
EBITDA	€th	-3,214	5,494	7,880	9,046
Funds from operations (FFO)	€th	-5,309	3,280	4,666	5,149
Ordinary shareholders' equity	**€th**	**32,895**	**32,741**	**33,785**	**34,983**
Gross debt	€th	21,099	26,290	28,130	31,830
o/w Less than 1 year - Gross debt	€th	3,086	2,215	3,215	3,615
o/w 1 to 5 year - Gross debt	€th	3,528	4,590	4,430	5,730
of which Y+2	€th	1,024	754	894	1,194
of which Y+5	€th	2,504	3,836	3,536	4,536
o/w Beyond 5 years - Gross debt	€th	14,485	19,485	20,485	22,485
+ Gross Cash	€th	1,023	3,059	4,796	10,598
= Net debt / (cash)	**€th**	**20,076**	**23,231**	**23,334**	**21,232**
Issued bonds	€th	12,254	17,254	18,254	20,254
Other financing	€th	8,845	9,036	9,876	11,576
Gearing (at book value)	%	50.6	66.1	68.9	63.7
Adj. Net debt/EBITDA(R)	*x*	*-6.25*	*4.23*	*2.96*	*2.35*
Adjusted Gross Debt/EBITDA(R)	*x*	*-6.61*	*4.81*	*3.59*	*3.54*
Adj. gross debt/(Adj. gross debt+Equity)	*%*	*39.2*	*44.7*	*45.6*	*47.8*
Ebit cover	*x*	*-3.75*	*2.75*	*4.17*	*4.86*
FFO/Gross Debt	*%*	*-25.0*	*12.4*	*16.5*	*16.1*
FFO/Net debt	*%*	*-26.4*	*14.1*	*20.0*	*24.2*
FCF/Adj. gross debt (%)	*%*	*-35.5*	*-11.9*	*-0.37*	*6.57*
(Gross cash+ "cash" FCF+undrawn)/ST debt	*x*	*-2.11*	*-0.04*	*1.46*	*3.51*
"Cash" FCF/ST debt	*x*	*-2.17*	*-1.42*	*-0.03*	*0.58*

Ebioss Energy (Buy)

Alternative Energy / Bulgaria

Financials

ROE Analysis (Dupont's Breakdown)

		12/16A	12/17E	12/18E	12/19E
Tax burden (Net income/pretax pre excp income)	x	0.69	-0.06	0.35	0.39
EBIT margin (EBIT/sales)	%	-62.1	9.20	10.8	11.1
Assets rotation (Sales/Avg assets)	%	15.2	70.2	87.9	100
Financial leverage (Avg assets /Avg equity)	x	1.51	1.70	1.75	1.72
ROE	**%**	**-11.8**	**-0.44**	**4.42**	**5.84**
ROA	%	-10.2	6.97	10.4	12.3

Shareholder's Equity Review (Group Share)

		12/16A	12/17E	12/18E	12/19E
Y-1 shareholders' equity	€th	25,583	21,088	32,741	33,785
+ Net profit of year	€th	-4,123	-145	1,469	2,009
- Dividends (parent cy)	€th	0.00	0.00	0.00	0.00
+ Additions to equity	€th	-372	0.00	0.00	0.00
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		11,798	-425	-811
= Year end shareholders' equity	**€th**	**21,088**	**32,741**	**33,785**	**34,983**

Staffing Analytics

		12/16A	12/17E	12/18E	12/19E
Sales per staff	€th	47.2	206	259	288
Staff costs per employee	€th	-16.5	-15.3	-22.6	-25.0
Change in staff costs	*%*	*-2.73*	*3.70*	*53.3*	*14.6*
Change in unit cost of staff	*%*	*-31.3*	*-7.22*	*47.1*	*10.7*
Staff costs/(EBITDA+Staff costs)	*%*	*-698*	*34.7*	*36.2*	*36.1*
Average workforce	**unit**	**170**	**190**	**198**	**205**
Europe	unit	120	130	135	0.00
North America	unit	0.00	0.00	0.00	0.00
South Americas	unit	10.0	12.0	13.0	0.00
Asia	unit	40.0	48.0	50.0	0.00
Other key countries	unit	0.00	0.00	0.00	0.00
Total staff costs	**€th**	**-2,811**	**-2,915**	**-4,468**	**-5,119**
Wages and salaries	€th	-2,766	-2,865	-4,378	-5,019
of which social security contributions	*€th*	*-399*	*-400*	*-700*	*-800*
Equity linked payments	€th				
Pension related costs	€th		0.00	0.00	0.00
Benefits related payments	€th	-45.0	-50.0	-90.0	-100

