

THE NAVIGATOR COMPANY

PAPER AND PULP

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COMPANY REPORT

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Trying to grow during an Asian takeover

A strategy of operational and geographic diversification

- The paper sector has been facing **decreasing levels of demand** in some of its main products, especially in graphic paper. However, it continues to be Navigator's main source of revenues, as the UWF paper segment accounted for over 80% of total revenues in the last three years.
- Historically dominated by Europe and North America**, the paper and pulp sector has been suffering from **growing levels of competition, mainly originated by Asian and South American companies**. Resulting in an accentuated imbalance in the sector's worldwide level of demand.
- The company's strategy to face these adverse market conditions, has been focused on the **operational and geographic diversification** of its activities, represented by the entrance in the Tissue segment, Pellets business (USA) and Forestry investments (Mozambique).
- Navigator's "stable" rating outlook, results of an historical solid financial performance, with emphasis on high levels of profitability (EBITDA margin over 20%) and a sustainable debt level (with the lowest ever cost of debt in short-term loans, 1.5%).
- It is **recommended a BUY position**, as the price target for the FY19 is **5.17 €**, which represents a potential upside of **46.9%**, when compared to the price of **3.52 €** at December 21st.

Company description

The Navigator Company is the largest paper and pulp producer in Portugal and one of the largest in Europe. With a deep vertical integration, the firm is able to enjoy competitive production costs when compared to its peers. Accounting for 1% of the Portuguese GDP and 2.4% of exports of goods, Navigator is one of the most important companies in the Portuguese economy.

Recommendation: **BUY**

Price Target FY19: **5.17 €**

Price (as of 21-Dec-18) **3.52 €**

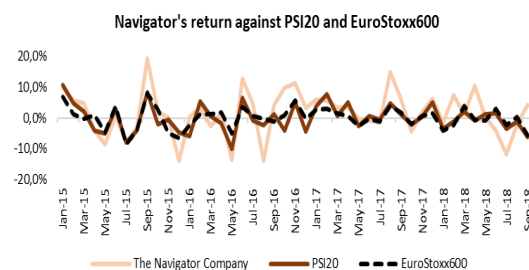
Reuters: NVGR.LS, Bloomberg: NVG PL

52-week range (€) 3.38-6.01

Market Cap (€m) 2,493

Outstanding Shares (m) 717.5

Source: Bloomberg



Source: Bloomberg

	2017	2018F	2019F
Revenues (€ millions)	1636	1589	1588
EBITDA (€ millions)	403.8	382.4	384.2
Net Profit (€ millions)	207.8	174.8	173.2
FCF (€ millions)	198.1	191.7	155.4
ROE (%)	17.5	14.6	14.2
D/E (%)	61.2	56.9	55.3
ROIC (%)	13.9	12.9	12.1
EBITDA margin (%)	24.4	24.1	24.2
EV/EBITDA (x)	11.1	11.5	11.4

Source: Bloomberg, Company Report, Analyst Estimates

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY PEDRO RIBEIRO HORTA, A MASTER IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, 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

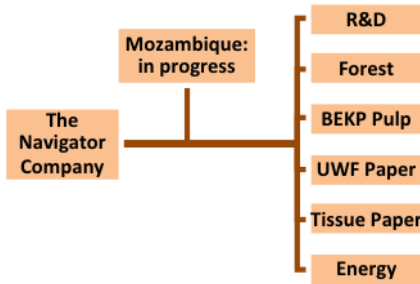
Company description

The Navigator Company geneses goes back to 1975, with the foundation of Portucel – Empresa de Celulosa e Papel de Portugal, a firm whose core business was the production of paper and pulp. Its creation was a result of the unstable political and economic situation lived in Portugal, which led to the nationalization of the cellulose industry. Thus, Portucel was originated from the merger of several pulp, paper and packaging companies. This nationalization process would only begin to be inverted in 1995 – with the start of Portucel's privatization – and was only concluded in 2004, when the Semapa Group, one of the largest Portuguese industrial conglomerates – mainly focused in the areas of Pulp, Paper, Cement and Environment – acquired 67.1% of Navigator's capital, becoming its biggest shareholder, a position preserved until today.

As one of the leading paper and bleached eucalyptus kraft pulp (BEKP) producers in Portugal, Portucel's consolidation strategy focused on the acquisition of its peers Inapa Papéis (2000) and Soporcel (2001). These acquisitions lead to the creation of The Navigator Company, in 2001. Nowadays, Navigator is a vertically integrated forest producer that is present in every step of the production chain (R&D, Forestry, BEKP and Paper production). The firm uses its own forestry production to manufacture BEKP that will later be integrated in the production of its core end products – uncoated woodfree (UWF) and Tissue papers – or sold to the market. Navigator also presents itself as one of Portugal's major energy producers, with a total power generation, in 2017, of 2,227 GWh, which accounted for 4% of the country's total power output and 52% of the country's total renewable energy generated from biomass. Navigator's vertical integration has proved to be an important competitive advantage relative to its peers, as it reduces the firm's exposure to the volatility of inputs' costs, nevertheless, the firm's forestry production is insufficient to face its paper and pulp demands, forcing Navigator to acquire a significant share of its inputs in the national and international markets.

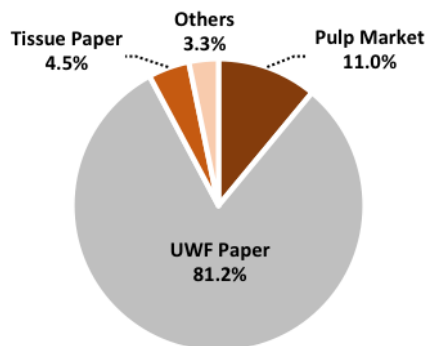
The Navigator Company is the largest paper and pulp producer in Portugal and one of the largest in Europe, which is represented by its 3,197 employees and leading production capacities of BEKP and UWF printing and writing (P&W) paper. In 2017, Navigator reached 1.6 billion € in revenues due to the almost full utilization of its annual production capacities: 1.6 million tonnes of paper, 1.5 million tonnes of pulp (being 80% directly integrated in paper production and only 0.3 million tonnes sold to the market), 65 thousand tonnes of Tissue products

Exhibit 1: Navigator internal organisation



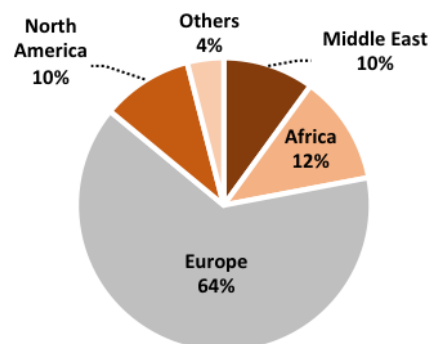
Source: Company Report

Exhibit 2: Revenues per segment, 2017



Source: Company Report

Exhibit 3: Navigator's main markets



Source: Company Report

and 2.5 Terawatts of renewable energy. Despite its dominant position in Portugal, Navigator is, above all else, an international company, as it exports 95% of its total production to 130 different countries. Nevertheless, all four industrial sites used by the company are located in Portugal:

- **Figueira da Foz Industrial Complex**, with a maximum production capacity of 650 thousand tonnes of BEKP, due to an expansion completed during the current year (the previous capacity was 580 thousand tonnes), the mill reached an all-time highest industrial output in 2017, with 593 tonnes of BEKP produced. It also has the capacity to produce 800 thousand tonnes of UWF P&W paper (having produced 771 thousand tonnes in 2017);
- **Setúbal Industrial Complex**, in the city where the firm's headquarters are located, the complex has an annual production capacity of 550 thousand tonnes of BEKP (having produced 542 thousand tonnes in 2017). Paper production is distributed between two paper mills, the first, with an annual capacity for 275 thousand tonnes and the second, one of the most sophisticated in the world, with the capacity to produce 500 thousand tonnes of UWF paper per year;
- **Cácia Industrial Complex**, the only facility that exclusively produces BEKP, with an annual production capacity of 320 thousand tonnes. The BEKP produced in Cacia is not to intended to produce UWF paper, but to incorporate in special papers, such as, cigarettes, décor or tissue;
- **Vila Velha de Ródão Factory**, solely focused on the production of Tissue paper, it has an annual production capacity of 60 thousand tonnes.

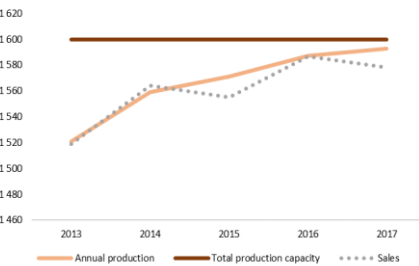
Lastly, it is essential to understand Navigator's importance in the Portuguese economy, as one of the country's largest employing entities and electricity producers, Navigator exportations of 1.3 billion € correspond to 2.4% of the country's total exports of goods. The firm's contribution to wealth creation is quite significant, accounting for 1% of the Portuguese GDP. Also, in order to foster the sector's growth in Portugal, Navigator gives priority to Portuguese suppliers, which account for 72% of the firm's total suppliers.

Segment Description

UWF paper

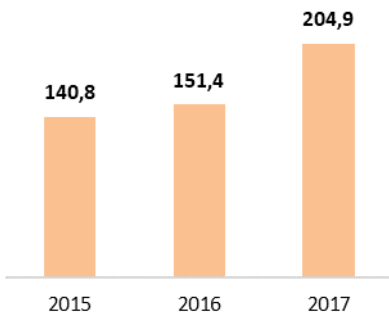
Constant technological evolution and a very mature market have been leading to a continuous decrease in the paper market's demand, resulting in a 2% decrease in UWF paper sales in the first 9M of 2018, when compared with the same period

Exhibit 4: Navigator’s UWF Paper operational data (in million tonnes)



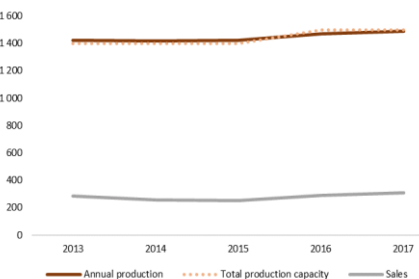
Source: Bloomberg

Exhibit 5: Navigator’s Pulp segment revenues (in millions €)



Source: Bloomberg

Exhibit 6: Navigator’s Pulp operational data (in million tonnes)



Source: Bloomberg

last year. Even though, Navigator still presents itself as the largest UWF P&W paper producer in Europe and sixth largest in the world, with a 1.6 billion ton/year production capacity. Also, UWF paper has been Navigator’s most important segment over the years, accounting for more than 80% of total revenues in the last three years, being 35% of those revenues in the premium segment, where the brand “Navigator” is recognised as the leading premium office paper brand in Europe. Hence, Navigator presents significant market shares in the Western European paper segment, with 19% market share in UWF paper segment and 50% in the premium segment¹.

Navigator’s core strategy in the paper segment is based on developing its own brands, taking advantage of its major brand awareness within the industry. Navigator assigns a brand to each type of paper product, having a total of 11 different brands² that are divide in two different groups:

- **Office paper**, paper solutions for professional and home use;
- **Offset paper**, paper solutions for the printing industry.

Pulp market

The Navigator Company produces several types of paper, inclusively, special papers tailored to each customer’s needs, meaning that, different types of paper require different types of pulp. The majority of pulp produced by Navigator is later incorporated in paper production (around 80%), being BEKP the most produced type of pulp, which is used to produce P&W paper and tissue products. The firm’s strategy in this segment is based on the use of a top-quality raw material – *Eucalyptus globulus* – which characteristics allow to produce a distinctive premium quality product. However, one major challenge faced by Navigator (and by the whole pulp sector), is the insufficiency of inputs, i.e., availability of wood. In particular, the beginning of 2018 was problematic to the sector, due to the lack of available wood in the world market.

Despite its main role of producing pulp to incorporate in paper production, in 2017, pulp sales accounted for 11% (180.5 million €) of the firm’s total revenues, which is equivalent to a 7% increase in the volume of pulp sold, relative to 2016. In the current year, pulp prices have been increasing, being predicted to remain high during the near future, backing up the increase in paper prices.

Recently, Navigator’s pulp production has been very close to its total capacity, creating the idea that the firm might be constraining its full potential. So, as part of the growth strategy initiated by the firm in 2015, two measures were taken:

¹ The Navigator Company 2017 annual report

² Navigator, Navigator Eco-Logical, Explorer, MultiOffice, Discovery, Inacopia, Target, Pioneer, Soporset, INASET and Navigator PrePrint

- Expansion of the pulp production capacity at Figueira da Foz, completed during this year, passing from a total production capacity of 580 to 650 thousand tonnes of BEKP. Which represented a CapEx of 81.5 million €;
- Inclusion of an option to build a large-capacity pulp mill in Mozambique, following the new project of establishing a forestry base in the country.

