

## THE NAVIGATOR COMPANY, S.A.

PULP &amp; PAPER

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## COMPANY REPORT

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## Navigating Through Peaceful Waters

*High operational efficiency leads to strong cash flow*

- We initiate Navigator's coverage with a **BUY recommendation and a price target of € 4.35** as of December 2017E. This price target represents an upside potential of c. 21.5% (annualized return) from the current stock price of € 3.95.
- As a vertically integrated company, Navigator is **one of the most efficient players in the industry**, taking full advantage of the entire value chain and leading to **strong cash flow** generation.
- **Continuing cost reducing measures**, to offset potential stagnation of the paper market, results in outstanding EBITDA margins, stable working capital and lower financial costs.
- **Navigator has significant investments in pipeline**, including two major expansion plans in the Pulp and Tissue segments. Moreover, the Company's most recent business segment – pellets – should begin operations this year, being fully operational by 2019F.
- **Fundamentals look attractive** with Navigator being traded at a discount to peers on P/E and EV/EBITDA, when we actually believe it should be trading at a premium given its strong cash flow profile and operational efficiency. The Company's ND/EBITDA ratio has also been consistently under the 2.0x mark and below industry peers.

## Company description

The Navigator Company S.A. is a Portugal-based company primarily engaged in Paper manufacturing activities, with further operations in the segments of Pulp, Paper, Energy, Tissue and Forestry. Headquartered in Setúbal, the Company is listed and traded on Euronext Lisbon, being also a member of PSI20, the Portuguese main stock index.

<b>Recommendation:</b>	<b>BUY</b>
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<b>Price Target FY17:</b>	<b>€ 4.35</b>
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<i>Upside Potential:</i>	21.5%
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<b>Price (as of 22-May-17)</b>	<b>€ 3.95</b>
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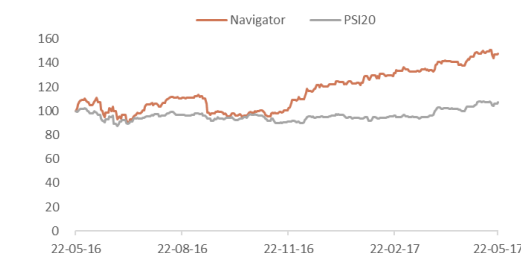
Reuters: NVGR.LS, Bloomberg: NVG PL

52-week range (€)	2.68-3.95
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Market Cap (€m)	2,834.13
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Outstanding Shares (m)	717.5
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Source: Bloomberg



Source: Bloomberg

Source: Bloomberg

(Values in € millions)	2016	2017E	2018F
Revenues	1,577	1,644	1,725
Rev. growth	-3.1%	4.2%	4.9%
EBITDA	397	421	441
EBITDA margin	25.2%	25.6%	25.6%
Net Profit	218	189	195
EPS (€)	0.30	0.26	0.27
P/E	13.0x	16.5x	15.0x
EV/EBITDA	8.7x	9.0x	8.9x
EV/Sales	2.2x	2.3x	2.3x
Net Debt to EBITDA	1.6x	2.0x	2.0x

Source: Company data, Bloomberg, Analyst estimates

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY PEDRO MORAIS DAVID, A MASTERS IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY ROSÁRIO ANDRÉ, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

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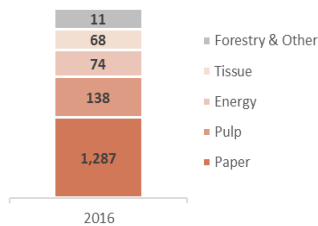
# Company Overview

## Company Description

The Navigator Company S.A. (“Navigator” or “Company”), is a Portugal-based company engaged in the paper manufacturing operations. The Company’s activities are divided into five main segments:

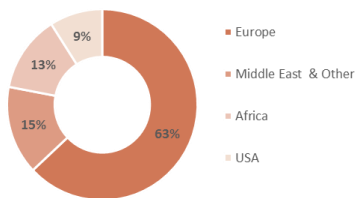
- (i) **Paper:** Leading European manufacturer of uncoated woodfree printing and writing paper (“UWF”) and the 6th leading producer worldwide;
- (ii) **Pulp:** European leader in the production of bleached eucalyptus pulp (“BEKP”) and the fifth leading producer worldwide;
- (iii) **Energy:** Portugal’s largest producer of energy from biomass, accounting for circa (“c.”) 50% of the country’s total power generation from this renewable source;
- (iv) **Tissue:** In 2015, Navigator moved into the tissue sector with the acquisition of one of the more efficient and profitable tissue manufacturers in Iberia – AMS-BR Star Paper (“AMS”);
- (v) **Forestry:** European leader in the production of certified forestry plants, managing around 120 thousand hectares of agroforestry holdings in mainland Portugal.

Figure 1: Revenue Breakdown (€ Million)



Source: Company Data

Figure 2: Exports Distribution 2016



Source: Company Data

Navigator is the largest Portuguese exporter of value added, contributing with more than 2.7 billion (>1%) to Portugal’s GDP and about 3% of Portuguese exports of goods and services, close to 8% of all containerized cargo and 7% of all containerized and conventional cargo exported through Portuguese ports.

The history of Navigator dates back to 1953 when Mr. Manuel Santos Mendonça launched a company called Companhia Portuguesa de Celulose, in Cacia, Portugal. In 1957, a team of technicians discovered a revolutionary process to produce paper pulp from eucalyptus. This remarkable achievement, combined with Mendonça’s strategy based on the consolidation, expansion and internationalization of the group, triggered a series of events that would place the Company among the world’s leading manufacturers of BEKP and UWF.

Portucel’s incorporation<sup>1</sup> in 1975, and the acquisitions of Papel Inapa and Soporcel in 2000 and 2001, respectively, represent some of the aforementioned events that contributed decisively towards the industry consolidation in Portugal and the rise of The Navigator Company<sup>2</sup>. After launching a second paper mill in

**Leading European manufacturer of UWF and BEKP**

<sup>1</sup> Following the merger of a number of Portuguese pulp and paper mills and packaging factories

<sup>2</sup> Grupo Portucel Soporcel was rebranded and renamed The Navigator Company in February 2016

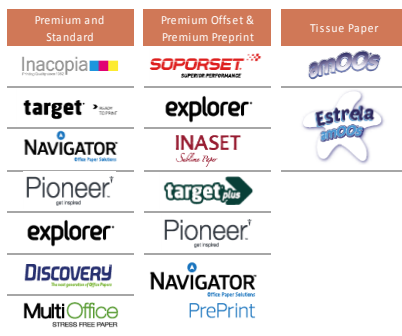
Setúbal (2009), Navigator consolidated its position as the leading European manufacturer, and the sixth largest in the world, of UWF printing and writing paper. The Company is also Europe's top producer of BEKP, the fifth largest in the world, and has entered into the tissue market, where is expected to become a key player as well.

Navigator's production structure is located in three major industrial centers in Portugal - Cacia, Figueira da Foz and Setúbal. In 2015, the Company completed the expansion of the Cacia complex and moved into the tissue sector, with the acquisition and integration of the AMS plant in Vila Velha de Ródão. In addition to entering the tissue market, the group is also debuting new business areas such as the construction of a pellet mill in the United States ("US") and a forestry investment project in Mozambique.

The Company's brand portfolio is divided into office paper brands and brands for the printing industry. The group currently exports about 95% of its production to 130 countries, across the five main continents.

As a vertically integrated company, Navigator takes full advantage of the entire value chain, producing enough energy and pulp to sustain paper production, being therefore less exposed to price fluctuations. The Company manages a vast tract of forest in Portugal (120,000 ha), has a production capacity of 1.6 million tons of paper, 1.4 million tons of pulp and power generation of 2.5 TWh, which overall translates into nearly € 1.6 billion in sales, annually.

Figure 3: Navigator Brands Portfolio



Source: Company Data

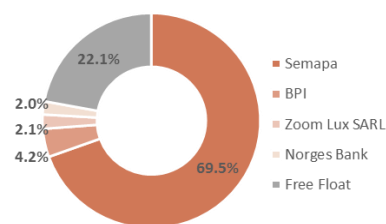
### Shareholder Structure

As of March, 2017, Semapa – Sociedade de Investimento e Gestão, S.G.P.S., S.A. ("Semapa") is the major shareholder<sup>3</sup> of Navigator, with c. 70% of the Company's share capital and voting rights. The remaining 30% are held by private shareholders and free float. The main private shareholders are Banco BPI, S.A (4.2%), Zoom LUX SARL (2.1%) and Norges Bank (2.0%).

The fact that the vast majority of Navigator's share capital is controlled by Semapa should be taken into consideration by any potential investor, once the Company's strategy will be directly linked to Semapa's strategy and more specifically to Semapa's financial situation, which currently highlights a significant level of leverage (3.6x Net Debt to EBITDA ratio), and therefore may pressure Navigator to maintain a high dividend payout ratio.

Navigator is listed and traded at Euronext Lisbon, being also a part of PSI20, the Portuguese's main stock index.

Figure 4: Shareholder's Structure



Source: Company Data as of March 2017

<sup>3</sup> In 2004, Semapa acquired a majority holding in the Navigator

## Macroeconomic Overview

Figure 5: Inflation Evolution 2009-2018F

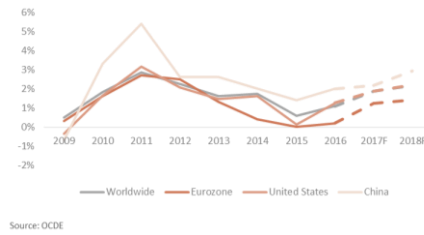


Figure 6: Real GDP Evolution 2009-2018F (% Growth)

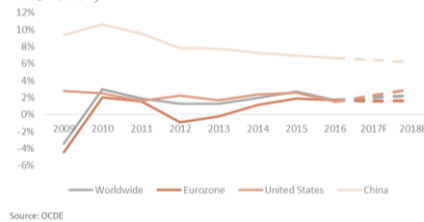


Figure 7: Europe Inflation Evolution 2009-2018F

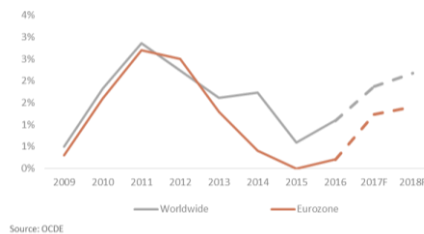
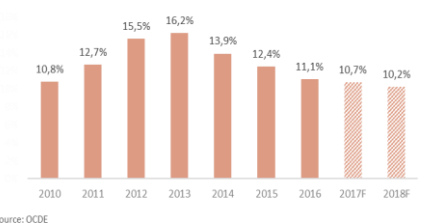


Figure 8: Portuguese Unemployment Rate 2010-2018F



Overall economic uncertainty is fading away, and confidence is improving. According to the latest economic report released by OECD<sup>4</sup> in March, 2017, the world economy, measured in terms of GDP<sup>5</sup>, is expected to grow 3.3% in 2017 and 3.6% in 2018, remaining below its historical average of 4.0%. The world's estimated recovery, after five years of low growth (CAGR<sub>2009-2016</sub> = 1.3%), will be mainly due to more expansionary fiscal policies, to be implemented by several countries. However, there is still some disruption between financial markets and economic fundamentals. The current political uncertainty, the high volatility of the markets and the uncertainty caused by the UK's decision to exit the euro zone constitute the major risks to this potential recovery.

Following the recent financial crisis, the euro area - the main market in which Navigator operates - is showing signs of recovery, on the back of depressed oil prices and low financing costs, both stimulating private consumption and exports, which have fueled by an increasing foreign demand. The Euro zone GDP is expected to grow 1.6% and 1.7% in 2017 and 2018, respectively, supported by the expansionary monetary policies and the reduction of fiscal austerity in the foreseeable future. Inflation in the Euro area fell to zero in 2015, and remained low in 2016 (0.2%), driven by a sharp decrease in energy prices. Inflation should increase in 2017 (1.2%) and 2018 (1.4%), as a result of higher real wages and domestic demand. Unemployment in the Euro area declined from 11% in 2015 to 10% in 2016, and the labor market is expected to improve in line with the economic environment.

In light of the several structural reforms<sup>6</sup> conducted by the Portuguese government in 2014 (towards a successful exit of EFAP<sup>7</sup>), the Portuguese economy started to recover, with estimated GDP growths of 1.5% in 2015 and 1.2% in 2016. According to OCDE, the Portuguese economy should be able to maintain the positive trend, with increases of 1.2% and 1.3% in 2017 and 2018, respectively. Inflation should remain stable at a relatively low level, around 1%, whereas the unemployment rate (one of the highest in Europe) is expected to continue the downward trend reaching 10.2% in 2018. However, the fact that Navigator is based in Portugal doesn't represent much of a risk to the Company, since 95% of its production is sold overseas.