Divisional Breakdown Of Revenues

		12/16A	12/17E	12/18E	12/19E
Engineering	€th	2,683	25,350	32,840	38,640
Bulgarian operations	€th	267 (1)	4,762 (1)	11,349 (1)	11,872
Italian operations	€th	161	851	851	851
Urban waste services	€th	4,920	9,110	7,180	8,623
Other	€th	(2)	-1,000 (2)	-1,000 (2)	-1,000
Total sales	**€th**	**8,031**	**39,073**	**51,220**	**58,986**

1. Due to a regulatory change on the Bulgarian REA, the biomass units are no longer covered by the Feed-in-Tariffs. The energy produced should be used for own use on the pelletiser plant.
2. Intra-group eliminations

Financials

Divisional Breakdown Of Earnings

		12/16A	12/17E	12/18E	12/19E
EBITDA/R Analysis					
Engineering	€th	-100	3,802	3,420	4,096
Bulgarian operations	€th	-421	2,404	4,772	4,891
Italian operations	€th	-19.0	123	120	117
Urban waste services	€th	-303	1,010	1,505	1,807
Other/cancellations	€th	(2)	-1,844 (2)	-1,908 (2)	-1,869
Total	**€th**	**-843**	**5,495**	**7,909**	**9,042**
EBITDA/R margin	%	-10.5	14.1	15.4	15.3

2. Intra-group eliminations

Revenue Breakdown By Country

		12/16A	12/17E	12/18E	12/19E
Bulgaria	%	18.0	20.0		
Spain	%	14.0	5.00		
Portugal	%	15.0	15.0		
Italy	%	3.00	5.00		
Other	%	50.0	55.0		

ROCE/CFROIC/Capital Invested

		12/16A	12/17E	12/18E	12/19E
ROCE (NOPAT+lease exp.(1-tax))/(net) cap employed adjusted*	*%*	*-5.30*	*4.76*	*7.09*	*8.51*
CFROIC	*%*	*-15.2*	*-5.97*	*-0.19*	*3.90*
Goodwill	€th	4,684	4,194	4,194	4,190
Accumulated goodwill amortisation	*€th*	*0.00*	*0.00*	*0.00*	*0.00*
All intangible assets	€th	11,889	10,640	10,080	9,520
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	25,862	25,037	23,626	22,200
Accumulated depreciation	*€th*	*0.00*	*0.00*	*0.00*	*0.00*
WCR	€th	6,268	11,703	15,372	17,218
Other assets	€th	811	1,265	1,265	810
Unrecognised actuarial losses/(gains)	€th	0.00	0.00	0.00	0.00
Capital employed after deprec. (Invested capital)	**€th**	**49,514**	**52,839**	**54,537**	**53,938**
Capital employed before depreciation	€th	49,514	52,839	54,537	53,938

Divisional Breakdown Of Capital

		12/16A	12/17E	12/18E	12/19E
Engineering	€th	10,791	10,281	11,781	13,781
Bulgarian operations	€th	13,657	12,927	13,427	13,927
Italian operations	€th	3,946	3,570	3,560	3,510
Urban waste services	€th	6,846	7,988	8,038	10,038
Other	€th	14,274	18,073	17,731	12,682
Total capital employed	**€th**	**49,514**	**52,839**	**54,537**	**53,938**

Pension Risks

Pension matters

Ebioss is in a growth configuration and its workforce is following the same path. In 2012, Ebioss was composed of a team of 27 employees, many of them from the EQTEC division. Nowadays following the different acquisitions made by the holding company in recent years (Syngas Italy and TNL) combined with its own development, the group constitutes a group of 96 employees.

The workforce is expected to continue increasing as part of the capital raised with debt obligations could be used to hire new staff, mainly engineers for project development, as the group has multiple projects that need to be taken care of simultaneously..

Nevertheless, despite the increase in the expected future workforce, due to its relative small size and the agreements reached with employees and executives, we do not include any major pension risks. Most of the employees directly working for the group are either executives or shareholders (or both), with an agreement that covers a complementary scheme in the event of departure and indemnities.