Tissue

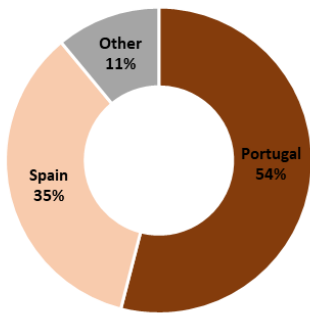
The Tissue segment is one of the most recent investments made by Navigator (2015), which began with the acquisition of the Tissue manufacturer AMS – BR Star Paper and its factory in Vila Velha de Ródão. This investment is in line with the firm’s strategy to diversify its operations beyond UWF paper. For Navigator, is crucial to look for new profitable growth opportunities, given its well established position in a mature market such as the paper and pulp’s, the company’s future growth depends on its ability to reinvent itself. Hence, the early investment in a sector that is growing between 2% and 3% every year³, is expected to originate some competitive advantages.

Good initial results in this segment led the firm to, in the beginning of 2017, make a 120 million € investment in the construction of a new tissue line, with 70 thousand tonnes production capacity, integrated in the Cacia pulp mill (started to operate in September of 2018). With this new tissue line, Navigator doubles its tissue production capacity to 130 thousand tonnes/year of reels, making it the third largest tissue producer in Iberia. Also, the firm is able to achieve profitability levels above the market average due to its high level of integration, the direct integration of pulp production in tissue operations allow the firm to keep its cost structure very competitive, while offering a high-quality product.

This segment comprises three different end products:

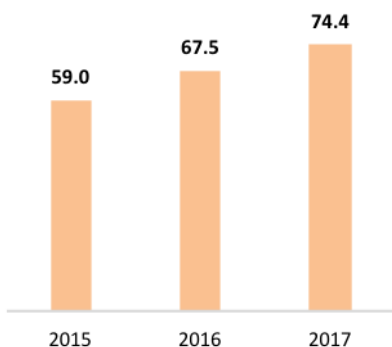
- **Reels**, tissue rolls that are produced and then converted into finished products or sold to the market. It represented only 2% of total tissue sales in the first 9M of 2018;
- **Away from home tissue products**, tissue products for hygienic, healthcare and sanitary uses in public places (hospitals, hotels, or schools), such as towel paper or toilet paper. It represented 61% of total tissue sales in the first 9M of 2018;
- **At home tissue products**, tissue products for domestic hygienic, healthcare and sanitary use. It represented 37% of total tissue sales in the first 9M of 2018.

Exhibit 7: Navigator’s Tissue sales by market



Source: Q3 Company Report, 2018

Exhibit 8: Navigator’s Tissue segment revenues (in million €)



Source: Company Report

³ The Navigator Company annual report, 2017

Tissue segment revenues have been constantly increasing since 2015, reaching 74.4 million € in 2017. In the first 9M of 2018, Tissue sales were 65 million €, which represented an increase of 17% relative to the same period last year. This growth in tissue revenues has been driven by the increase in pulp prices, which, in turn, increased the average sales price (7%, relatively to last year's).

Others (Pellets, Energy and Forestry)

In 2016, Navigator decided to reorganize its operational segments' reporting, by creating the Tissue segment and integrating the Energy and Forestry business units in this new "Others" segment (later, the Pellets business unit was also included). The Others segment represents the smallest share on Navigator's revenues, accounting for 2.3%, 2.2% and 3.3% of the firm's total revenues in the last three years, respectively.

The Forestry business unit is the base of all other segments, producing wood that will be transformed in BEKP and then incorporated in paper production. Its output comes from woodlands in Portugal, owned or leased by the group, Navigator manages 112 thousand hectares, representing 3% of the country's total forested area. The Forestry segment produces four different end products: eucalyptus wood, which is mainly integrated in the production of BEKP, Wood, Cork, and Pine that are sold to third parties. The Navigator Company also presents itself as the largest national producer of pine and one of the largest producers of Cork Oak. Even though, Navigator's Forestry segment is exposed to a large scope of risks which have been constraining the firm's total production potential:

- **Low productivity of the Portuguese forests**, since only a small proportion of Portuguese forests have the necessary accreditations and the worldwide demand for certified products is historically high;
- **Risk of forest fires**, these fires can result in the destruction of present and future inventories and, therefore, increasing Navigator's costs of production. To avoid these incidents, Navigator invests, on average, 3.4 million €/year in protection against forest fires;
- **Regulatory risk**, high levels of regulation in the sector forces the firm to use external markets to acquire its inputs.

As already discussed, Navigator is the largest electricity producer in Portugal, producing around 4% of the country's total power and 52% of the energy generated from biomass, this represents a production capacity of 2.5 TWh of electricity/year. However, in accounting terms, the energy business unit has a small weight on the firm's operations. This only happens due to Navigator's reporting strategy, only "Sales of electricity exclusively produced in units dedicated to the production of electricity from biomass are reported under the

segment “Other”⁴, energy sales of energy generated in the production of pulp and UWF paper are reported in the Market Pulp and UWF paper segments. Therefore, in 2017, total energy sales were 166.7 million €, but only 21.5 million € were reported in the Others segment. In the first nine months of the current financial year, total energy production was 1.7% lower relatively to the same period in the previous year, however, total energy sales increased 2.9% due to an increase in Brent’s quote, the market index to which energy sales are indexed.

The investment in the Pellets segment and, simultaneously, in the US market, was in line with the firm’s strategy to diversificate its operations and reduce the almost absolute weight of the UWF paper segment. The project required an initial investment of \$120 million to build a state-of-the-art pellets mill in the USA with an annual production capacity of 500 thousand tonnes of pellets, which started its production at the end of 2016. Initially, the investment was seen as a big growth opportunity, due to the potential growth of the sector and the correlation with Navigator’s core business. However, an increase in the sector’s competition led to an imbalance in international demand, resulting in a negative impact on Navigator’s EBITDA of 16 million €. As a result, in December of 2017, Navigator sold its Pellets business unit to Enviva Holdings, for \$135 million, recovering all its initial investment. During its operating year, the Pellets segment originated 14.6 million € in revenues, equivalent to 120.6 thousand tonnes of Pellets sold. It is expected that the exit from the Pellets sector will free up money to⁵:

- Continue Navigator’s diversification strategy, as this exit should not change the company’s strategic vision;
- Reinvest in the paper and pulp business units, where the firm has higher demand and competitive advantages;
- Keeping the reported net leverage ratio below 2.0x.