<sup>4</sup> Organization for Economic Co-operation and Development

<sup>5</sup> Gross Domestic Product

<sup>6</sup> Structural reforms related to labor regulation, reductions in corporate taxes and efforts to improve court procedures

<sup>7</sup> Economic and Financial Assistance Program

Figure 9: USA Inflation Evolution 2010-2018F



Source: OCDE

The US economy is extremely important to Navigator, as the Company exports 9% of its production to this country. Moreover, the Company has recently invested in a start-up pellets factory in South Carolina. This project, with operations projected to begin in 2017, will increase the Company’s exposure to the US economy. Even so, US GDP has increased at an annual rate of 1.5% in 2016 and remains healthy according to recent indicators released by OCDE. The expected improvement in domestic demand, which will benefit from a higher household income and accelerating wage growth, will continue support US growth in the upcoming years. The country’s GDP is expected to grow 2.3% in 2017 and 3.0% in 2018, boosted by President Trump<sup>8</sup> policies. The unemployment rate should decrease to 4.5% in 2017, which reflects an improvement over the 4.7% registered in 2016. Inflation should increase to 1.9% in 2017 and 2.2% in 2018. These rates are higher than the ones reported in 2015 (0.1%) and 2016 (1.3%), but then again, these years were heavily affected by the crash in oil prices.

Figure 10: China Inflation Evolution 2010-2018F



Source: OCDE

On the other hand, and despite the limited exposure of Navigator to the Chinese economy, it is worth mention that in 2016 China’s GDP grew at its slowest pace since 1991, at a rate of 6.7%. The Chinese economy was dragged by a sharp slowdown in manufacturing and construction activities, once China’s key drivers of growth. For 2017, another slowdown is expected (GDP forecasted to grow at 6.4%), as the country is shifting from an export-based economy to a consumer and service-based economy. China’s consumer prices stood at 2.0% in 2016, a 0.6 percentage points (“p.p.”) increase over 2015, and is projected to increase to 2.9% by the end of 2018.

## The Sector

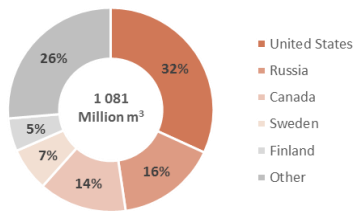
Despite the Company’s effort to diversify its source of revenues and entry into new business segments, UWF and BEKP continues to drive Navigator’s value by far. The pulp and paper manufacturing sector is a very challenging sector: it consumes significant levels of energy and raw materials and continues to demand high capital costs and long investment cycles. Players among the industry have been able to surpass this challenges by investing in resource efficiency and innovative processes which allowed them to exploit new business models and develop new products and technologies.

***The pulp and paper sector consumes large amounts of energy and raw material***

<sup>8</sup> The recently elected President of the United States has promised significant tax reforms, towards an increase of the US economy

## Wood Raw Materials

Figure 11: Top Consumers of Roundwood in the UNECE Region (2015)



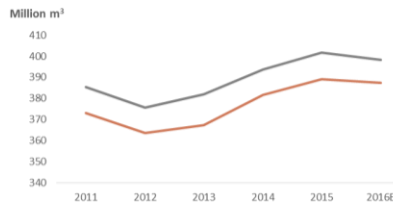
Source: UNECE/FAO

Figure 12: Wood Raw Materials Production & Consumption (2011-2016E)



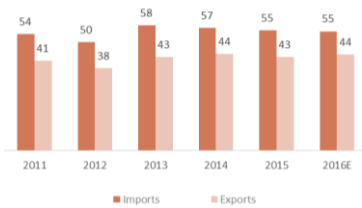
Source: UNECE/FAO

Figure 13: Wood Raw Materials Supply and Demand in Europe (2011-2016E)



Source: UNECE/FAO

Figure 14: Wood Raw Materials Trade Balance in Europe (2011-2016E)



Source: UNECE/FAO

Wood continues to be the main raw material used by pulp and paper producers worldwide, being therefore one of the pillars of their business operations where sustainability plays a key role in the preservation and survival of their businesses.

The type of wood used to produce pulp and paper will depend heavily on the final product that one intends to produce. Hardwood, that comes from oaks, beeches, poplars, birches and eucalyptus, is mostly used to produce fine paper for printing and writing purposes. In Europe, it is mostly birches (from Sweden, Norway, UK and Spain) and eucalyptus (from Portugal, Spain and Norway) that are used for paper and pulp manufacturing. Softwood comes from pine and spruce trees and is most commonly used to produce papers where strength is needed such as packaging papers.

According to UNECE<sup>9</sup> and FAO<sup>10</sup> data, removals of industrial roundwood in Europe increased by the 3<sup>rd</sup> consecutive year (CAGR<sub>2012-2015</sub> of 2.3%), reaching 389 million m<sup>3</sup> in 2015. This positive trend is explained by further production increases reported by European's top producers: Sweden, Finland, Germany, Poland and Turkey. UNECE estimates that production in 2016 will stay around 387 million m<sup>3</sup>, slightly below the amount reported in 2015. Demand followed the same pace of European production (2.0% increase in 2015) with Finland, Turkey and Poland being once again the major consumers of roundwood.

The trade balance in European countries declined in 2015, in spite of the increase verified in roundwood consumption. Imports of roundwood by European countries decreased 2.0% to 54 million m<sup>3</sup> (1.0% estimated in 2016), with countries like Finland and Sweden being the larger importers of wood raw material. This downward movement is essentially explained by negative currency effects as a result of the weakening of Euro against the US dollar. To face demand requires, European consumers had to turn to the domestic market, thus reducing exports to 43.0 million m<sup>3</sup> in 2015, a 3.2% decreased when compared to 2014. However, preliminary figures for 2016 points to 44.3 million m<sup>3</sup> of roundwood exported, which would indicate the return to 2014 levels.

In 2015, Portugal was the only European country to import hardwood from outside Europe. Portuguese pulp manufacturers, namely Navigator and Altri<sup>11</sup>, have been importing large volumes of eucalyptus wood from South America (especially since 2008), as a result of the restrictions imposed by the Portuguese government on eucalyptus plantation. The Portuguese state intends to approve

<sup>9</sup> United Nations Economic Commission for Europe

<sup>10</sup> Food and Agriculture Organization of the United Nations

<sup>11</sup> Altri, S.G.P.S., S.A. is a Portuguese pulp manufacturer (BEKP)

new legislation that forbids forestry companies to plant new areas of eucalyptus, arguing that eucalyptus poses a serious problem for the conservation of wild life, plant life, land resources and the management of water resources. The Portuguese government is only available to make exceptions if producers accept to swap from its existing plantations in marginal and low-yield areas. Navigator has been struggling to convince the government otherwise, claiming that eucalyptus is of paramount importance to the Portuguese economy and that further restrictions will harm the Company's ability to remain competitive. Moreover, Portuguese wood has unique features that allow Navigator to benefit from greater quality and higher productivity than its European competitors. Uruguay is the major supplier of eucalyptus wood (72% of eucalyptus shipments to Portugal come from this country) but Portuguese pulp mills also resort heavily on countries like Brazil and Chile to import eucalyptus.

In North America, supply of wood raw materials remained stable during 2015, with 506 million m<sup>3</sup> of roundwood produced. In fact, supply is only 0.9% up from the figures registered in 2011. With roughly 494 million m<sup>3</sup> of roundwood consumed in 2015, demand has been following supply's trend, with no apparent changes compared to 2014 (+0.8%), and pretty much the same figures of 2011 (487 million m<sup>3</sup>). For 2016, estimates point towards a slight slowdown of consumption (-0.2%), strengthening the idea that the industry may be reaching its mature stage in North America. US exports to countries outside North America dropped 15.0% in 2015, with a further 1.2% decrease estimated for 2016. This descendence movement is partially explained by the decrease in exports to Asia. This reduction is more evident in the exports to China, which has been shifting to other markets since 2013 (-33%), but countries like Japan and South Korea are also reducing the volume of roundwood imported from US. The decreasing demand for wood raw materials in these countries and the strength of the USD<sup>12</sup> explain this downward trend. On the other hand, imports in North America continue to grow at fast pace (despite 2014's slowdown), mostly due to imports from Canada, but its absolute value remains rather insignificant.

All in all, production of roundwood increased 0.9% worldwide, to 1,109 million m<sup>3</sup> in 2015, while consumption reached 1,082 million m<sup>3</sup> in the same period.

Prices (in USD) of the typical wood raw material used in the pulp industry, that is hardwood and softwood, have been falling at a constant pace since the peak of 2011, with hardwood prices highlighting deeper dropdowns than softwood. Countries with fast growing hardwood plantations, like Australia, Brazil and Chile have been pushing hardwood prices down and there is still some room for further

**Portuguese legislation constitutes an handicap to Navigator**

Figure 15: Wood Raw Materials Supply and Demand in North America (2011-2016E)

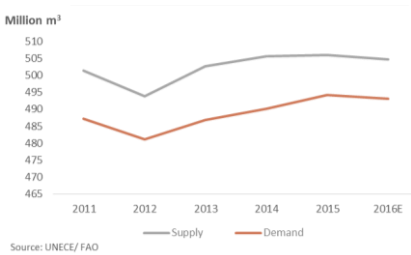
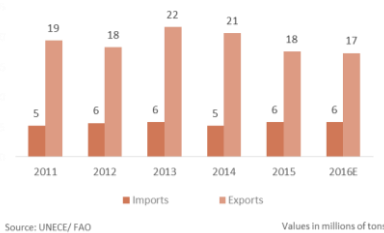
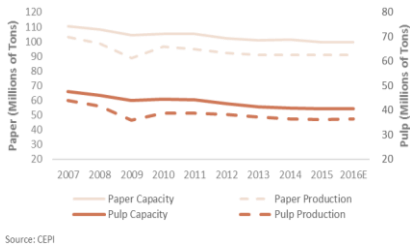


Figure 16: Wood Raw Materials Trade Balance in North America (2011-2016E)



<sup>12</sup> Refers to the United States Dollar

**Figure 17: Pulp and Paper Production in Europe (2007-2016E)**

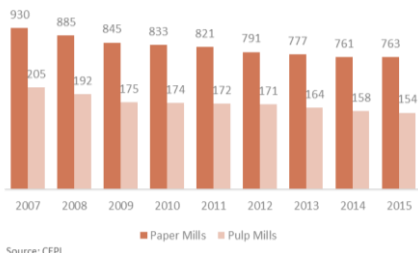


adjustments. On the other hand, it looks like the negative price trend that has been hunting softwood materials since 2014, has started to level out in 2016, which may indicate that the price fall season is over. The biggest changes in softwood prices were reported in Brazil, Canada and France.

### Pulp & Paper

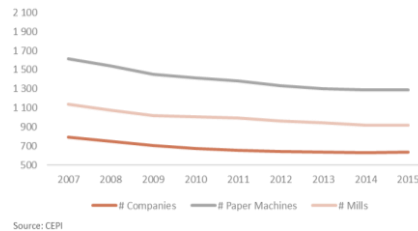
The rapid development of new technologies poses a serious risk to the paper market. The digitalization of the global economy aims to replace paper as the traditional form of communication, which weakens paper demand and consecutively product prices. To counter the potential demand decrease, producers have been converting their paper mills into packaging mills, which granted some breathing to the paper market.

**Figure 18: Number of Pulp and Paper Mills in Europe (2007-2015)**



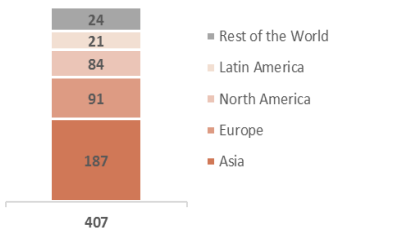
Shortly after the financial crisis of 2007, production of total pulp and paper in Europe started to fall consistently until 2015, despite the slight recovery between 2009 and 2010. Pulp’s overall production accounted for nearly 43.9 million tons in 2007, whereas in 2015 European producers registered only 36.3 million tons, almost a 17.4% decrease. Paper’s production also suffered a significant decrease after the financial crisis with European manufacturers producing c. 9.9% less paper in 2015 when compared to pre-crisis levels.

**Figure 19: Industry Evolution in Europe (2007-2015)**



The advanced stage of consolidation of the European pulp and paper sector is also contributing to the shrinkage of overall production. Consolidation is naturally unavoidable in almost any industry, as companies tend to seek inorganic approaches to grow (such as mergers and acquisitions), rather than pursuing organic growth<sup>13</sup>. It happens when companies seek profitable growth while their markets reach its mature stage and organic growth become too expensive.

**Figure 20: Paper Production by Region in 2015 (Millions of Tons)**



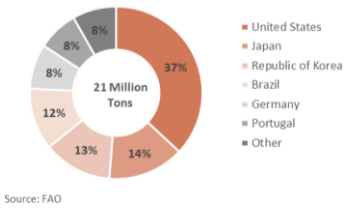
European’s pulp and paper industry is no exception and between 2007 and 2015 the industry has been witnessing a continued decrease in the number of companies and the number of active pulp and paper mills. According to CEPI<sup>14</sup>, in 2015 the number of companies operating in the European pulp and paper industry decreased to 633, less 20.0% than 2007. Compared to the pre-crisis levels, the number of pulp and paper mills are also down by 19.2% and the number of paper machines has decreased by 20.4%, all supporting evidence of the industry’s consolidation trend.