For EQTEC's leading engineering team that developed the gasification technology and provides all the know-how (in terms of power plant design), Ebioss has established different protective measures to maintain its key employees such as royalties for developed projects in addition to EQTEC and Ebioss shares.

Summary Of Pension Risks		12/16A	12/17E	12/18E	12/19E
Pension ratio	**%**	**0.00**	**0.00**	**0.00**	**0.00**
Ordinary shareholders' equity	€th	32,895	32,741	33,785	34,983
Total benefits provisions	**€th**	**0.00**	**0.00**	**0.00**	**0.00**
of which funded pensions	*€th*	*0.00*	*0.00*	*0.00*	*0.00*
of which unfunded pensions	*€th*	*0.00*	*0.00*	*0.00*	*0.00*
of which benefits / health care	*€th*		*0.00*	*0.00*	*0.00*
Unrecognised actuarial (gains)/losses	€th	0.00	0.00	0.00	0.00
Company discount rate	*%*	*2.50*	*2.50*	*2.50*	
Normalised recomputed discount rate	%		1.50		
Company future salary increase	*%*	*2.00*	*2.00*	*2.00*	
Normalised recomputed future salary increase	%		2.00		
Company expected rate of return on plan assets	*%*	*0.50*	*0.50*	*0.50*	
Normalised recomputed expd rate of return on plan assets	%		2.00		
Funded : Impact of actuarial assumptions	**€th**		**0.00**		
Unfunded : Impact of actuarial assumptions	**€th**		**0.00**		

Geographic Breakdown Of Pension Liabilities		12/16A	12/17E	12/18E	12/19E
US exposure	%				
UK exposure	%				
Euro exposure	%	100	100	100	
Nordic countries	%				
Switzerland	%				
Other	%				
Total	%	100	100	100	0.00

Pension Risks

Balance Sheet Implications

		12/16A	12/17E	12/18E	12/19E
Funded status surplus / (deficit)	€th	0.00	0.00	0.00	0.00
Unfunded status surplus / (deficit)	€th	0.00	0.00	0.00	0.00
Total surplus / (deficit)	€th	0.00	0.00	0.00	0.00
Total unrecognised actuarial (gains)/losses	**€th**	**0.00**	**0.00**	**0.00**	**0.00**
Provision (B/S) on funded pension	€th	0.00	0.00	0.00	0.00
Provision (B/S) on unfunded pension	€th	0.00	0.00	0.00	0.00
Other benefits (health care) provision	€th		0.00	0.00	0.00
Total benefit provisions	**€th**	**0.00**	**0.00**	**0.00**	**0.00**

P&L Implications

		12/16A	12/17E	12/18E	12/19E
Funded obligations periodic costs	€th	0.00	0.00	0.00	0.00
Unfunded obligations periodic costs	€th	0.00	0.00	0.00	0.00
Total periodic costs	**€th**	**0.00**	**0.00**	**0.00**	**0.00**
of which incl. in labour costs	*€th*	*0.00*	*0.00*	*0.00*	*0.00*
of which incl. in interest expenses	*€th*	*0.00*	*0.00*	*0.00*	*0.00*

Funded Obligations

		12/16A	12/17E	12/18E	12/19E
Balance beginning of period	**€th**	**0.00**	**0.00**	**0.00**	**0.00**
Current service cost	€th		0.00	0.00	0.00
Interest expense	€th		0.00	0.00	0.00
Employees' contributions	€th				
Impact of change in actuarial assumptions	€th		0.00	0.00	0.00
of which impact of change in discount rate	*€th*		*0.00*		
of which impact of change in salary increase	*€th*		*0.00*		
Changes to scope of consolidation	**€th**				
Currency translation effects	€th				
Pension payments	€th				
Other	€th				
Year end obligation	**€th**	**0.00**	**0.00**	**0.00**	**0.00**

Plan Assets

		12/16A	12/17E	12/18E	12/19E
Value at beginning	**€th**		**0.00**	**0.00**	**0.00**
Company expected return on plan assets	€th		0.00	0.00	0.00
Actuarial gain /(loss)	€th		0.00	0.00	0.00
Employer's contribution	€th	0.00	0.00	0.00	0.00
Employees' contributions	€th	0.00	0.00	0.00	0.00
Changes to scope of consolidation	€th				
Currency translation effects	€th				
Pension payments	€th	0.00	0.00	0.00	0.00
Other	€th				
Value end of period	**€th**	**0.00**	**0.00**	**0.00**	**0.00**
Actual and normalised future return on plan assets	€th	0.00	0.00	0.00	0.00