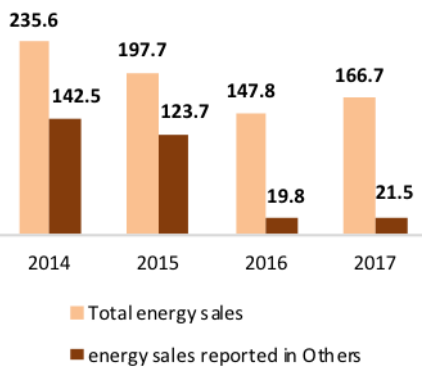
R&D (RAIZ) and Nurseries

Navigator’s forest holdings are considered to be one of its most valuable assets, being responsible for the feasibility of the firm’s operations. This recognition of the forest’s importance led to, in 1996, the creation of RAIZ, a non-profit research institute focused on applied research, technological consultancy and training. RAIZ main areas of investigation are eucalyptus, pulp, paper and forest-based bio refineries. With an annual budget of 3.5 million €, some of RAIZ main targets are: trying to improve the productivity of eucalyptus forests (one of Navigator’s main problems), increase the quality of fibre produced from wood, reduce the cost of wood production and implement a sustained forestry management, in

⁴ The Navigator Company annual report, 2017
⁵ “The Navigator’s exit from the Pellets business is credit positive”, Moody’s Investors Services

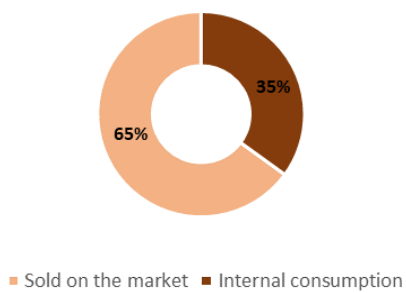
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Exhibit 9: Total energy sales vs Energy sales reported in Others (in million €)



Source: Company Report

Exhibit 10: Destiny of plants produced in Navigator’s Nurseries



Source: Company website

economic, environmental and social terms. RAIZ is also used as a link between Navigator and academia, through which they cooperate in scientific projects.

In line with the goal of renewing and improving the Portuguese woodland, Navigator produces forestry and ornamental plants through its subsidiary, Viveiros Aliança (with three Nurseries in Portugal). These Nurseries are able to produce 12 million plants each year, making it one of the largest Nurseries for certified forest plants in Europe. As a result of the new project in Mozambique, a new Nursery is expected to be built in the country.

Mozambique Project

Just like the EUA, Mozambique is one of the countries identified by Navigator to its international expansion, however, also as the Pellets business, it has been facing several challenges. Despite the improvement in the country's political and economic situations since 2016, they are still very vulnerable, which led the firm to moderate its investment pace in the country. Currently, the Mozambique project is, primarily, a forestry project – aiming the forestation of 356,210 hectares of land – with the possibility of building a large-scale pulp mill in the long-term, leading to an expected 10 million €/ year investment in the project⁶.

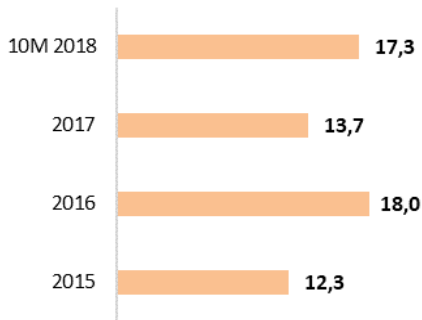
This project is only possible due to the participation of the International Finance Corporation (IFC), an arm of the World Bank, that recognizes the social impact that this project may have in improving life conditions in Mozambique (increase in jobs and improvement of health and education conditions). Despite the social perspective of the project, it presents significant economic opportunities to Navigator, based on the country's high yield forests, competitive land prices and proximity to China, one of the most influent markets in the sector. Even though, as seen, the project is still in an embryony stage and faces significant political and economic risks, which led the firm to reevaluate the recoverability of its investment in the country, "having recognised an impairment loss in such a way that in December 2017, its balance sheet value is residual (less than 1% of the total consolidated assets)"⁶.

Stock Performance

A listed company since 1995, at the time, still under Portucel identity, Navigator's share capital is only traded in the Portuguese stock market – the Euronext stock exchange – with the ticker NVG, being fully represented by 717,500,000 ordinary shares. Is also part of the Portuguese stock market index (PSI-20), with a weight of 7.4% on it. Recently, Navigator's stock performance has been characterized by high levels of volatility, when compared with the market performance (as we

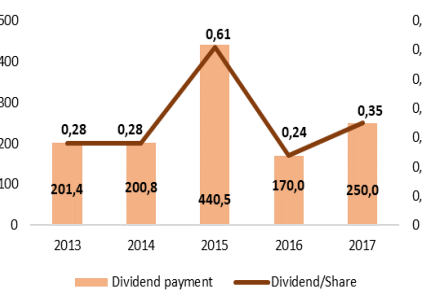
⁶ The Navigator Company annual report, 2017

Exhibit 11: Annual average of Navigator monthly volume (in millions)



Source: Bloomberg

Exhibit 12: Navigator's dividend payment (in million €) and dividend/share

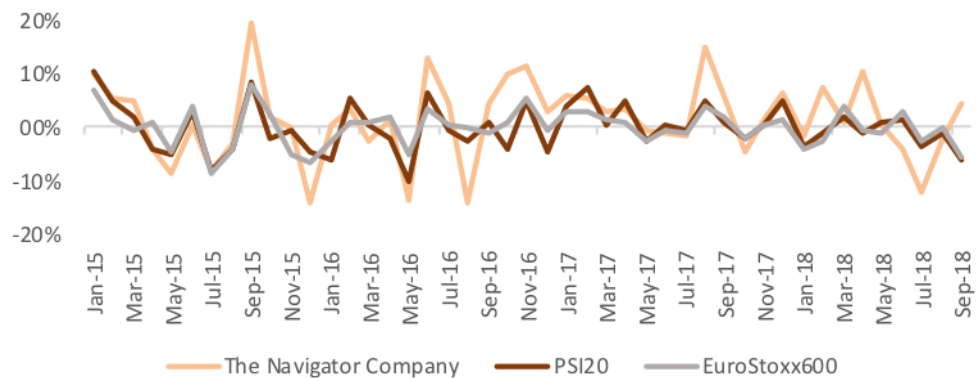


Source: Company Report

can see in exhibit 13). This volatility can be divided in two different periods, the first one, which started in 2015 and went until the third trimester of 2016, was driven by a negative growth trend, following closely PSI20 movements. While the second one, showed much better results, having started in the last trimester of 2016 and went until mid-2018. In 2017, Navigator achieved a total return of 42.2%⁷, this positive performance was a result of an overall good performance of the sector and the Portuguese stock exchange. Also, the high and stable pulp prices and worldwide increase in paper prices sustained this growth. In 2017, Navigator also continued its dividend payment strategy, by making two payments during the year, in a total value of 250 million € (0.349 €/share).