The production of paper worldwide achieved 406 million tons in 2015, with production in European countries accounting for only 22% of the world’s total

<sup>13</sup> Growth that comes from a company’s existing business. It refers to the company’s capacity to expand its business by increasing its sales/ output internally, without resorting on mergers, acquisitions or takeovers

<sup>14</sup> Confederation of European Paper Industries

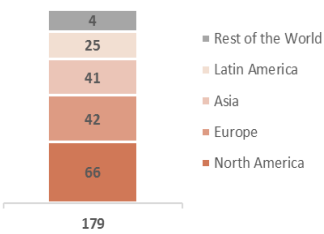
Figure 21: Top Producers of UWF by Region (2015)



production. China, India and Russia head the list of Asian largest producers, placing Asia in a leading position with almost 46%. Northern America production represents 21% of the World's total production with the remaining 11% being spread across different geographies.

According to FAO's latest available information, 21 million tons of UWF were produced in 2015, with the United States being the major producer with 37%, followed by Japan, Republic of Korea and Brazil with 14%, 13% and 12%, respectively. Portugal is ranked 4<sup>th</sup>, represented by Navigator with 8% of the world's total production of UWF.

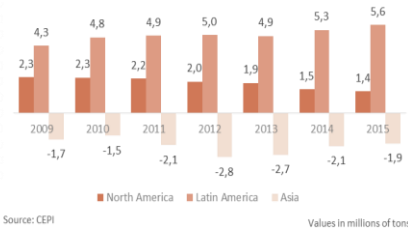
Figure 22: Pulp Production by Region in 2015 (Millions of Tons)



Pulp's production reached 179 million tons in 2015, with North America being the undisputed leader contributing with 37% of the World's overall production. European and Asian producers share the second position with 24% each and Latin America rounds of the podium with almost 14% of World's pulp production.

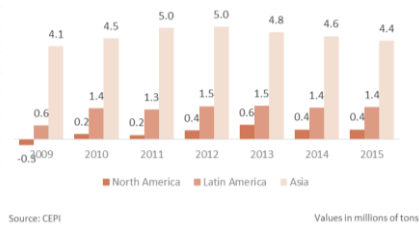
Regarding international trading, Europe clearly stands out as the major supplier of paper and the largest consumer of external pulp. European countries export primarily to Asia, with the negative trade balance (of more than 4.9 million tons) coming from the massive amounts of pulp that reach Europe from America, with more and more countries shifting to South America (rather than North America). On the paper segment, however, Europe reported a strong positive trade balance in 2015, with an excess of 9.1 million tons of paper. Asia is Europe's top client with nearly 5.0 million tons shipped in 2015, followed by North America (2.1 million tons) and South America (1.8 million tons).

Figure 23: Pulp Net Import Trade Balance - Europe vs Rest of the World (2009-2015)



In 2016, CEPI estimates that paper production in Europe has decreased by 0.1% compared to 2015, with total production remaining constant at roughly 91 million tons. The industry's installed capacity remained unchanged as machine closures were replaced by new capacities or upgrading of existing ones. Pulp overall production is estimated to be 0.7% higher than 2015. Non-European markets such as United States and Canada are expected to be down by 1.0% and 1.8% in 2016, whereas in Brazil and Japan no changes are anticipated. Russia, India and China are the markets where production seems to have risen more with increases of c. 3.8%, 3.0% and 2.9%, respectively.

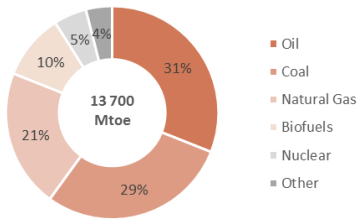
Figure 24: Pulp Net Exports Trade Balance - Europe vs Rest of the World (2009-2015)



According to Technavio's latest market research, pulp market will grow by 2.0% per year until 2020, mostly on the back of tissue paper, whose demand has been increasing significantly in recent years, especially in emerging markets with tissue production rising consistently in Asia, Middle East, and Africa. The writing and printing segment, the largest segment of the global pulp and paper market, is forecasted to grow at a CAGR<sub>2016-2021</sub> of 4%, according to the same source.

## Biomass Energy

Figure 25: Total Primary Energy Supply by Fuel (2014)



Source: IEA

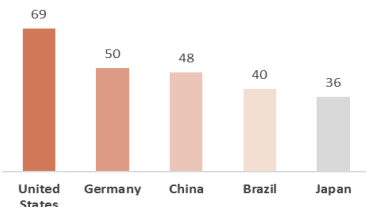
Biomass is energy generated from plant material and animal waste. It is a renewable source of energy that is used to produce electricity and other forms of power and can primarily be obtained by processing scrap lumber, forest debris, certain crops, manure and some type of urban waste residues. The energy comes from the sun absorbed by plants and animals and is renewable once it can regrow over a short period of time, when compared to fossil fuels that take hundreds of millions of years to form. When the organic material is burned, they release the energy they captured from the sun forming biomass energy.

According to data retrieved from IEA<sup>15</sup>, oil remained the dominant fuel in 2014, with 31% of the total primary energy produced in the world. Coal is the second most used energy resource (29%), followed by natural gas (21%), and have been increasing their shares consistently over the past decade. Biofuels contribute more to primary energy supply than any other renewable energy and is currently the 4<sup>th</sup> main source of energy, representing 10% of the world’s total production.

### Biomass is the 4<sup>th</sup> main source of energy worldwide

The biomass market has been growing fast (CAGR<sub>2010-2015</sub> = 2.0%), particularly in developed countries. Russia and the Baltic states are the largest biomass exporters, while most of the other European countries are typically importers, especially from Canada (Europe’s top supplier).

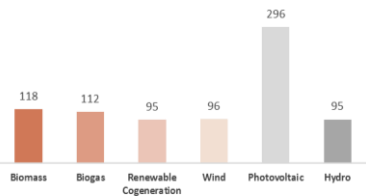
Figure 26: Top Bio-Power Producers in 2015 (TWh Generated)



Source: REN21

According to REN21<sup>16</sup>, bio-power capacity increased to 106 GW in 2015 (5% increase), and production rose by more than 8% to 465 TWh, mostly due to the increase of the installed capacity. United States was the major supplier of electricity from biomass with 69 TWh generated, followed by Germany (50 TWh), China (48 TWh) and Brazil (40 TWh). In Europe, UK has been challenging Germany’s leading position, by increasing its bio-power capacity and production consistently over the past few years. In 2015, UK’s installed capacity and production rose 12% and 27%, respectively.

Figure 27: Renewable Energy - Average Prices in Portugal (€/MWh)



Source: ERSE

Biomass energy highlights relatively high costs when compared to other renewable energy, being only surpassed by photovoltaic energy. In Portugal, the ERSE<sup>17</sup> estimates that it takes almost € 118 to produce one MWh from biomass energy, while fossil fuels costs only 90 €/MWh. Being a renewable energy, biomass is highly subsidized by the government to make this sort of energy competitive with the more traditional, large CO<sub>2</sub> emitting, production methods.

<sup>15</sup> International Energy Agency

<sup>16</sup> Renewable Energy Policy Network for the 21st Century

<sup>17</sup> Entidade Reguladora dos Serviços Energéticos

## Business Areas

Navigator operates under a vertically integrated business model, participating actively on all stages of the paper and pulp production, which includes research, forestry and industrial.

Navigator, through its subsidiary Viveiros Aliança S.A.<sup>18</sup> currently owns and operates 3 forestry production units: Espirra (Pegões), Carniceira (Tramagal) and Ferreiras (Penamacor). In 2012, the Company completed a major investment project that intended to expand and modernize its nurseries, equipping Navigator with the largest nursery for certified forest plants in Europe and an annual production capacity of 12 million plants (of which 6 million are eucalyptus clones). The Company sells about 65% of the plants it produces, integrating the remaining 35% in the paper and pulp production.

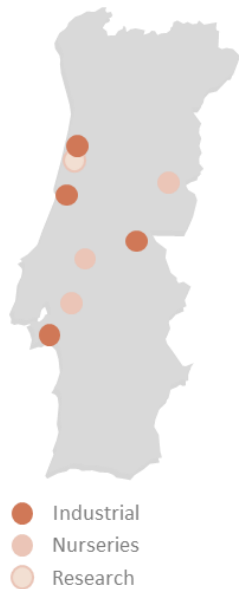
To produce pulp and paper, Navigator currently owns and operates 4 sophisticated mills: one pulp mill in Cacia, two integrated pulp and paper mills located in Setúbal and Figueira da Foz, and another one in Vila Velha de Ródão that specializes in tissue manufacturing.

The industrial complex of Cacia is the oldest production mill of Navigator, with annual capacity of 320 thousand tons of BEKP. In operation for more than 60 years, Cacia has suffered innumerable alterations to its original form, the last of which in 2015 when the Company invested more than € 56 million to expand its installed capacity in more than 20%.

Figueira da Foz is one of the largest and most efficient industrial sites in Europe. Originally designed to produce pulp, the complex became an integrated complex in 1991, combining pulp production with paper manufacture. Nowadays, the pulp mill operates together with a biomass cogeneration plant that generates energy from renewable source and a natural gas combined cycle power station. The complex has an installed capacity of 570 thousand tons of BEKP and 800 thousand of UWF.

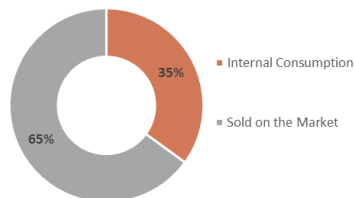
In Setúbal lies the largest industrial complex of Navigator. It comprises one pulp mill, two paper mills, one biomass cogeneration plant and one biomass power station. In 2009, Navigator invested nearly € 550 million in a new, state-of-the-art paper mill – About the Future<sup>19</sup> – which represented an all-time record investment

Figure 28: Geographic Footprint



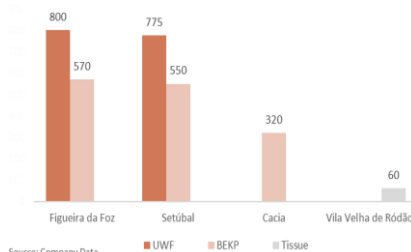
Source: Company Data

Figure 29: Plants Production Allocation (2016)



Source: Company Data

Figure 30: Paper & Pulp - Production Capacity in 2016 (Millions of Tons)



Source: Company Data

<sup>18</sup> Viveiros Aliança S.A is the nursery operator of Navigator, that works totally independently and autonomously and produces plants for the group

<sup>19</sup> Officially inaugurated in 2009, the new paper mill encompasses one of the world's largest and most sophisticated machines for producing UWF, turning out reels 10.4 meters wide and producing paper at a rate of 30 meters a second

in the Company’s history at a time of a deep economic recession. The complex is able to produce 550 million tons of BEKP and 775 million tons of UWF per year.

The factory of Vila Velha de Ródão is specialized in the production of tissue. Built as a greenfield, this industrial unit is the second most efficient tissue factory in Europe, with an installed capacity of 60 thousand tons of tissue per year.

The Company’s industrial facilities are extremely well positioned, not only because they are located in Portugal, a convenient location for eucalyptus plantation and a low-cost provider of labor services, but also because they are all strategically located next to important ports and railroads. Moreover, Navigator has at its disposal one of the most technology advanced and efficient paper mills in Europe (Setúbal), with outstanding low-energy solutions which brings more competitive advantages to Navigator. This fact is reflected in Navigator’s superior EBITDA margins<sup>20</sup> when compared to peers.

**Navigator’s production units are strategically located with easy access to raw material and international markets**

### Pulp BEKP

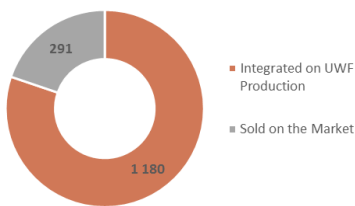
The pulp segment represents only a small portion of Navigator’s revenues (9%), but is nonetheless important to the Company’s operations and sustainability, as the Company integrates most of its production in the paper and tissue manufacturing lines (up to 82%). The excess production is sold to European manufactures, as Navigator chooses to stay “long” on pulp to avoid exposure to the evermore volatile and uncertain pulp market.

In 2016, the pulp sector witnessed a year marked by a sharp decrease in BEKP prices. The downward trend is clearly evident in the benchmark index for hardwood pulp<sup>21</sup> – PIX BHKP – that decreased by 13% and 16% in Euros and USD, respectively.

Navigator was able to surpass the difficult price environment by placing c. 291 million tons of pulp in the market, a 14.9% increase when compared to 2015. This significant increase was only possible due to the expanded installed capacity of Cacia (+20%) who become fully operational in 2016. This, however, was not enough to overturn the abrupt drop in prices and the Company registered a decrease of 1.6% in pulp sales when compared to 2015.