Pension Risks

Unfunded Obligations

		12/16A	12/17E	12/18E	12/19E
Balance beginning of period	**€th**	**0.00**	**0.00**	**0.00**	**0.00**
Current service cost	€th		0.00	0.00	0.00
Interest expense	€th		0.00	0.00	0.00
Employees' contributions	€th				
Impact of change in actuarial assumptions	€th		0.00	0.00	0.00
of which Impact of change in discount rate	*€th*		*0.00*		
of which Impact of change in salary increase	*€th*		*0.00*		
Changes to scope of consolidation	€th				
Currency translation effects	€th				
Pension payments	€th				
Other	€th				
Year end obligation	**€th**	**0.00**	**0.00**	**0.00**	**0.00**

Governance & Management

The basic shareholders are those who initially subscribed to all the shares in the capital upon the incorporation, owning approximately 52.77% of the capital. The minority shareholders are those who subscribed shares in two capital increases in 2013 and 2014 on the Spanish Alternative Stock Exchange – MAB, owning 47.23% of the capital.

The managers, Jose Oscar Leiva and Luis Sanchez Angrill, have also been on the board since 2012, and Carlos Cuervo Arango was included in 2015.

Governance parameters

	Yes ✔ / No ✘	Weighting
One share, one vote	✔	25%
Chairman vs. Executive split	✘	10%
Chairman not ex executive	✘	10%
Independent directors equals or above 50% of total directors	✘	15%
Full disclosure on mgt pay (performance related bonuses, pensions and non financial benefits)	✘	10%
Disclosure of performance anchor for bonus trigger	✘	5%
Compensation committee reporting to board of directors	✘	5%
Straightforward, clean by-laws	✔	20%
Governance score	45	100%

Existing committees

- ✘ Audit / Governance Committee
- ✘ Compensation committee
- ✘ Financial Statements Committee
- ✘ Litigation Committee
- ✘ Nomination Committee
- ✘ Safety committee
- ✘ SRI / Environment

Management

Name			Function	Birth date	Date in	Date out	Compensation, in k€ (year) Cash	Equity linked
Jose Oscar LEIVA MENDEZ	M	🇪🇸	CEO		2012			
Alexandra TCHERVENIAKOVA	F	🇧🇬	CFO		2012			
Mariano SANCHO BLANCO	M	🇪🇸	Senior Executive		2012			
Luis SANCHEZ ANGRILL	M	🇪🇸	Executive Officer		2012			

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)
Jose Oscar LEIVA MENDEZ	M	🇪🇸	✘	President/Chairman of th...			2012			
Luis SANCHEZ ANGRILL	M	🇪🇸	✘	Member			2012			
Carlos CUERVO ARANGO	M	🇪🇸	✘	Member			2015			

Ebioss Energy (Buy)

Alternative Energy / Bulgaria

ALPHAVALUE CORPORATE SERVICES

Governance & Management

Human Resources

Accidents at work	Human resources development	Pay	Job satisfaction	Internal communication
25% Of H.R. Score	35% Of H.R. Score	20% Of H.R. Score	10% Of H.R. Score	10% Of H.R. Score

HR Breakdown

		Yes ✓ / No ✗	Rating
Accidents at work	**25%**		**25/100**
Set targets for work safety on all group sites?	40%	✓	10/100
Are accidents at work declining?	60%	✓	15/100
Human resources development	**35%**		**28/100**
Are competences required to meet medium term targets identified?	10%	✗	0/100
Is there a medium term (2 to 5 years) recruitment plan?	10%	✓	4/100
Is there a training strategy tuned to the company objectives?	10%	✓	4/100
Are employees trained for tomorrow's objectives?	10%	✓	4/100
Can all employees have access to training?	10%	✓	4/100
Has the corporate avoided large restructuring lay-offs over the last year to date?	10%	✓	4/100
Have key competences stayed?	10%	✓	4/100
Are managers given managerial objectives?	10%	✓	4/100
If yes, are managerial results a deciding factor when assessing compensation level?	10%	✓	4/100
Is mobility encouraged between operating units of the group?	10%	✗	0/100
Pay	**20%**		**14/100**
Is there a compensation committee?	30%	✗	0/100
Is employees' performance combining group performance AND individual performance?	70%	✓	14/100
Job satisfaction	**10%**		**7/100**
Is there a measure of job satisfaction?	33%	✗	0/100
Can anyone participate ?	34%	✓	3/100
Are there action plans to prop up employees' morale?	33%	✓	3/100
Internal communication	**10%**		**10/100**
Are strategy and objectives made available to every employee?	100%	✓	10/100
		Human Ressources score:	**84/100**