Nevertheless, in the summer of 2018, Navigator's stock value re-entered in a declining period, mainly driven by the unexpected announcement that the US Department of Commerce (USDC) would increase their tariffs over Navigator paper imports to 37.34%. According to Navigator, this new measure would have a negative impact of 66 million € on EBITDA and 45 million € on the firm's net profits. Given the importance of USA in the global paper and pulp industry and, in particular, in Navigator's business, Navigator's stock price faced one of its biggest ever blows after this announcement. Still, after the firm's protests, the tariffs rate was reviewed to 1.75% by the USDC, which made possible to recover usual demand levels in USA and stabilize Navigator's stock market performance.

Exhibit 13: Navigator's returns against PSI20 and EuroStoxx 600

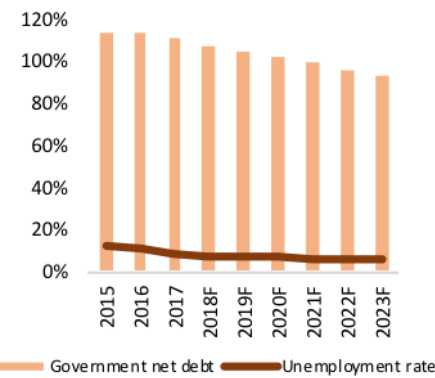


Source: Bloomberg

The year of 2018 was, for the stock market as a whole, one of the worst years since 2008. This negative performance was mainly driven by political and economic instability in some key countries – such as the trade war between USA and China –, which brought uncertainty and an increased level of volatility into the market. Within the paper and pulp sector, this reality is easily noticeable when comparing recent total returns (last 12 months) with previous total returns (last 24 and 36 months) of some of the main companies in the sector.

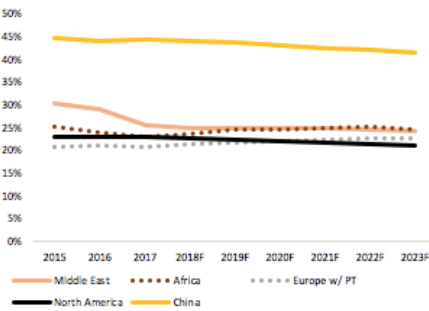
⁷ Source: Bloomberg

Exhibit 15: World's governments net debt (% GDP) and unemployment rate



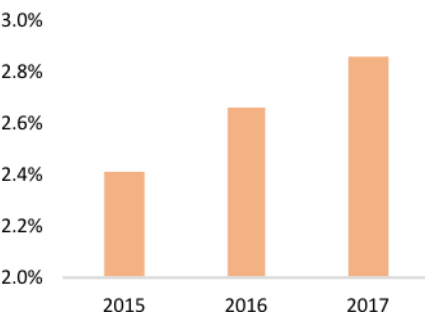
Source: IMF, World Economic Outlook

Exhibit 16: Total investment, in % of GDP



Source: IMF, World Economic Outlook; Analyst Estimates

Exhibit 17: Average growth rate of households' expenditure



Source: OECD, National accounts at a glance

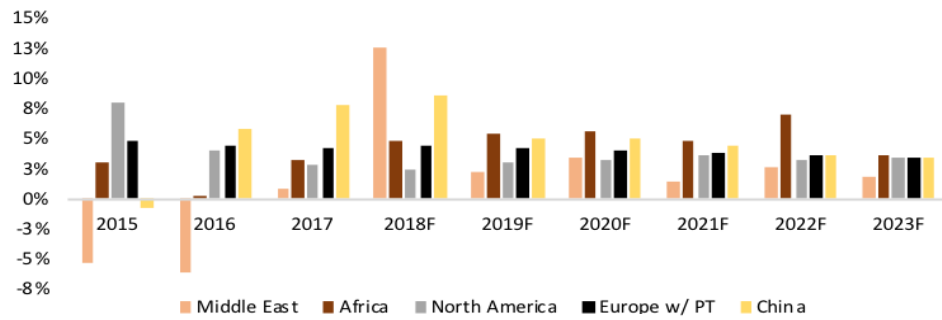
projected that, after this positive period, growth rates will stagnate and keep stable (but relatively low) levels. There are other economic indicators that represent the improvement in the worldwide economy, such as the constant decrease in governments' net debt value (in % of GDP) and unemployment rates. Global stock market performance in 2017, especially in the USA and Brazil, was also very affirmative, with shares growing, on average, 25%⁹. This positive performance was fuelled by worldwide economic growth, an expansionist monetary policy followed by Central Banks and the recovery in oil prices.

The Portuguese macroeconomic situation has also improved, mainly due to the better conditions of the Portuguese economy, which led to an improvement in Portugal's debt rating by S&P's. Navigator's sustainability depends on its ability to export its end products, given that only 5% of final production is sold in Portugal, therefore, its success relies heavily on the availability of its main markets to import goods. In exhibit 18, we can observe Navigator's main markets and its respective yearly % change in the volume of imports of goods. The main highlights, for different reasons, go to Middle East and North America, the first one, due to its recent increase (expected to increase 12.45% between 2017 and 2018), and the second one, because it is one of Navigator's main markets and its volume of imports of goods has been decreasing since 2015, and is expected to keep that trend in the near future. The African and European markets are expected to keep similar growth levels in their imports of goods, when compared to previous years. Finally, the Chinese market is included due to its increasing importance, both in the world economy and in the paper and pulp sector, which is shown by the increasing volume of imports of goods since 2016. Due to its growth potential, the Chinese market is a present and long-term investment of Navigator, that sees the country's growing economy has an attractive business opportunity. This is also represented by the Mozambique project, that has the aim of increasing the firm's geographic proximity to China.

Finally, the level of investment in Navigator's main markets is expected to remain constant between 20% and 25% in % of GDP, except for China, where it is expected to be around 45% of the national GDP, which can be seen as advantage by firms that are expanding their operations to that geography. It is also important to notice the continuous increase in the worldwide level of household expenditures, from which Navigator can benefit through its UWF Paper and Tissue segments. In 2015, household expenditures grew by 2.41% and, in 2017, by 2.86%.

⁹ The Navigator Company annual report, 2017

Exhibit 18: % change in the volume of imports of goods



Source: IMF, World Economic Outlook; Analyst Estimates

Paper Sector

The paper sector, in the last years, has been characterized by the decreasing level of demand for its products, especially in Europe and North America. However, despite facing a challenging environment, in 2017, the paper industry as a whole was able to grow, mainly guided by the worldwide increase in paper prices. A sign of the sector's growth is the current level of investment within the industry, which was not seen since 2005. From 2016 to 2017, investment in the Paper sector increased by 7.5%¹⁰. However, this increase in investment may represent the increasing transformation of the industry, considered by many as a “traditional sector”, firms are trying to diversify its operations in order to keep meaningful profitability levels. So, it is safe to assume that the paper industry is not disappearing, instead, it is going through a deep structural transformation. According to McKinsey&Company¹¹, one other phenomenon that is marking the sector is the increasing consolidation inside companies, this is, paper firms are focusing their activity in fewer segments, in which they are able to enjoy greater competitive advantages.