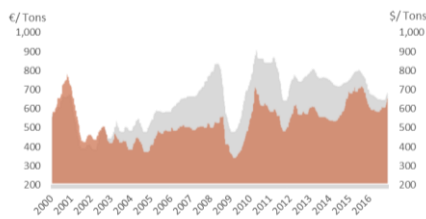
Despite the negative pressure on prices felt during 2016, environment for pulp producers unexpectedly improved in a meaningful way during the first months of 2017: (i) the increased capacity of more than 2.5 million tons of pulp from Indonesia (APP Mill) schedule for the end of 2016 has been delayed and recent estimates points towards 1.2 million tons in 2017E, (ii) Brazilian pulp

Figure 31: BEKP Allocation in 2016 (Millions of Tons)



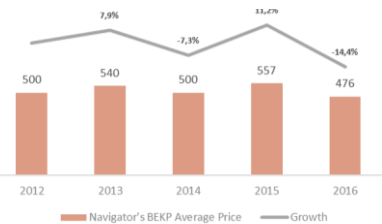
Source: Company Data

Figure 32: Europe Pulp BHKP PIX Index (2000-2016)



Source: Bloomberg

Figure 33: Navigator's BEKP Average Price in €/ton (2012-2016)



Source: Company Data/ Analyst Estimates

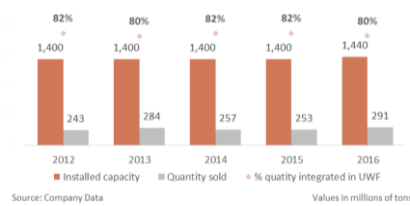
<sup>20</sup> See sections “Financials” and “Navigator Among Peers” for further information regarding EBITDA margins

<sup>21</sup> Annual average prices retrieved from Bloomberg

Figure 34: Europe Pulp BHKP PIX Index (last 12 Months)



Figure 35: Pulp - Production Capacity and Quantity Sold (2012-2016)



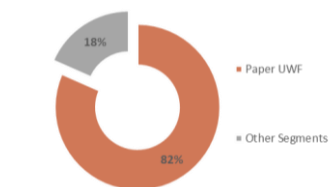
manufacturer Eldorado Brasil postponed the new 2.5 million tons pulp line project at Três Lagoas mill to 2020 (originally expected to start operating in the 1H2018) and (iii) capacity cuts in China, due to some shutdowns and reconversions (mostly to packaging and dissolving grades), which indicates that more pulp will be redirected to this market.

Also, BHKP prices in USD have been improving rapidly since late 2016. This recent behavior is most probably related to the delay in the mega mill from APP that was supposed to be operating by the end of last year and by the delay of the aforementioned Eldorado’s project. Producers saw a small window of opportunity and they are taking it, however, new price adjustments are expected for 2H2017, with Fibria’s<sup>22</sup> and APP’s new mills coming into operation this year. Notwithstanding, demand, is still growing 3% year-on-year (“yoy”), which should, by itself, be sufficient to sustain prices during 2017E.

Meanwhile, the Company is currently undertaking a project to extend the installed capacity of Figueira da Foz pulp mill. This investment is set to be completed in late 2018 and will bring additional 70 million tons of pulp to Figueira’s factory that the Company will use to feed the tissue segment, in which further expansion plans<sup>23</sup> were set in motion.

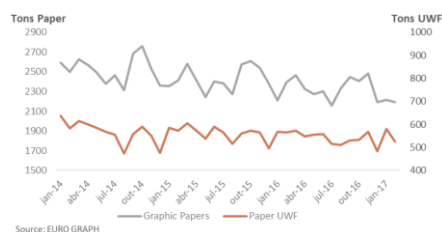
### Paper UWF

Figure 36: Revenue Breakdown (2016)



The paper (UWF) segment is Navigator’s core business accounting for nearly 82% of total turnover in 2016. Due to its industrial excellence, Navigator has been able to maintain its paper mills operating at full capacity (100%) whereas in Europe, utilization rate stood below 92%<sup>24</sup>. Once the Company is not looking to increase its installed capacity any time soon, volumes are expected to remain stable at its theoretical capacity of 1,575 thousand tons per year.

Figure 37: European Demand for Paper (2014-2017)



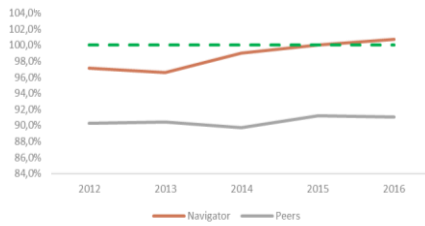
Market conditions for the UWF sector has been deteriorating with overall consumption in 2016 decreasing up to 4% in Europe. Imports of paper office increased by 19% in 2016, exerting an overall downwards pressure on prices. Even the recent shrinkage tendency of the European sector, with cutbacks of c. 1.0 million tons between 2015 and 2016, were not sufficient to alleviate pressure on prices. Imports from United States also declined substantially (-12%) after the fall of apparent consumption (-3.7%) brought by the anti-dumping policies imposed on Australian, Brazilian, Chinese and Indonesian producers. Overall

<sup>22</sup> Fibria Celulose S.A. is a Brazilian forestry company and the largest producer of eucalyptus pulp worldwide. In 2015, the company announced the launch of Horizonte 2 project, the 2<sup>nd</sup> pulp production line of Fibria in Três Lagoas. The new mill will increase the company’s installed capacity in 1.9 million tons per year and will be completed in late 2017

<sup>23</sup> See section “Tissue” for further information on the expansion plans in the tissue segment

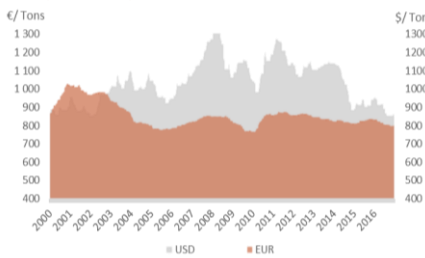
<sup>24</sup> According to data retrieved from CEPI – Preliminary Key Statistics 2016

Figure 38: Paper Utilization Rate (2012-2016)



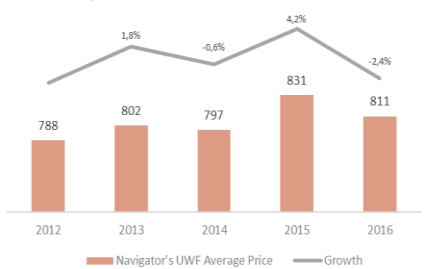
demand for paper (UWF) was also negative in December 2016 (-2.3% yoy) and continued the negative trend in the first quarter of 2017, which represents a risk to Navigator. However, the Company sells a premium product and is more efficient than its competitors, making price risk the key issue to Navigator rather than volume risk. The benchmark index for UWF<sup>25</sup> prices (PIX A4 – Copy B) registered a slight increase in 2016 of 0.3%.

Figure 39: Europe Paper A4 B copy PIX (2010-2016)



In 2016, and despite the adverse environment that has been hunting the paper segment, Navigator was able to place 1.587 million tons of UWF on the market which represents an increase of 2.0% over 2015. Navigator's average price for UWF (811 €/ton) stood 2.4% below 2015's figures (831 €/ton), mostly due to an unfavorable change in the product and market mix, with more standard paper being shipped to Africa and Middle East (the European market has been losing weight to Navigator's total revenues).

Figure 40: Navigator's UWF Average Price in €/ton (2010-2016)

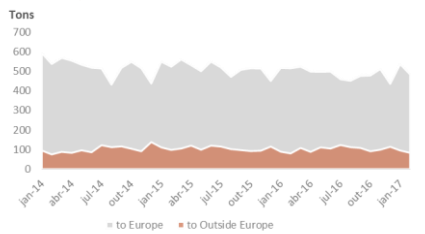


For 2017, the market is expecting a smooth and peaceful year, with a well arranged and composed order book on the horizon. With this in mind, Navigator announced that will increase paper prices this year in all the countries of Middle East, Africa and Turkey by 4% to 7%. The European market will also suffer price adjustments ranging from 4% to 6%. According to the Company, rising costs of production, the current robust order book and the recent decline in paper prices were the main drivers for these price adjustments. Regarding installed capacity, the Company is not expecting to invest in new expansion projects any time soon.

## Energy

Navigator is currently the largest producer of energy from biomass in Portugal, being responsible for c. 5% of the total electricity produced in Portugal and nearly 50% of the country's total power generation from this renewable source.

Figure 41: Total European Shipments (2014-2017)



The Company cogeneration<sup>26</sup> plants and power stations have an installed capacity of 2,500 GWh and the current volume of energy generated in the three industrial sites<sup>27</sup> allows Navigator to be auto-sufficient in its productive activities and to sell the surplus to the national grid. The biomass cogeneration plants and the natural gas power station generate electricity and heat that are fully integrated in the production of pulp and paper, while the electricity generated by the biomass power stations is sold to the national grid at regulated tariffs<sup>28</sup>. The

<sup>25</sup> Annual average prices retrieved from Bloomberg

<sup>26</sup> Cogeneration means that the plant is able to produce both electrical power and heat, making pulp and paper production a lot more efficient

<sup>27</sup> Refers to the complexes of Cacia, Figueira da Foz and Setúbal

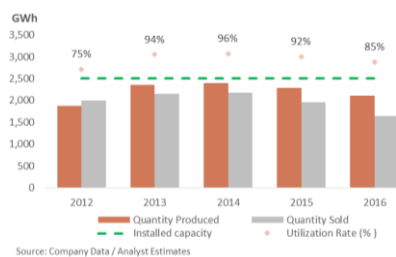
<sup>28</sup> For units powered through residual forestry biomass, dedicated to the production of electricity, the legal framework is provided by Decree-Law 33-A/2005, revised by Decree-Law 225/2007, that extends from 15 to 25 years the guaranteed tariffs under the PRE (Produção em Regime Especial)

Company uses waste organic material originated in the pulp and paper activities to feed its cogeneration and power plants stations. However, the waste generated in its industrial sites is not sufficient to meet the Company's biomass needs and the Company is forced to buy biomass material from the market.

In 2016, the Company produced 2,100 GWh, which represents a significant decrease when compared to the 2,291 GWh generated in 2015 (-8%). Sales reduced by 16%, from 1,961 GWh in 2015 to 1,641 GWh in 2016. This reduction in output and sales is explained by the maintenance stoppage of the natural gas power station in Setúbal and by the repair works that took place in Cacia and Setúbal. Finally, following the downward revision of subsidized prices that took place in 2016, the complex in Figueira da Foz started to operate on a self-consumption mode, consuming part of the energy that was formerly destined to be put for sale on the national grid.

Given the non-recurring nature of the production stoppages that took place in 2015 and 2016, Navigator should return production to the levels highlighted in 2014 (utilization rate of 96%) by 2018F. Nevertheless, sales are not expected to increase much further as the Company is now drawing more energy to the Figueira da Foz complex. Finally, expansion plans for the energy segment are not on Navigator's agenda (at least until 2020), therefore the Company's installed capacity should remain unchanged at 2,500 GWh during the forecasted period.

Figure 42: Energy - Output, Sales and Utilization Rate (2012-2016)



## Tissue

### **Significant investments in pipeline to boost revenues in the tissue segment**

In 2015, Navigator moved into the tissue segment with the acquisition of AMS, the most efficient tissue manufacturer company of Iberia and the 2<sup>nd</sup> most efficient in Europe. Navigator intends to leverage from the integration of pulp in tissue production, becoming one of the lowest cost producers of tissue in Europe.

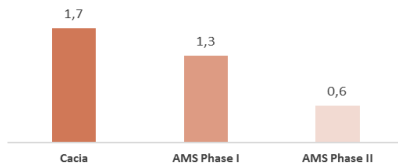
Navigator operates in both consumer and professional markets, producing toilet paper and napkins for the consumer area and hygienic products to serve the needs of hotels, offices and other service companies.

At the time of the acquisition<sup>29</sup>, AMS had one reel machine with an installed capacity of 30.000 tons. In 2015, Navigator invested € 39 million to install a second reel machine in AMS's complex at Vila Velha de Ródão, doubling the plant's production capacity to 60.000 tons.

The tissue segment continues to account for a small portion of Navigator's revenues (4.3% in 2016), but is also the Company's business segment that highlights greater growth potential in the mid and long-term. Navigator will take

<sup>29</sup> The acquisition was valued at € 41 million, with Navigator assuming AMS's net debt of c. € 24 million

Figure 43: Average CAPEX per Additional Ton of Tissue



Source: Company Data / Analyst Estimates

the investment in the tissue segment way further with new significant investments schedule for 2017. According to the Company's latest investor's presentation (2016), Navigator will invest € 120 million in building a new line for tissue paper in Cacia. These new expansion project represents a higher investment than the one conducted in AMS in 2015 (CAPEX per additional ton of tissue) once the complex was not initially designed for tissue manufacturing, and will have to be adapted to receive the new reeling machines. The new tissue mill is expected to come online during the second half of 2018F and will take advantage of a fully integrated mill, using BEKP fiber to produce high quality tissue paper, while maintaining lower production costs.

The tissue market is very regional, mostly due to high transport costs. According to the Company, AMS will continue to serve the Iberian market, while the new tissue mill in Cacia, given its strategic location, will have the ability to penetrate the UK market. The Company is set to move into this segment by combining organic growth with the acquisition of existing capacity, to serve other markets such as France, Belgium and Netherlands.

In 2016, the new installed capacity of the complex at Vila Velha de Ródão allowed Navigator to produce and sell 42 million tons of tissue paper, a 18.5% increase compared to 2015's output.