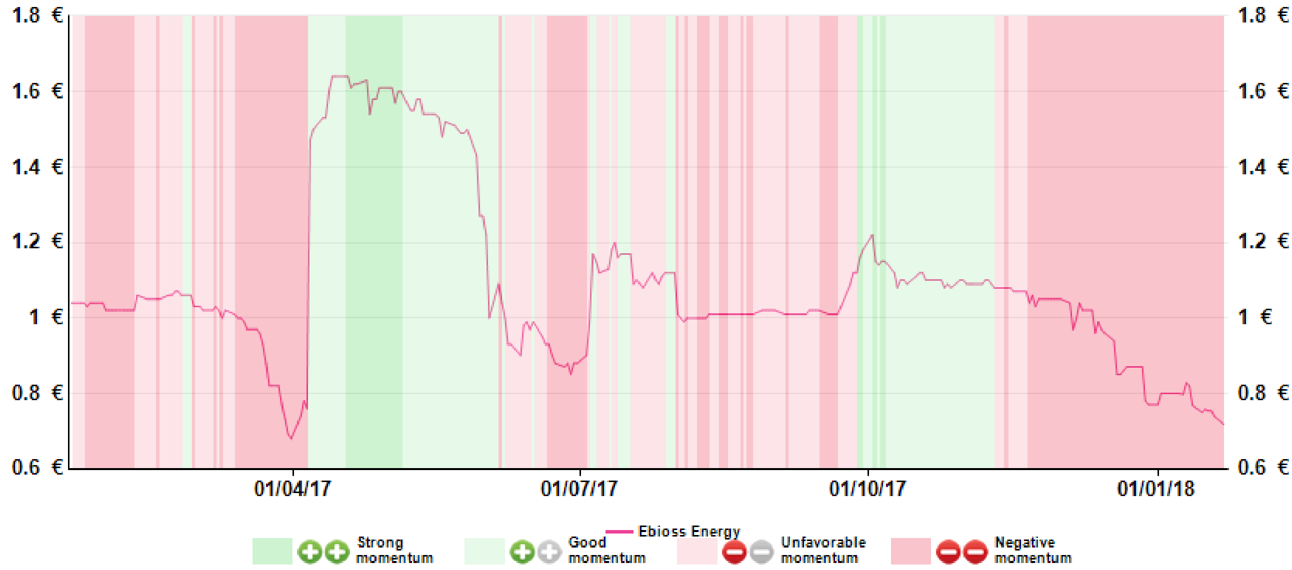
HR Score

H.R. Score : 8.4/10

▼ Utilities
■ Ebioss Energy

Graphics

Momentum



: 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

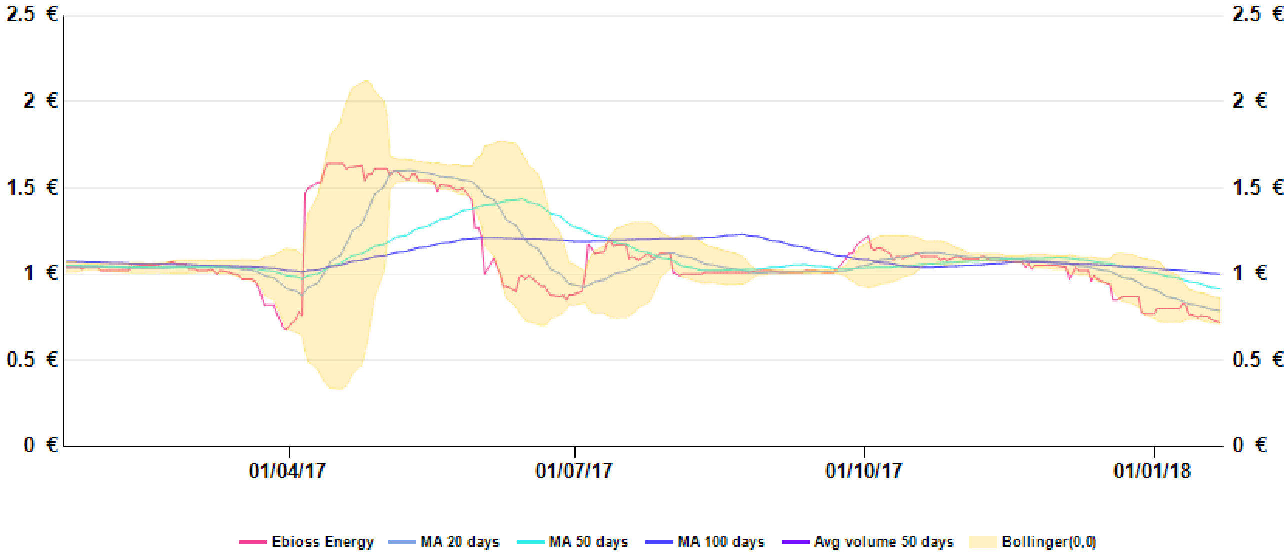
: Relatively unfavorable momentum with a neutral or negative moving average trend, but offset by an oversold pattern or lack of confirmation from volumes

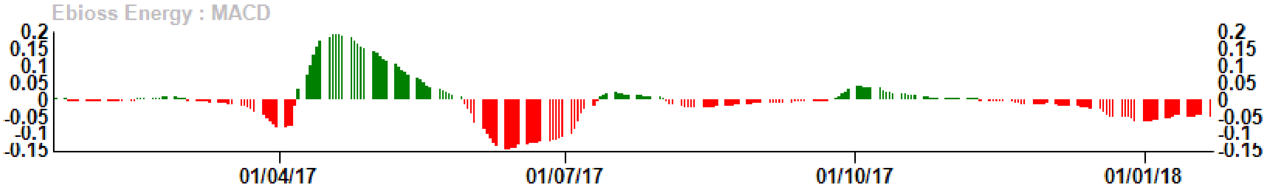
: Strongly negative momentum corresponding to a continuous and overall negative moving average trend confirmed by volumes

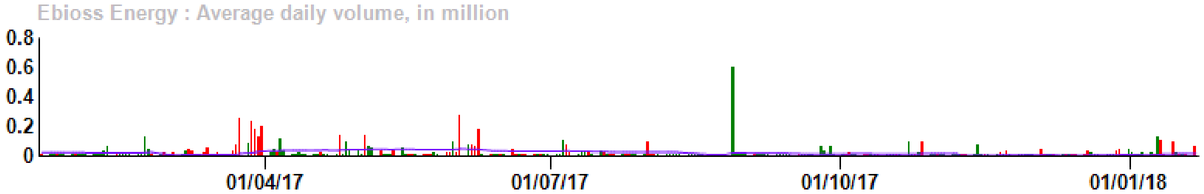
Momentum analysis consists in evaluating the stock market trend of a given financial instrument, based on the analysis of its trading flows.
The main indicators used in our momentum tool are simple moving averages over three time frames: short term (20 trading days), medium term (50 days) and long term (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.