Paper sector's demand has been recently affected by high levels of volatility, mainly due to two reasons: on one side, digital transformation has made obsolete some of the traditional paper industry products, decreasing its demand; and, on the other side, pulling demand up, emerging markets such as the Asian –mainly through China – and Latin American – mainly through Brazil – have been increasing its investment in the paper sector. Traditional paper products, such as graphic and P&W paper, have been suffering – and will continue to suffer – a decrease in their levels of demand. However, the paper industry is no longer solely dependent on P&W paper, other products' increasing demands have been offsetting these decreases, “the packaging paper industry [both industrial and consumer] will rise and the household paper industry will maintain a stable

Exhibit 19: Leading Forestry and Paper firms worldwide, based on market cap (in billion USD)



Source: Statista

Exhibit 20: Average paper price evolution. Market index: A4 B-copy



Source: FOEX

¹⁰ Source: Confederation of European Paper Industries (CEPI)

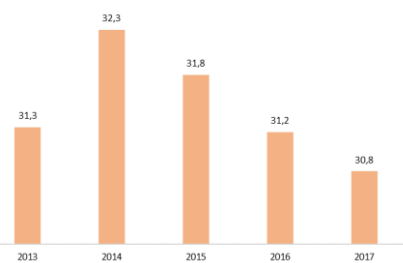
¹¹ “Pulp, paper and packaging in the next decade: Transformational change”, McKinsey&Company

Exhibit 21: Largest country producers of UWF Paper (in million tonnes)



Source: FAO database

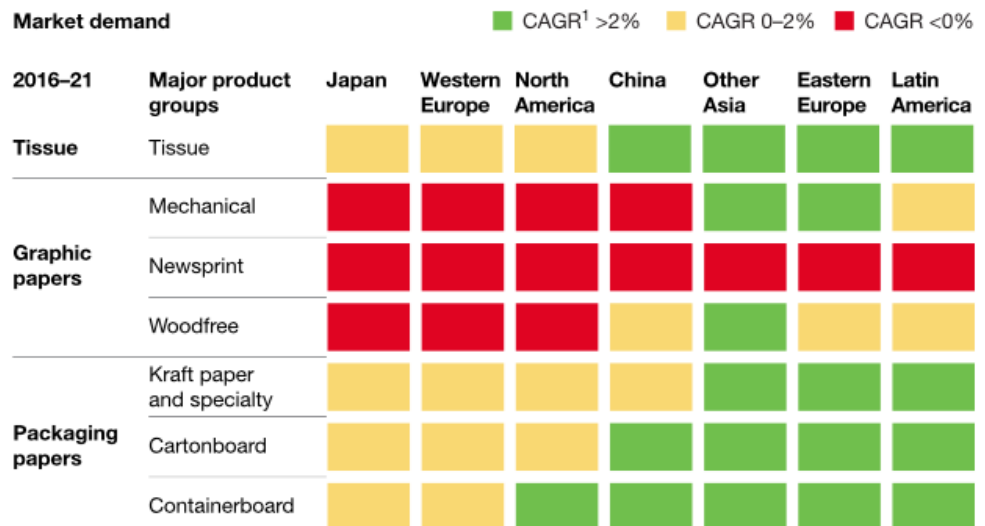
Exhibit 22: Global UWF Paper production (in million tonnes)



Source: FAO database

development”¹². When discussing worldwide paper demand, is important to refer the role that China plays on it, given its weight in the sector, small increases or slowdowns in China’s level of paper demand may have a significant impact for the sector. Industrial packaging is one of the segments that enjoys more growth opportunities, given that it is closely related with one of the biggest online phenomena, online shopping. What was once referred as one of the main risks for the paper industry – digital transformation – is now creating alternative opportunities for the sector to grow. As we can see in Exhibit 23, packaging papers enjoy from a higher expected CAGR in its demand level, for the period 2016-2021, while graphic paper segment will keep its decreasing level of demand. In terms of geographies, as already discussed, the Asian and Latin American markets are the ones that show higher growth potential, while North America and Europe (except for Eastern Europe) are expected to either stagnate or decrease its demand levels.

Exhibit 23: Market demand across type of paper products and geographies



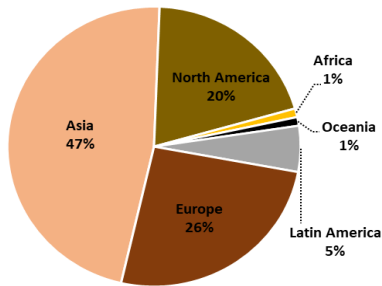
Source: McKinsey&Company

The UWF Paper segment is one of the most important segments in the paper sector, accounting for 50% of the global demand of P&W paper¹³. The segment’s worldwide production has been decreasing since 2014, when total production was 32.3 million tonnes, reaching 30.8 million tonnes in 2017. In the period of 2013-2017, Portugal was the 7th largest worldwide producer of UWF Paper, in which Navigator’s production accounted for almost 100% of national production. The Asian region was, in 2017, the largest producer of UWF paper in the world, accounting for 47% of total production, followed by Europe (26%) and North America (20%). It is expected that Asia will keep on consolidating its position,

¹² “2018 Credit Outlook for the Global Paper Industry”, Dagong Global Credit Rating

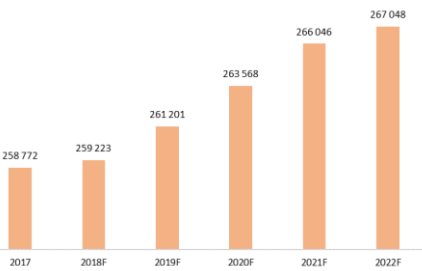
¹³ The Navigator Company results presentation, 9M 2018

Exhibit 24: Global paper production distribution, per region, in 2017



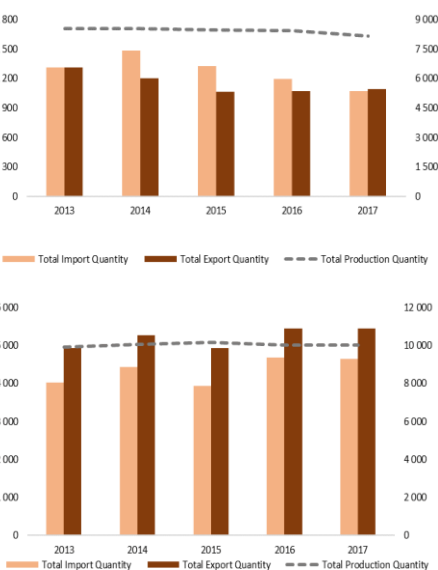
Source: FAO database

Exhibit 25: Worldwide paper and paperboard production capacity forecast (in thousand tonnes)



Source: FAO database

Exhibits 26 and 27: North American and Asian UWF Paper production, imports and exports (in thousand tonnes)



Source: FAO database

given that it still presents plenty of room to grow and its level of paper consumption keeps increasing, while North America is expected to decrease its production quantity, as producers have recently started to shut down production capacity. The Latin American region is predicted to acquire a more significant position in the sector, given the growing competition that comes from countries like Brazil and Chile (home of some of the biggest companies in the sector). Given this overall outlook of the sector, the Food and Agriculture Organization (FAO) of the United Nations' (UN) forecasts point to a constant annual increase in the worldwide production capacity of paper and paperboard in the future.