## New Projects and Other

At the end of 2014, Navigator announced it would be investing in a new business line with the start-up of a pellets factory in South Carolina, United States. The construction works started in 2015, in an investment estimated at € 32 million, and proceeded during 2016, with the set-up of the electrical and control facilities and the conclusion of mechanical installation.

The new pellets mill will have an installed capacity of 500 thousand tons in an overall investment worth more than € 114 million. Given the difficult market situation (price reduction of around 40% in 2016) and to reduce risks associated to this investment, the Company was able to negotiate fixed price contracts with its suppliers, securing 40% of the mill's output for the next 10 years.

The Company is also investing in a start-up large scale forest plantation in Mozambique, holding land use permits for 356 thousand ha in the provinces of Zambézia and Manica. The new nursery project has a current production capacity of 6 million plants with the possibility to expand up to 12 million plants. Right now, the Mozambique project is still at an early stage and the Company's main goal is to cover 2/3 of the total plantation area with new plants and run tests to find out which plants suits better the Mozambique weather and land conditions.

**More cash-flow on the horizon...**

The ultimate goal is to build a local pulp and paper mill<sup>30</sup>, which the Company anticipates will be inaugurated in 2023F. However, the project has been evolving at a very slow pace given Mozambique's current political and economic environment. Despite the great long-term potential that this investment highlights, the Company remains cautious and will conduct experimental operations (starting in 2017) to export 2,000 tons of woodchips from the port of Nacala.

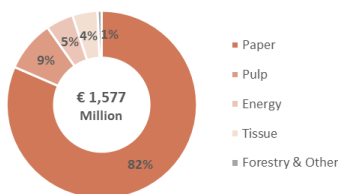
Given the current state of the Mozambique project, and the lack of information available on this matter, any profits from the Mozambique operations were not considered in Navigator's valuation (NPV=0).

Recently, Navigator set in motion a series of cost reducing measures<sup>31</sup> that already brought benefits to the Company in 2016, with a positive impact on EBITDA of c. € 16 million. For 2017, the Company will upgrade the paper machines in Setúbal and Figueira da Foz, renegotiate its current transportation contracts (road and maritime) and conduct improvements in the packaging areas of the Setúbal complex<sup>32</sup>.

## Financials

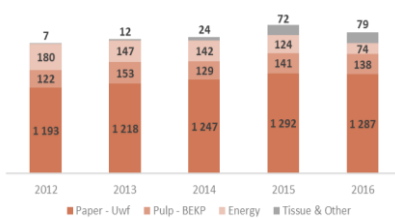
Navigator reported revenues of € 1,577 million in 2016, which represents a 3.1% decrease over 2015. The Company's turnover is mostly related to paper activities, which represented c. 82% in 2016. In spite of the small decrease between 2015 and 2016 (-0.4%), paper manufacturer operations registered a positive evolution since 2012 (CAGR<sub>2012-2016</sub> = 1.9%), mostly on the back of the Company's operational efficiency, since market conditions for the UWF sector has been deteriorating over time. The pulp segment, which represented around 9% of the Company's turnover, registered a -1.6% decrease in 2016, having been negatively affected by the sharp decrease in BEKP prices that have been hunting the sector since late 2015. The negative impact on Navigator's revenues could have been much higher, if the Company wouldn't be able to place c. 291 million tons of pulp in the market, a 14.9% increase when compared to 2015. The energy segment constitutes a marginal share of Navigator's turnover (5% in 2016) and has been decreasing consistently since 2012 (CAGR<sub>2012-2016</sub> = -20.0%). Several factors have been influencing this downward trend, namely (i) the fact that the Company is allocating more energy to feed the industrial complexes, which reduces the quantity of energy available for sale, and (ii) the non-recurrent repair stoppages that took place in Setúbal. The tissue segment

Figure 44: Revenue Breakdown (2016)



Source: Company Data

Figure 45: Revenue Breakdown (2016)



Source: Company Data

<sup>30</sup> Output from this mill is expected to boost Navigator's exports to over \$ 1.0 billion

<sup>31</sup> Reference is made M2 Project that encompasses a list of more than 100 projects that are currently under development with the objective of improving Navigator's cost structure. The project was launched in 2014

<sup>32</sup> Reference is made to the Navigator Lean System Programme

Figure 46: EBITDA Margins – Navigator vs Peers (2016)

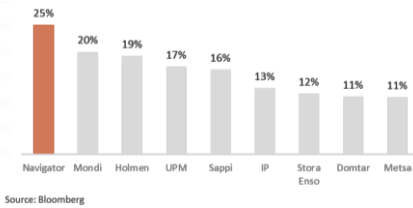


Figure 47: EBITDA & EBITDA Margin Evolution (2012-2016)

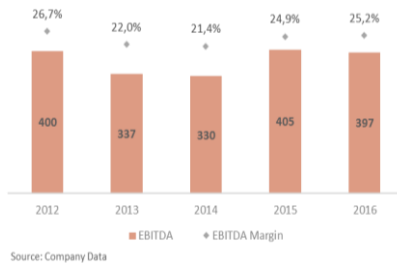


Figure 48: Working Capital Evolution (2012-2016)

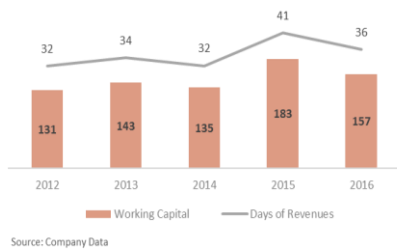


Figure 49: CAPEX Evolution (2012-2016)

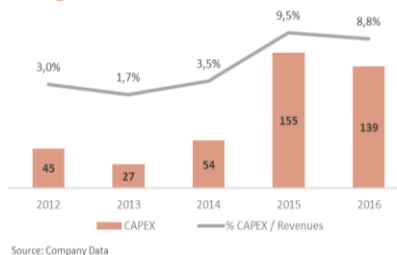
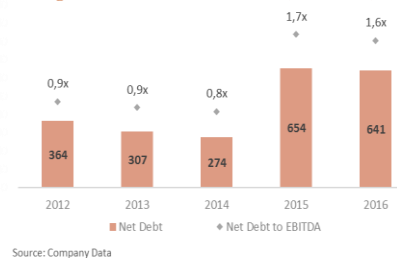


Figure 50: Net Debt Evolution (2012-2016)



has been evolving steadily since the Company first acquired AMS in 2014. In 2016, Navigator reported € 67.5 million in revenues with this business line, a 21% increase over 2015, mostly on the back the new installed capacity of AMS.

On the cost side, Navigator continues to be one of the most efficient players in the industry, with its EBITDA margin being placed nearly 10 p.p. above its main competitors (average of 14.9%), combining both logistic know-how and financial strength. In fact, the Company is well positioned to leverage on the upcoming industry challenges and to stay ahead of peers given its cost-cutting measure and stable balance sheet.

EBITDA has shown considerable resilience throughout the 2013-2016 period<sup>33</sup> (CAGR<sub>2013-2016</sub> = 5.7%), with Navigator reporting € 397 million in 2016 (1.9% increase over 2015). The Company was able to improve its EBITDA margin to 25.2%, mostly due to reductions in personnel costs<sup>34</sup> and by the implementation of 100 new cost reducing measures (M2 Project) with an estimated impact on EBITDA of € 16 million. Also, non-recurring items such as revaluation of biological assets, reversal of duties, and receivables in the form of compensations for breakdowns in Cacia, had a positive impact of € 7.5 million in EBITDA.

Working capital has shown an activity-related behavior, yet with significant variation downwards in 2016 (- € 26 million), when trade payables increased despite the reduction in COGS and supplies and services. Inventories also decrease between 2015 and 2016, contributing to a “divestment” situation and generating more free cash flow during 2016.

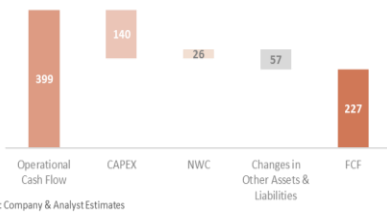
Between 2012 and 2016, Navigator made several investments, specifically in the paper and pulp, tissue and pellets segments. Accumulated CAPEX for the period 2014-2016 amounted to roughly € 350 million, of which € 300 million realized in 2015 and 2016. The most relevant investments include: (i) € 52 million in the Mozambique project between 2014 and 2016, (ii) 80 million with the acquisition (2014) and expansion (2015) of AMS, (iii) € 56 million in the expansion of the Cacia complex (2015), and (iv) € 114 million in the construction of a new pellets factory in South Carolina, US, that started in 2015 and proceeded in 2016.

Regarding Navigator’s current capital structure, we must highlight the Company’s effort in refinancing its debt in order to achieve better financial results and therefore improve the Company’s net income. In 2015, the Company redeemed € 200 million of the (€ 350 million) Senior Secured Notes (“SSN”) due at 2020

<sup>33</sup> In 2013, Navigator’s EBITDA took a hit due to rising costs with Soporgen consolidation in the group. As so, 2012’s EBITDA is not a good proxy for comparison purposes.

<sup>34</sup> Non-recurring items in the amount of €15 million related to pension fund costs reported in 2015

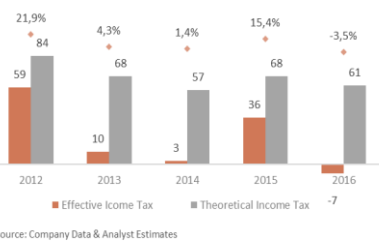
Figure 51: Free Cash Flow (2016)



and issued a new bond loan<sup>35</sup> in the exact same amount. Apart from switching from a 5.375% coupon bond to a much lower 1.9%, Navigator was also able to extend the loan’s maturity from 2020 to 2023. In 2016, the Company repaid the remaining € 150 million of the SSN, funded through new financings<sup>36</sup> with an average cost of debt of 1.6%. In 2016, Net Financial Debt<sup>37</sup> reached € 641 million, a 2.1% decrease when compared to 2015 and the Navigator’s estimated cost of debt is around 1.7% with an average maturity of 4.5 years.

All in all, Navigator’s free cash flow evolved positively to € 201 million in 2016.

Figure 52: Income Tax - Effective VS Nominal (2012-2016)

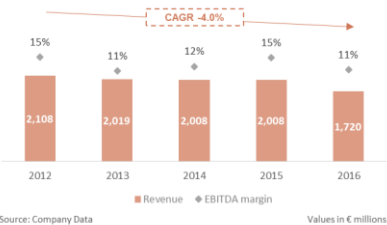


Navigator has been reporting surprisingly low corporate income taxes (“CIT”), during the period comprised between 2013 and 2016, especially if compared to the Portuguese established CIT for companies with similar characteristics. Such fact can be explained by the tax benefits (related to renewable energy) the Company has been enjoying in the past years. However, such benefits are not expected to last in the future, as the board already highlighted, and the Company should return to standard CIT rate during the forecasted period.

## Navigator Among Peers

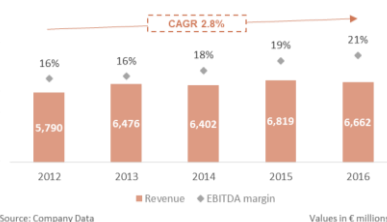
In order to make an educated guess on how well Navigator has been performing relative to industry standards, it is of utmost importance that we have a deeper view on how peers have been evolving in terms of their operational capacity.

Figure 53: Metsa - Revenues & EBITDA margins (2012-2016)



Recent changes in the pulp and paper market has been particularly harmful for Metsa Board OYJ (“Metsa”), the Finish manufacturer of pulp, paper and paperboard. Metsa has been conducting a major restructuring project that aims to exit the fine paper production and focus its operations on the manufacturing of premium fresh fiber paperboard. As a result, revenues have been deteriorating at fast pace since 2010, with the company taking a new hit in 2016 (14.1% decrease compared to 2015). Metsa’s EBITDA margin has also been decreasing, with the company reporting an all-time low margin of 11%, mostly due to its heavy cost structure, based on significant fixed costs.

Figure 54: Mondi - Revenues & EBITDA margins (2012-2016)



On the other hand, Mondi PLC (“Mondi”), the UK<sup>38</sup> paper and packaging group, has been highlighting strong financial performance, with several projects under way to secure its operating profit. The company pursues an inorganic approach to deliver growth, with more than € 1.6 billion invested in acquisitions since 2012. Over the past 4 years, Mondi has been able to increase its EBITDA margins by 4

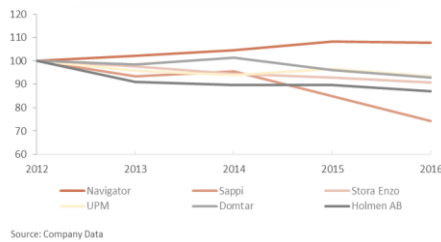
<sup>35</sup> Reference is made to Obrigações Portucel 2015/2023

<sup>36</sup> Reference is made to Obrigações Portucel 2016/2021 (€ 100 million) and a Commercial Paper program (€ 70 million)

<sup>37</sup> Calculated as the sum of all current and non-current interest-bearing liabilities, including all bank loans, bond loans and refundable investment grants, subtracted by cash and cash equivalents.