Graphics

Moving Average MACD & Volume

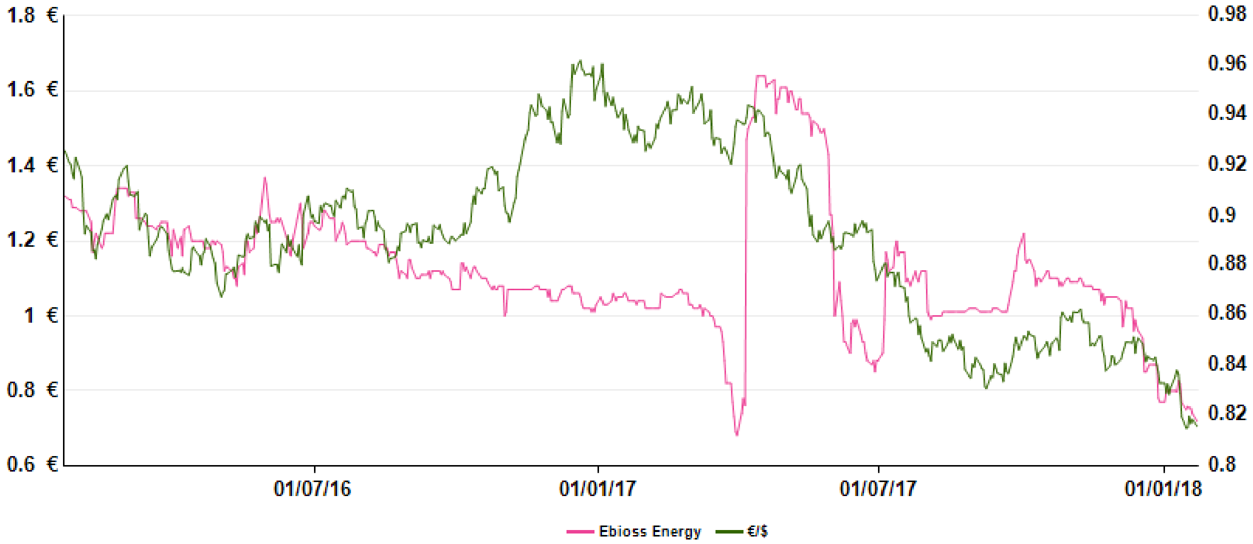




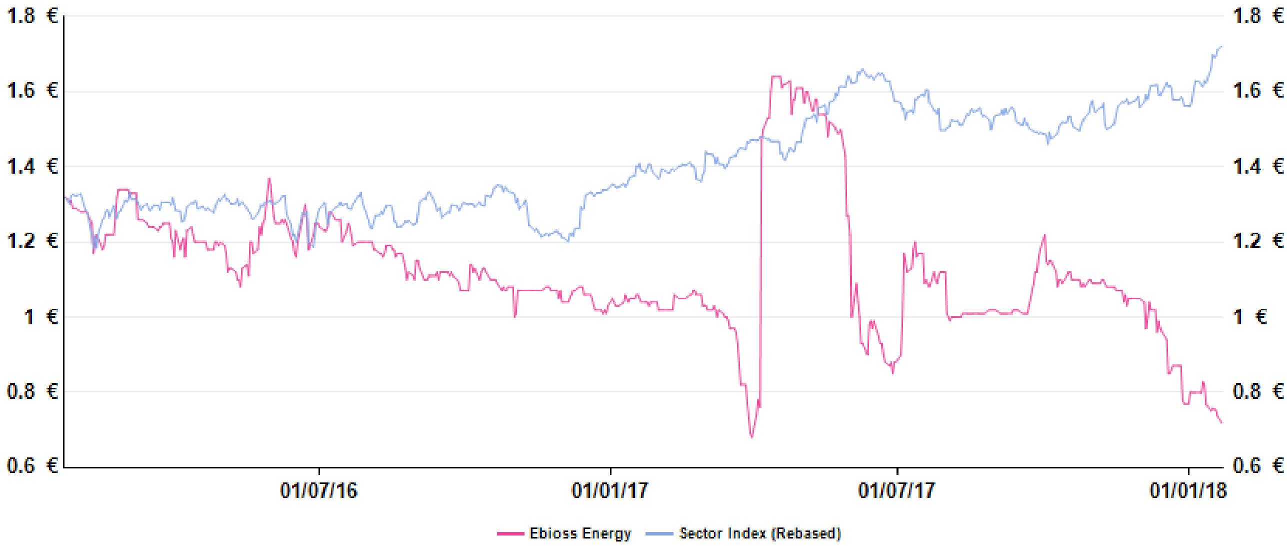


Graphics

€/$ sensitivity



Sector Utilities



Methodology

Methodology

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.

Methodology

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%	25%	15%
PE	10%	10%	10%	5%	10%	20%
EV/EBITDA	20%	20%	0%	5%	0%	0%
Yield	10%	10%	20%	5%	15%	15%
P/Book	5%	5%	5%	5%	15%	10%
Banks' instrinsic method	0%	0%	0%	0%	25%	0%
Embedded Value	0%	0%	0%	0%	0%	40%
Mkt Cap/Gross Operating Profit	0%	0%	0%	0%	10%	0%