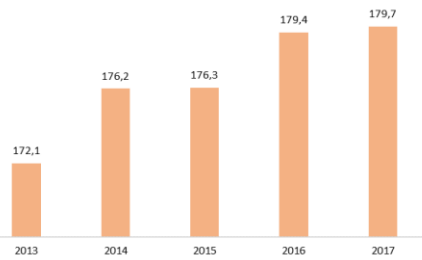
Worldwide quantities of imports and exports of UWF Paper have been stable over the years, however, when analysing it by region, some conclusions about how the sector is changing can be drawn. Beginning with the North American market, historically, one of the biggest paper producers in the world, yet, recently, North American producers have been closing down production capacity, which has resulted in a decreasing production quantity of UWF Paper in the region. Also, this decrease in the production of UWF Paper transformed one of the largest paper producers into a net importer, this is, the North American market, since 2014, imports more UWF Paper than it exports, a clear sign of the declining trend in sector's performance. In Europe, both imports and exports have been declining since 2014, though, the European market still presents itself as a net exporter, despite the difference between imports and exports being increasingly lower. The Asian market, as already discussed, is the market with higher growth potential and one of the most important within the sector, being already the second largest exporter of UWF Paper in the world (only behind Europe). Finally, in South America and Africa, the level of imports and exports of UWF Paper has remained constant over the last years.

Pulp Sector

In contrast with the paper sector, which has been guided by high levels of volatility and uncertainty, the pulp market has been enjoying a solid performance and is expected to keep that path. As a result of that strong performance, global production of pulp has been increasing since 2013, reaching 180 million tonnes in 2017. The year of 2017 was crucial for the pulp sector's growth, which took advantage of favourable market conditions to consolidate its performance: constant increases in the benchmark index over the year – PIX BHKP, which increased 19% relatively to 2016 –, led worldwide pulp prices to increase; and, a 4% growth in global pulp consumption, mainly driven by the Chinese market¹⁴. During 2017 and the beginning of 2018, the pulp market witnessed an increase in

¹⁴ The Navigator Company individual report and accounts, 2017

Exhibit 28: Global Wood Pulp production (in million tonnes)



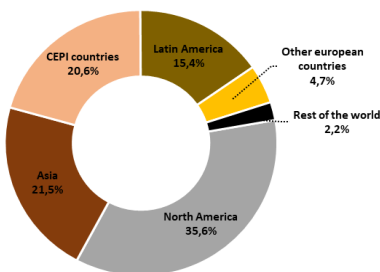
Source: FAO database

Exhibit 29: Historical pulp prices, in USD/ton and €/ton. Market index: PIX Europe



Source: Company results presentation, 9M 2018

Exhibit 30: World total pulp production by region, 2016



Source: CEPI

its worldwide production capacity, however, this increase was not fully exploited due to several challenges faced by the sector in that same period. These problems were mainly due to significant constraints on world pulp supply, the lack of wood was an issue, but the numerous (expected and unexpected) production stoppages were the main cause for the lack of pulp in the market. In the first 9 months of 2018, overall pulp market conditions continued positive, in particular, worldwide demand for BEKP increased 4.7%, mainly driven by an increase in the Chinese market's demand of 10.2%¹⁵. Worldwide pulp prices continued to increase, guided by the increase in the reference market index, which was up by 24%, when compared to the same period in the previous year, leading pulp prices over \$1000/ton¹⁶. In the near future, there are no expected significant changes in the sector's conditions, meaning that pulp prices and demand should remain at high levels. Nevertheless, current political and economic instability lived by two of the main players in the sector – USA and China – may cause imbalances in this sector's performance.

North America presents itself as the world's largest producer of wood pulp, accounting for more than 35% of total production, mainly due to USA and Canada, which are the first and third main producers of pulp in the world, respectively. In second place comes Europe (25.3% of total production), driven by Nordic countries' production (Sweden and Finland), where some of the biggest companies in the sector are headquartered. The third and fourth regions with higher levels of wood pulp production are Asia and Latin America, respectively, however, both these regions have been recently increasing its weight in the global pulp sector. In terms of pulp's international trades, both world imports and exports have been increasing rapidly since 2013, when analysing each region individually, final conclusions are similar to the ones discussed for the paper sector:

- Significant increase in the levels of imports and exports in Asia, especially in China. In the period 2013 – 2017, the Chinese market presented significant CAGRs for imports and exports of 5.6% and 38.4%, respectively¹⁷;
- South America's weight on the global pulp market has been constantly increasing over the last few years, mainly guided by the growth in its levels of production and exports, presenting CAGRs of 5.2% and 7.2%, respectively (for the period 2013 – 2017)¹⁷;

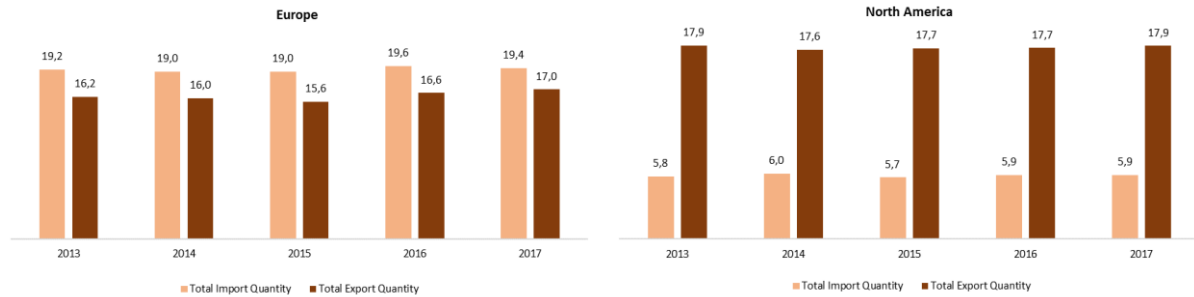
¹⁵ Source: PPPC

¹⁶ The Navigator Company results presentation, 9M 2018

¹⁷ Source: FAO database and Analyst Estimates

- The level of pulp imports and exports in Europe and North America has not suffered any significant changes since 2013, allowing both regions to keep their historical net importer and net exporter conditions, respectively. Africa still plays a non-significant role within the industry.