<sup>38</sup> Mondi headquarters are located in South Africa

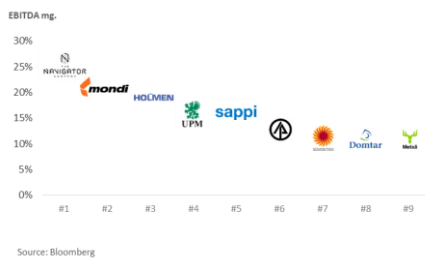
**Figure 55: Revenues & EBITDA margins Evolution of the Paper Industry (2012-2016)**



p.p., essentially on the back of lower maintenance costs and better use of natural resources (wood and water).

Sappi Limited<sup>39</sup> (“Sapi”), Stora Enso OYJ<sup>40</sup> (“Stora Enzo”), and UPM – Kymmene OYJ<sup>41</sup> (“UPM”) have all been able to improve their EBITDA margins between 2012 and 2016, despite the significant loss in revenues reported by these companies during the same period. Sappi has been applying an aggressive cost-cutting policy, with the disposal of non-core assets and substantial reductions in variable and fixed costs. Stora Enzo have been conducting some structural changes in its paper division to improve the heavy weight of fixed costs in its production units. The pulp segment represents a significant slice of Stora Enzo’s revenues, which represents an incremental risk for the company, as pulp prices are extremely volatile and any downward movement will have a negative impact on the company’s sales (as highlighted in the company’s financial results for 2015 and 2016).

**Figure 56: Efficiency Ranking Measured in terms of EBITDA Margin (2016)**



Despite the efforts from Navigator’s competitors to improve its operational efficiency, we still believe that Navigator is one step ahead from them and is better prepared to face the upcoming challenges of the paper sector. In fact, the cost-cutting measures that paper producers are currently implementing were already set in motion by Navigator in 2015. Moreover, Navigator is Europe’s top producer of UWF (market share of more than 50%<sup>42</sup>) and follows a strategy based on product and brand differentiation, selling high-end products with increased value added at premium prices, being therefore less exposed to price fluctuations. The company intends to replicate the same strategy to the new segments (tissue and pellets), marketing premium products, which will enable the Company to achieve superior margins through higher price power. Finally, Navigator’s production units combine pulp and paper mills with biomass cogeneration plants, equipping the industrial sites with low-energy solutions that allow Navigator to maintain high EBITDA margins compared to peers.

## Valuation

We believe the Discounted Cash Flow (“DCF”) model to be the most accurate valuation technique to determine the fair value of Navigator. DCF valuations are broadly considered accurate and flexible since firm specific growth rates and cash flows are less influenced by market errors in the valuation. It can be conducted in several different approaches and models, but they all share a single

<sup>39</sup> South Africa-based producer of coated fine paper

<sup>40</sup> Finland-based company that manufactures magazine paper, newsprint, fine paper and packaging boards

<sup>41</sup> Finland-based company engaged in energy, pulp and paper manufacturing business

<sup>42</sup> According to Company data

concept: use future free cash flow projections and discount them at the appropriate discount rate that reflects the risk of investing in a given company. Measuring the referred rate to discount cash flows is one of the most challenging tasks in valuation. In our DCF model, we conducted a two-stage valuation analysis, combining the Forecast Period<sup>43</sup> with a Terminal Value.

In performing Navigator's valuation, several assumptions had to be made, mainly to create forecasts regarding the evolution of Navigator's business.

## Revenues

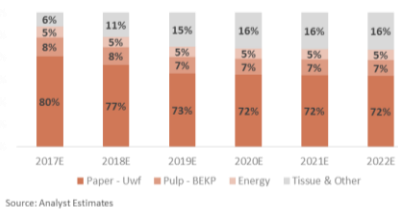
Navigator's consolidated revenues come from six different revenue streams (Paper UWF, Pulp BEKP, Energy, Tissue, Pellets and Forest and Other Non-Allocated) and are expected to grow at 2.5% CAGR<sub>2016-2023F</sub>, with the Tissue business as the main contributor to such increase with a 18.9% CAGR<sub>2016-2023F</sub>. In fact, our estimations points towards a significant increase in the weight of the Tissue segment (combined with pellets) in Navigator's revenues, evolving from 5% in 2016, to c. 16% in 2020F.

The Paper UWF segment represents the majority total revenue of Navigator and evolve with production and price. Earlier this year, Navigator announced that will increase paper prices in all markets (except for US) by 4% to 7%. In our estimations, we are assuming an increase of 4% for the aforementioned markets (91% of paper sales). Given the current market conditions for UWF, we assumed prices to stay flat between the 2018F and 2022F, and to evolve at inflation rate from 2023F onwards. Installed capacity should remain stable at 1.6 million tons, as the Company is not planning to invest in new expansion projects any time soon and we estimate a utilization rate<sup>44</sup> of 100%, in line with the Company's operational efficiency of the last 4 years.

During the first months of 2017E, Navigator has set in motion the expansion plan of the complex in Figueira da Foz. This expansion plan is expected to start operations in 1Q2018F, and should be fully operational by the end of 1Q2019F, bringing an additional 70 million tons of pulp to the Company's current installed capacity (1.4 million tons). We expect some price adjustments between 2018F and 2020F (CAGR<sub>2018F-2020F</sub> = -2%), given the expected increase in pulp supply coming from Fibria's and APP's new mills in 2018F. From 2021F onwards, we expect prices to grow with inflation rate.

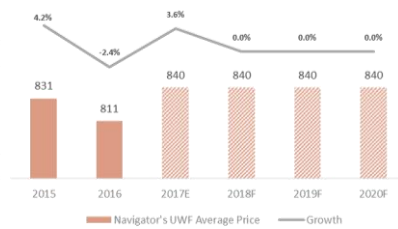
Within the energy segment, Navigator sells the excess production of electricity to the national grid at regulated tariffs. Therefore, we assumed prices to remain

Figure 57: Evolution of the Weight of Each Segment in Navigator's Revenue (2017E-2022F)



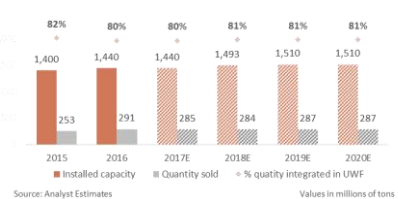
Source: Analyst Estimates

Figure 58: Navigator's UWF Price Estimates in €/tons (2017E-2020F)



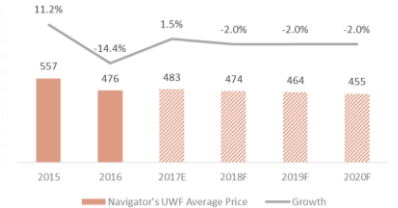
Source: Company Data/ Analyst Estimates

Figure 59: Pulp - Production Capacity and Quantity Sold Estimates (2017E-2020F)



Source: Analyst Estimates

Figure 60: Navigator's BEKP Price Estimates in €/tons (2017E-2020F)



Source: Company Data/ Analyst Estimates

<sup>43</sup> Also referred as "explicit period". In this case we assumed to be 7 years

<sup>44</sup> Represents how much the company is producing, compared to its installed capacity

Figure 61: Energy - Output, Sales and Utilization Rate Estimates (2017E-2020F)

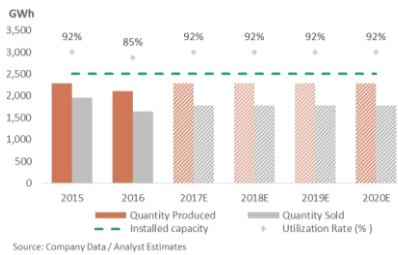


Figure 62: Tissue - Output, Sales and Utilization Rate Estimates (2017E-2020F)

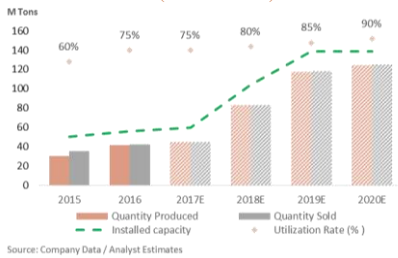
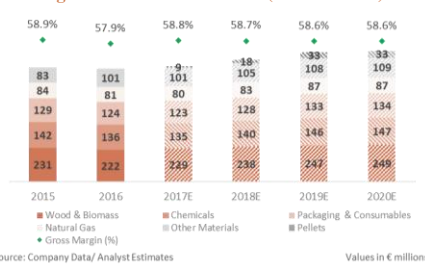


Figure 63: Pellets – Output and Price Estimates (2017E-2020F)



Figure 64: COGS Estimates (2017E-2020F)



stable during the forecasted period, being updated at inflation rate. As previously mentioned, revenue streaming from energy activities in 2016 was negatively impacted by the repair stoppages that took place in the Setúbal complex. Given the non-recurrent nature of this events, we expect the Company to return to the production levels highlighted in 2015 (utilization rate of 91%) from 2017E onwards. However, the fact that Figueira da Foz started operating in "self-consumption" mode, releases less energy to be sold on the national grid, thus we do not foresee any improvement in the percentage sold to the market (77.6%).

The Tissue segment is currently undertaking its ramp-up phase with new expansion projects on the horizon. After the expansion project of 2015, Navigator is expecting to further increase AMS capacity to 69 thousand tons by the end of 2017E. Furthermore, the Company has announced that will move forward with the Cacia project, a new tissue mill with annual capacity of 70 thousand tons of tissue. The new mill should begin operating in 2018F and be fully functional by 2019F. We do not expect any prices adjustments during the forecasted period, beyond the natural inflation updates.

Navigator has also announced that its most recent business area – pellets – recorded its first sales during 1Q2017. The mill is still at the start-up phase and should become fully operational in early 2019F, with revenues evolving from € 18 million in 2017E to c. € 70 million in 2023F.

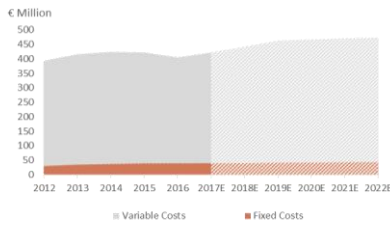
### OPEX

As a vertically integrated company, Navigator has little exposure to commodity and raw materials prices. The Company's lean cost structure and efficient operations lead to strong EBITDA generation.

Navigator has been improving its gross margin<sup>45</sup> consistently between 2014 (55.3%) and 2016 (57.9%) and has new (ambitious) cost reduction measures underway. The Company estimates that its cost reduction program (M2 Project) will have a positive impact of c. € 20 million on 2017E's EBITDA, mostly through reductions in costs related to pulp and paper chemicals, packaging materials and energy and water consumption. However, part of the referred improvements was (and will be) attained on the back of lower raw material costs (wood and biomass), which does not necessarily represent an efficiency improvement, but rather a depressed wood and biomass market. In our forecasts, we are assuming that the M2 project will have a positive impact of c. 1.0% on the company's gross margin (which accounts for c. € 16 million, representing a 20% discount on the company's forecasts) as we believe to be a more appropriate estimate.

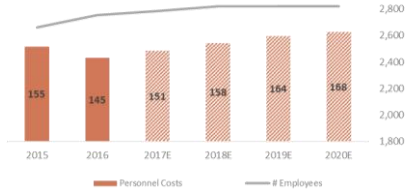
<sup>45</sup> Gross margin = Revenues – COGS + Variation of Production

**Figure 65: ESS - Fixed Costs vs Variable Costs Estimates (2017E-2020F)**



Source: Company Data/ Analyst Estimates

**Figure 66: Personnel Costs Estimates (2017E-2020F)**



Source: Company Data/ Analyst Estimates

Values in € million

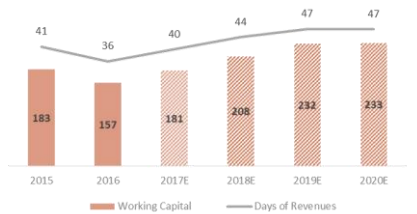
External services and supplies (“ESS”) were separated and forecasted based on the nature of the cost – variable or fixed costs. Variable costs, which are mainly composed of freight, energy and fluids and specialized services, were estimated as a percentage of revenues, while fixed costs such as rents and insurance were projected with inflation. Also, we disregarded the non-recurring items (mostly related to the AMS acquisition) identified by the Company in its financial reports.

Personnel costs were estimated based on historical 2015-2016 costs in Navigator. The Company currently employs c. 2,750 people, with an average wage per year of c. € 34 thousand<sup>46</sup>. From 2018F onwards, we expect the Company to further increase its staff crew to 2,820, in light of the new production units in Cacia (tissue) and Figueira da Foz (Pulp). Wages were assumed to grow at the real wage growth rate (inflation rate plus an estimated 0.5% spread).

### NWC Requirements

All Working Capital (“WC”) items were forecasted as a portion of a specific driver, calculated in the terms of days of receivables/ payables, and based on 2016 figures. Depending on the specific nature of the WC item to be forecasted, we applied different drivers: (i) COGS for inventories, (ii) Revenues for receivables, other current assets and state and other public entities, and (iii) a combination of COGS and ESS for payables and other current liabilities.

**Figure 67: Net Working Capital Estimates (2017E-2020F)**



Source: Company Data/ Analyst Estimates

Values in € million

In forecasting Navigator’s Net Working Capital (“NWC”), some adjustments had to be made in order to reflect a more realistic scenario. In fact, the Company made a considerable divestment in NWC in 2016 (- € 26 million), reflecting an extraordinary payment delay in accounts payables, that switched from 75 days of COGS & ESS in 2015, to 87 days in 2016 (the highest payment deadline ever reported). Considering that (i) we don’t think it is feasible to maintain a scenario in which a company is constantly being funded through NWC and (ii) that the Company’s average payment deadline for the period 2013-2015<sup>47</sup> was 71 days, we decided to smoothly accommodate the number of days in accounts payables during the forecast period.

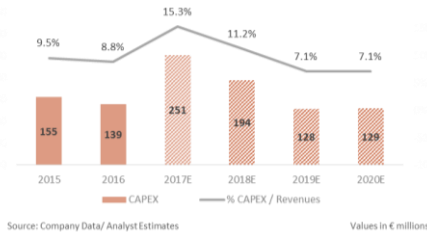
### CAPEX & Depreciations

Early this year, Navigator announced that will be investing € 207 million in expanding the Company’s installed capacity within the pulp and tissue segments. During the latest press release, Navigator’s management team has confirmed that will move forward with the Cacia project, an investment worth € 120 million.

<sup>46</sup> Staff remuneration excluding statutory bodies

<sup>47</sup> Accounts payables reported in 2012 were also an outlier (85 days of COGS + ESS), being therefore disregarded for the purpose of estimating a current payment deadline of Navigator

Figure 68: CAPEX Estimates (2017E-2020F)



As previously stated, the Cacia project consists on equipping Cacia with a new integrated tissue mill that will double the Company’s presence in the tissue sector. According to the Company, 40% of the budget should be realized in 2017E, with the remaining 60% in 2018F. Furthermore, the Company will also invest € 5 million in the expansion of AMS, increasing the factory’s installed capacity up to 69 thousand tons. The 2017E budget also foresees an investment of € 82 million in the expansion of Figueira da Foz pulp mill (additional 70 million tons of pulp), with operations scheduled to start in 1Q2018F.

Apart from the abovementioned CAPEX, we also included in our estimations maintenance CAPEX, which should be around 7.1% of revenues (~€ 130 million).

Depreciations and Amortizations were estimated based on the useful life of each asset class: (i) 50 years for land, (ii) 30 years for buildings and other constructions, (iii) 25 years for equipment and other tangibles, and (iv) 3 years for industrial property and other rights. These limits are in line with the average useful life used by the Company in its financial reports.

### WACC

For the purpose of reaching Navigator’s fair value, we chose to apply the Free Cash Flow to the Firm (“FCFF”) approach, as it respects the company as a whole, valuing the asset based on cash flows that are available to all stakeholders, both equity and debt holders. It is the cash flow that results from the company’s operations, before debt repayments and after reinvestment in fixed assets (CAPEX) and investment in NWC. Under this methodology, the enterprise value is obtained by summing up the forecasted after tax unlevered cash flows, discounted at the Weighted Average Cost of Capital (“WACC”).

The process of calculating WACC, involves estimating the company’s target gearing (D/E ratio), the cost of equity ( $r_e$ ) and the cost of debt ( $r_d$ ), separately.

We started our WACC estimations by finding the appropriate target D/E ratio. We analyzed Navigator’s capital structure over the past few years, and since we don’t have any supporting evidence that would make us believe that the Company will change its gearing policy in the foreseeable future, we come up with the target value of 19% for debt and 81% for equity, which corresponds to the average capital structure of Navigator between 2012 and 2016.

To assess the cost of equity (7.6%), we decided to apply the Capital Asset Price Model<sup>48</sup> (“CAPM”), with the German Government 10-year bond (0.4%) as our proxy for the risk-free rate. The equity beta (1.34) was obtained through a

<sup>48</sup>  $r_e = r_F + \beta_L * MRP + CRP$

regression between the monthly excess returns of the MSCI Europe Index and the return of Navigator’s stock. We could also consider the unlevered betas of comparable companies (Pulp and Paper integrated players), re-levered afterwards using Navigator’s target gearing. However, given the observed deviations among peers, we consider the 1<sup>st</sup> method to be more appropriate. Finally, we chose the MSCI Europe Index as our benchmark to compute the Market Risk Premium<sup>49</sup> (“MRP”) (5.4%), as we believe to be the representative portfolio of Navigator’s typical investor.

Navigator’s cost of debt (3.4%) was obtained by adding the spread proposed by professor Aswath Damodaran for a BB/Ba2 rating to the risk-free rate. The rating was assumed according to the last rating assigned by MOODY’S<sup>50</sup> and STANDARD & POOR’S<sup>51</sup> to the Company’s long-term debt.

Figure 70: WACC Key Parameters

Risk-free rate ( $r_f$ )	0.4%
$\beta_L$ - Equity Beta	1.34
Market Risk Premium	5.4%
<b>Cost of Equity (<math>r_e</math>)</b>	<b>7.6%</b>
BB/Ba2 Rating	3.0%
<b>Cost of Debt (<math>r_d</math>)</b>	<b>3.4%</b>
Tax Rate	29.2%
D/E Ratio	0.19
<b>WACC</b>	<b>6.8%</b>

Source: Bloomberg; Analyst Estimates

At the end, we reached a WACC of 6.8% that we used to discount cash flows of Navigator until 2023F. We assumed WACC to remain constant throughout the forecast period, once the Company’s D/E ratio has shown low volatility in the last 4 years. To compute the firm’s value from 2024F onwards, we applied a Terminal Value using a constant growth rate (“g”) in perpetuity. Taking into consideration the limited growth potential that the Pulp and Paper industry is facing, and that the market in which Navigator operates (namely Europe) will not increase in demand, a nominal terminal growth rate of -0.9% was considered, which combined with IMF long term estimations for inflation rate (1.9%), resulted in a growth rate in perpetuity of 1.0% for Navigator.

Figure 69: Sensitivity Analysis on WACC and Terminal Growth Rate

		WACC				
		5.8%	6.3%	6.8%	7.3%	7.8%
Growth Rate	0.0%	4.6 €	4.1 €	3.8 €	3.4 €	3.1 €
	0.5%	5.0 €	4.5 €	4.0 €	3.7 €	3.3 €
	1.0%	5.5 €	4.9 €	<b>4.4 €</b>	3.9 €	3.6 €
	1.5%	6.1 €	5.3 €	4.7 €	4.2 €	3.8 €
	2.0%	6.8 €	5.9 €	5.2 €	4.6 €	4.1 €

## Equity Value

Once the Enterprise Value of a given company is calculated, the ultimate goal of any financial valuation is to reach the company’s Equity Value, which is most commonly presented to investors in the form of the company’s stock price.

This last step encompasses subtracting and adding (whichever the case may be) all non-equity items from Enterprise Value. As such, we started the EV

<sup>49</sup> Average annual excess return of the MSCI Europe Index (last 5 years)

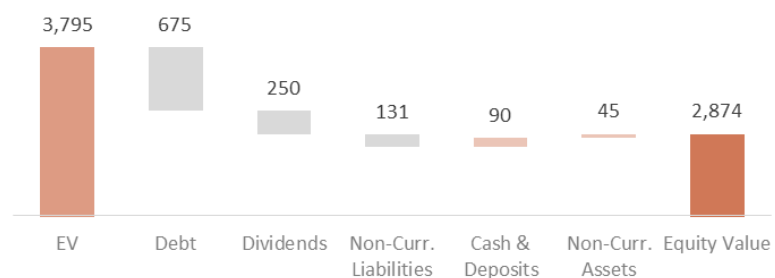
<sup>50</sup> Last update on 22-02-2017

<sup>51</sup> Last update on 27-03-2017

adjustments by subtracting the captions in Navigator’s balance sheet that are related to interest bearing liabilities, or in other words the overall market value of debt (€ 675 million). We also excluded provisions (€ 31 million), deferred tax liabilities (€ 60 million), pension and other post-employment benefits (€ 6 million) and other non-current liabilities related to investment grants and equipment (€ 33 million). On other hand, positive add-ons included cash and cash equivalents (€ 90 million), deferred tax assets (€ 44 million), available for sale assets (€ 0.1 million) and other financial assets (€ 0.3 million). Considering that Navigator has already confirmed a dividend payment for 2016 worth € 250 million, we also incorporated this (negative) amount in our EV adjustments.

All in all, our valuation resulted on an equity value of € 2,874 million, which we divided by the number of outstanding shares (717.5 million) to calculate the target stock price. However, the previously mentioned dividend payment is yet to be executed, which means that the Company’s current stock price of € 3.95 has not been adjusted for the dividend payment. Therefore, our target price also incorporates an add-on of € 0.34, equivalent to the dividend per share.

Figure 71: Enterprise Value to Equity Value



Source: Analyst Estimates

Values in € million

Based on our estimates, we initiate Navigator’s coverage with a BUY recommendation and a price target of € 4.35<sup>52</sup> for the end of 2017, representing an upside potential of c. 21.5%<sup>53</sup> from the current stock price of € 3.95.















### Multiple Valuation

When it comes to assess a company’s stock value, it is also important to conduct an analysis of the peers’ trading multiples. Valuing a company solely on multiples could yield tremendous wrong results, as relative valuation methods constitute a gross and simplified representation of reality. Nonetheless, they are a useful tool to double-check the results yielding from our DCF model. Multiples are also important metric to understand how similar companies are performing in terms of margins, leverage and investment strategies.

<sup>52</sup> Target price of € 4.00, excluding dividends

<sup>53</sup> Annualized return

Figure 72: List of Trade Comparable Companies for Navigator

	Country	Market Cap (€ Million)	EV/Sales	EV/EBITDA	Net Debt to Equity	P/E	Dividend Yield (%)	Beta Unlevered
<b>Pulp Players</b>								
Altri		864	2.2x	7.9x	0.53	12.7x	6.0%	0.73
Ence		860	1.8x	7.6x	0.25	22.3x	2.3%	0.86
Fibria		4,727	2.9x	8.3x	0.70	16.2x	2.5%	0.26
Suzano		4,076	2.5x	8.9x	0.73	13.6x	2.7%	0.14
Mercer International		676	1.3x	6.7x	0.68	17.5x	4.1%	0.77
<b>Pulp Average</b>		<b>n.a.</b>	<b>2.1x</b>	<b>7.9x</b>	<b>0.58</b>	<b>16.5x</b>	<b>3.5%</b>	<b>0.39</b>
<b>Pulp &amp; Paper</b>								
International Paper		20,088	1.5x	11.9x	0.47	18.4x	3.5%	0.89
Metsa		2,383	1.6x	14.1x	0.12	22.9x	2.8%	0.98
Mondi		11,772	1.7x	8.5x	0.14	18.1x	2.4%	1.02
Sappi		3,967	1.1x	6.8x	0.33	13.1x	1.5%	0.56
Stora Enso		9,170	1.2x	10.1x	0.27	19.9x	3.2%	1.16
UPM-kymmene		13,258	1.3x	7.6x	-0.05	14.9x	3.9%	1.24
Domtar		2,186	0.7x	6.2x	0.49	13.5x	4.4%	1.01
Holmen AB		3,430	2.4x	12.4x	0.11	19.3x	3.1%	0.60
<b>Pulp &amp; Paper Average</b>		<b>n.a.</b>	<b>1.5x</b>	<b>9.6x</b>	<b>0.23</b>	<b>17.1x</b>	<b>3.9%</b>	<b>0.92</b>
<b>Industry Average</b>		<b>n.a.</b>	<b>1.7x</b>	<b>9.0x</b>	<b>0.37</b>	<b>17.1x</b>	<b>3.3%</b>	<b>0.73</b>
<b>Navigator</b>		<b>2,879</b>	<b>2.2x</b>	<b>8.9x</b>	<b>0.22</b>	<b>13.9x</b>	<b>10.5%</b>	<b>0.83</b>

Source: Bloomberg @16.May.2017

Navigator's current trading multiples look attractive, beating industry standards in all relevant metrics. The gap is quite obvious in the Price Earnings ("P/E") ratio, a measure of proportion between a company's current stock price and earnings per share, with Navigator trading at discount to peers (13.9x vs 17.1x), when we actually think it should be trading at a premium, given its strong cash flow profile and operational efficiency. Sappi is also trading at discount (13.1x) to peers, mostly due to outstanding net results of \$ 316 million in 2016 that compare with \$ 167 reported in 2015. Navigator also offers one of the most attractive Dividend Yields in Europe (10.5%), way beyond the industry average of 3.9%.

The Debt to Equity ratio is a leverage measurement that compares a company's total liabilities to its shareholder equity, and it's a general indicator of a company's capacity to meet its financial obligations. Navigator's financial leverage (0.22) is in line with industry standards (0.23). Such fact can be explained by the relatively low investment that paper producers have been undertaking over the past few years. The current low gearing ratio leaves room for Navigator to fund expansion projects more easily in the foreseeable future.

The EV/EBITDA is another useful metric that is commonly used to determine the value of a company, being a powerful tool to assess if a company's stock is undervalued or overvalued. In this case, Navigator is currently trading at relatively lower multiple than its peers (8.9x < 9.6x). However, in this case we see some distortions among peers, as we can easily see in Domtar, Sappi and Metsa EV/EBITDA multiples. Such fact can be explained by the exceptional EBITDA fluctuations<sup>54</sup> observed in Domtar, Sappi and Metsa results for the year end 2016. If we disregard these companies (outliers) from our analysis, we came up

<sup>54</sup> See section "Navigator Among Peers" for further information regarding the referred EBITDA fluctuations

with an average for the paper industry of 9.9x, which reinforces the idea that the Company stock may be undervalued and therefore its price can eventually go up in the near future (perhaps even more than the industry’s average).

Another useful metric when it comes to assess a company’s value is to use past transaction multiples. Precedent transaction analysis is important because it presents investors with an estimation of how much a company is worth based on the price paid for similar companies in the past. However, past transaction multiples (especially in M&A<sup>55</sup>) typically involve acquisitions of significant holdings by a single investor, transferring corporate governance rights to the new owner, including direct access to cash flows and dividend policy. These sort of transactions are not an adequate metric for comparison purposes because they often incorporate a control premium. Therefore, we think it is wiser to analyze past minority acquisitions, rather than a complete list of past transactions, even though we recognize that minority discounts may also apply. However, Navigator has only a small portion of its shares available for sale on the stock market<sup>56</sup>, which strengths the idea that we should be looking to past minority acquisitions.

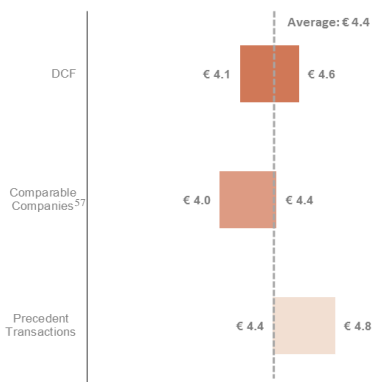
We identified the most relevant transactions of the past 5 years, taking into consideration: (i) the same industry in which Navigator operates (Pulp and Paper), (ii) the size of the transactions and (iii) the characteristics of the target company (that should be similar to Navigator).

Figure 73: List of Precedent Transactions (2012-2016)

Date	Target	Country	Stake	EV	PE Ratio	EV/EBITDA	EV/Sales
2015	Lee & Man Paper Manufacturing Ltd.		4.3%	3,457	9.8x	9.1x	1.7x
2015	Lee & Man Paper Manufacturing Ltd.		6.8%	3,533	9.8x	9.1x	1.7x
2013	BillerudKorsnas AB		24.9%	2,585	13.5x	18.5x	1.7x
2012	Yueyang Forest and Paper Co Ltd		19.2%	1,745	29.7x	11.8x	2.0x
2012	Daio Paper Corporation		16.7%	3,650	n.a.	8.9x	1.1x
2012	Mondi Packaging Paper Swiecie SA		34.0%	852	10.2x	6.5x	2.1x
<b>Average</b>					<b>14.6x</b>	<b>10.6x</b>	<b>1.7x</b>

Source: MergerMarket

Figure 74: Valuation Results From Different Approaches (per share basis)



Transaction multiples are very useful because they reflect actual payments for real-life acquisitions, rather than traded multiples that result from supply-demand interactions. On the other hand, precedent transaction multiples are rarely perfectly comparable and they may not reflect current market conditions.

We chose the average EV/EBITDA multiple from comparable companies and precedent transactions as our reference to conduct the relative valuation of Navigator. EV multiples tend to perform better than equity value multiples because they disregard the capital structure of the company that one intends to compare with. As we can see from figure 74, multiples valuation corroborates our DCF results, adding further consistency to our investment recommendation.

<sup>55</sup> Refers to “Mergers and Acquisitions”

<sup>56</sup> As of March, 2017, Navigator had 22.1% of its shares in free-float

<sup>57</sup> Excludes multiples from companies identified as outliers in our analysis, namely Metsa, Domtar and Sappi

# Financial Statements

Balance Sheet	2013	2014	2015	2016	2017E	2018F	2019F	2020F	2021F	2022F
Goodwill	377	377	377	377	377	377	377	377	377	377
Other Intangible Assets	3	3	5	4	7	9	12	14	17	20
Property Plant & Equipment	1,316	1,250	1,321	1,295	1,403	1,446	1,419	1,387	1,351	1,310
Biological Assets	111	114	117	126	126	126	126	126	126	126
Deferred Tax Assets	31	23	51	44	44	44	44	44	44	44
<b>Non-Current Assets</b>	<b>1,839</b>	<b>1,768</b>	<b>1,872</b>	<b>1,847</b>	<b>1,957</b>	<b>2,003</b>	<b>1,978</b>	<b>1,949</b>	<b>1,915</b>	<b>1,877</b>
Inventories	203	189	213	209	213	224	237	239	240	241
Receivable and Other Current Assets	201	189	215	216	225	236	248	251	252	253
State and Other Public Entities	53	63	58	70	73	76	80	81	81	81
Deposits	524	500	73	68	90	90	90	90	90	90
<b>Current Assets</b>	<b>981</b>	<b>940</b>	<b>558</b>	<b>562</b>	<b>601</b>	<b>626</b>	<b>655</b>	<b>660</b>	<b>662</b>	<b>665</b>
<b>Total Assets</b>	<b>2,820</b>	<b>2,708</b>	<b>2,430</b>	<b>2,409</b>	<b>2,558</b>	<b>2,629</b>	<b>2,633</b>	<b>2,609</b>	<b>2,577</b>	<b>2,542</b>
Share Capital	768	768	768	718	718	718	718	718	718	718
Treasury Shares	-94	-97	-97	-1	-1	-1	-1	-1	-1	-1
Fair Value Reserves	0	-2	-2	-8	-8	-8	-8	-8	-8	-8
Other Reserves	75	84	92	100	111	120	130	140	144	144
Currency Translation Reserves	-1	1	6	-1	-1	-1	-1	-1	-1	-1
Retained Earnings	522	519	273	206	162	172	181	192	209	228
Net Profit for the Period	210	181	196	218	189	195	207	203	197	192
Anticipated Dividends	0	0	-30	0	0	0	0	0	0	0
Non-Controlling Interests	0	0	9	2	2	2	2	2	2	2
<b>Equity</b>	<b>1,480</b>	<b>1,454</b>	<b>1,214</b>	<b>1,233</b>	<b>1,172</b>	<b>1,197</b>	<b>1,228</b>	<b>1,245</b>	<b>1,260</b>	<b>1,275</b>
Deferred Taxes Liabilities	99	96	88	60	60	60	60	60	60	60
Pensions and other post-employment benefits	0	0	0	6	6	6	6	6	6	6
Provisions	49	41	59	31	31	31	31	31	31	31
Interest-Bearing Liabilities	772	468	541	640	907	955	798	667	839	581
Other Non-Current Liabilities	46	39	39	33	33	33	33	33	33	33
<b>Non-Current Liabilities</b>	<b>966</b>	<b>644</b>	<b>727</b>	<b>771</b>	<b>1,038</b>	<b>1,085</b>	<b>928</b>	<b>797</b>	<b>969</b>	<b>712</b>
Interest-Bearing Liabilities	60	305	186	68	18	18	143	229	9	214
Payables and Other Current Liabilities	201	212	225	256	246	240	240	243	245	247
State and Other Public entities	113	94	77	81	84	88	93	94	94	95
<b>Current Liabilities</b>	<b>373</b>	<b>611</b>	<b>489</b>	<b>405</b>	<b>348</b>	<b>346</b>	<b>477</b>	<b>566</b>	<b>349</b>	<b>555</b>
<b>Total Equity &amp; Liabilities</b>	<b>2,820</b>	<b>2,708</b>	<b>2,430</b>	<b>2,409</b>	<b>2,558</b>	<b>2,629</b>	<b>2,633</b>	<b>2,609</b>	<b>2,577</b>	<b>2,542</b>

€ Millions

Income Statement	2013	2014	2015	2016	2017E	2018F	2019F	2020F	2021F	2022F
<b>Revenues</b>	<b>1 531</b>	<b>1 542</b>	<b>1 628</b>	<b>1 577</b>	<b>1 644</b>	<b>1 734</b>	<b>1 825</b>	<b>1 841</b>	<b>1 848</b>	<b>1 855</b>
<b>EBITDA</b>	<b>350</b>	<b>328</b>	<b>390</b>	<b>397</b>	<b>426</b>	<b>454</b>	<b>484</b>	<b>486</b>	<b>484</b>	<b>483</b>
Provisions	-14	1	15	0	0	0	0	0	0	0
Depreciation and Amortization	-103	-112	-122	-167	-138	-142	-144	-145	-147	-149
<b>EBIT</b>	<b>234</b>	<b>218</b>	<b>283</b>	<b>230</b>	<b>288</b>	<b>312</b>	<b>340</b>	<b>340</b>	<b>337</b>	<b>334</b>
Gains (losses) of associated companies and joint ventures	0	0	0	0	0	0	0	0	0	0
Financial Results	-14	-34	-50	-21	-12	-13	-13	-12	-10	-8
<b>EBT</b>	<b>220</b>	<b>184</b>	<b>233</b>	<b>210</b>	<b>276</b>	<b>299</b>	<b>327</b>	<b>328</b>	<b>327</b>	<b>326</b>
Income Taxes	-10	-3	-36	7	-81	-87	-96	-96	-95	-95
<b>Net Income</b>	<b>210</b>	<b>181</b>	<b>197</b>	<b>217</b>	<b>196</b>	<b>212</b>	<b>231</b>	<b>232</b>	<b>231</b>	<b>230</b>
Non-Controlling Interests	0	0	0	1	0	0	0	0	0	0
<b>Net Profit for the Year</b>	<b>210</b>	<b>181</b>	<b>196</b>	<b>218</b>	<b>196</b>	<b>212</b>	<b>231</b>	<b>232</b>	<b>231</b>	<b>230</b>
<b>EPS</b>	<b>€ 0,27</b>	<b>€ 0,24</b>	<b>€ 0,26</b>	<b>€ 0,30</b>	<b>€ 0,27</b>	<b>€ 0,29</b>	<b>€ 0,32</b>	<b>€ 0,32</b>	<b>€ 0,32</b>	<b>€ 0,32</b>

€ Millions

Cash-flow Statement	2013	2014	2015	2016	2017E	2018F	2019F	2020F	2021F	2022F
EBIT	234	218	283	230	280	293	311	308	301	294
Income Tax	-72	-68	-83	-67	-82	-85	-91	-90	-88	-86
Tax Adjustments	58	55	32	68	0	0	0	0	0	0
NOPLAT	220	205	232	232	198	207	220	218	213	208
Depreciation	103	112	122	167	141	148	153	158	163	168
Non-Controlling Interests	0	0	0	1	0	0	0	0	0	0
<b>Operating Cash Flow [A]</b>	<b>323</b>	<b>317</b>	<b>354</b>	<b>399</b>	<b>339</b>	<b>356</b>	<b>373</b>	<b>376</b>	<b>376</b>	<b>376</b>
(-) Net CAPEX	-19	-46	-194	-140	-251	-194	-128	-129	-130	-130
(-) Working Capital	-12	8	-48	26	-23	-27	-24	-1	0	0
(-) Changes in other assets	-87	1	-39	-30	0	0	0	0	0	0
<b>Operational Investing Cash Flow [B]</b>	<b>-119</b>	<b>-36</b>	<b>-281</b>	<b>-145</b>	<b>-274</b>	<b>-221</b>	<b>-152</b>	<b>-130</b>	<b>-130</b>	<b>-130</b>
(-) Changes in non-current assets	2	0	0	0	0	0	0	0	0	0
(+) Changes in non-current liabilities	72	-16	18	-27	0	0	0	0	0	0
<b>Non-Operational Cash Flow [C]</b>	<b>73</b>	<b>-16</b>	<b>18</b>	<b>-27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Free Cash Flow to the Firm [A] + [B] + [C]</b>	<b>277</b>	<b>265</b>	<b>91</b>	<b>227</b>	<b>65</b>	<b>135</b>	<b>221</b>	<b>245</b>	<b>247</b>	<b>246</b>
(+) Changes in Non-Current Financial Liabilities	298	-303	72	99	267	48	-157	-131	172	-257
(+) Changes in Current Financial Liabilities	-160	245	-118	-118	-50	0	125	86	-220	204
(-) Changes in Excess Cash	-195	25	427	5	-22	0	0	0	0	0
(+) Interest paid	-14	-34	-50	-21	-13	-17	-19	-21	-23	-23
(-) Interest Tax Shield	4	11	15	6	4	5	6	6	7	7
(+) Changes in Equity	-211	-208	-436	-198	-250	-170	-176	-186	-183	-177
<b>Cash Flow from Financing</b>	<b>-277</b>	<b>-265</b>	<b>-91</b>	<b>-227</b>	<b>-65</b>	<b>-135</b>	<b>-221</b>	<b>-245</b>	<b>-247</b>	<b>-246</b>

€ Millions

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<b>Buy</b>	Expected total return (including expected capital gains and expected dividend yield) of more than 15% over a 12-month period.
<b>Hold</b>	Expected total return (including expected capital gains and expected dividend yield) between 0% and 15% over a 12-month period.
<b>Sell</b>	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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