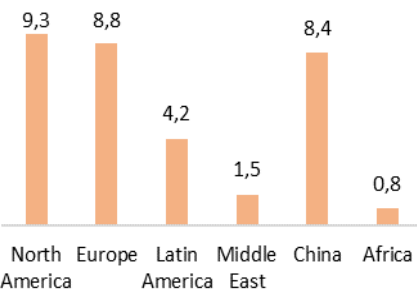
Exhibits 31 and 32: Europe and North America total quantity of imports and exports (in million tonnes)



Source: FAO database

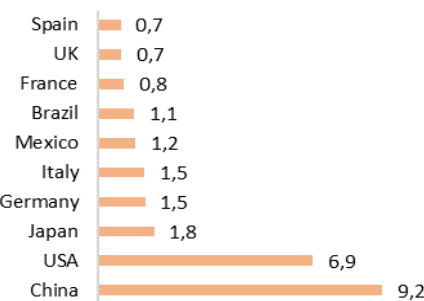
Tissue Sector

Exhibit 33: World Tissue consumption by region, 2017 (in million tonnes)



Source: RISI WTBM

Exhibit 34: Largest Tissue producers by country, 2017 (in million tonnes)



Source: FAO database

The Tissue sector, as already discussed, is one of the sectors with highest growth potential within the Paper industry, in fact, recently, it has been enjoying an annual growth of 2% to 3%¹⁸ and annual increases in worldwide production since 1994¹⁹. This recent growth has been driven by the development of the tourism sector, favorable economic conditions and, especially, a recovery in demand levels of strategic regions. Between 2006 and 2016, the Chinese market increased its consumption of Tissue products in more than 4 million tonnes, representing more than 40% of Tissue’s global growth for that period. In the same period, Europe, North and Latin America also contributed to the growth of the sector, with an increase in Tissue consumption of 1.5 million tonnes each. On average, Tissue consumption increased 3.5% per year, between 2006 and 2016²⁰. The continuous growth of the Tissue sector is being a much-needed leverage for the paper industry’s performance, as it is offsetting the decreasing demand in traditional paper products. In terms of Tissue production, Asia has been increasing its total production quantity every year and, is currently the world’s largest producer of Tissue, accounting for 40.6% of its total production, followed by Europe (24.1%) and North America (22.5%)¹⁹.

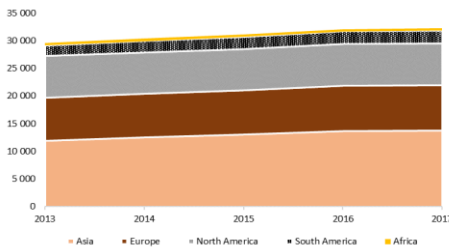
In the first 9 months of 2018, worldwide Tissue prices were constantly increasing, however, companies were not able to take advantage of this increase due to two main reasons: on one hand, production costs have also increased, especially pulp prices, as analysed above, pulp prices were also constantly increasing in

¹⁸ The Navigator Company results presentation, 9M 2018

¹⁹ Source: FAO database

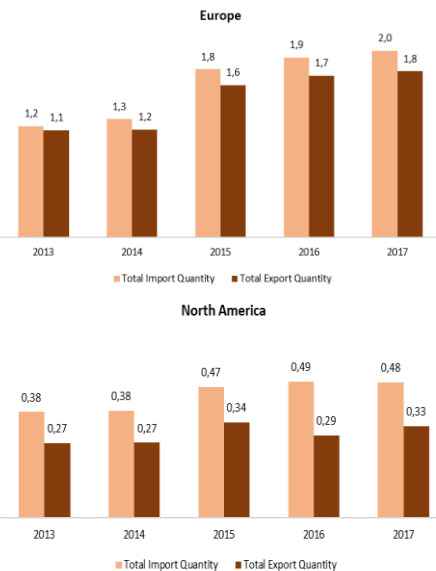
²⁰ Source: RISI WTBM

Exhibit 35: Largest Tissue producers by region (in thousand tonnes)



Source: FAO database

Exhibits 36 and 37: North American and European Tissue imports and exports (in million tonnes)



Source: FAO database

2018, which made more expensive for firms to produce Tissue products; on the other hand, given this sector’s present and potential level of growth, more firms want to be a part of it, leading to an increase in the level of competition (especially in Iberia). In the future, the Tissue segment is expected to keep growing, however, not in such an optimistic way as the one predicted by most companies. It is expected that the segment’s growth will be impacted by three main drivers²¹:

- **Demographic evolution**, the world’s total population is expected to reach 9.7 billion people by 2050²². More population implies more Tissue consumption, as it is essential in people’s day-to-day activities;
- **Consumer trends**, trends in consumption are difficult to predict, even so, for the Tissue segment, consumers should continue to demand increasing sustainability and convenience levels on its products;
- It is expected that the Tissue sector will grow at the same pace as **GDP**.

In terms of commercial trades, the first highlight goes to the African region, due to the significant improvement in Tissue’s market conditions. Despite continuing as a net importer, the African region has significantly increased its exports level, presenting a CAGR of 17.4%²³ between 2013 and 2017. The Asian region – largest producer of Tissue in the world – has been increasing its total production quantity every year and, in terms of imports and exports quantities, is only surpassed by Europe, which presents CAGRs for 2013 – 2017 of 13.7% and 11.5%, for imports and exports, respectively²³. Europe and North America, despite being the second and third largest producers of Tissue in the world, still present themselves as net importers, relying on the Asian market to fulfill their national markets’ demand of Tissue products.

Navigator Financial Performance

The Navigator Company has been, in the last years, a synonym of stability and return to investors, even though its recent stock performance not being positive. Navigator’s ROIC has been high and stable since 2016, and it is expected to remain like that in the near future. In order to assess whether or not Navigator is able to create value to its shareholders, it is important to compare some financial metrics, such as: ROIC with WACC and ROE with Cost of Equity. A firm is able to create value when its ROIC/ROE is higher than its WACC/Cost of Equity. Navigator’s WACC has been ranging between 4.0% and 4.3%, while its ROIC, as

²¹ “Pulp, paper and packaging in the next decade: Transformational change”, McKinsey&Company

²² United Nations, Department of Economic and Social Affairs

²³ Source: FAO database and Analyst Estimates

shown in the table 3, has been much higher. This means that, in 2017, Navigator paid 4% for every extra euro of investment but had a return of 13.9%.

Table 3: Navigator’s historical and forecasted ROIC

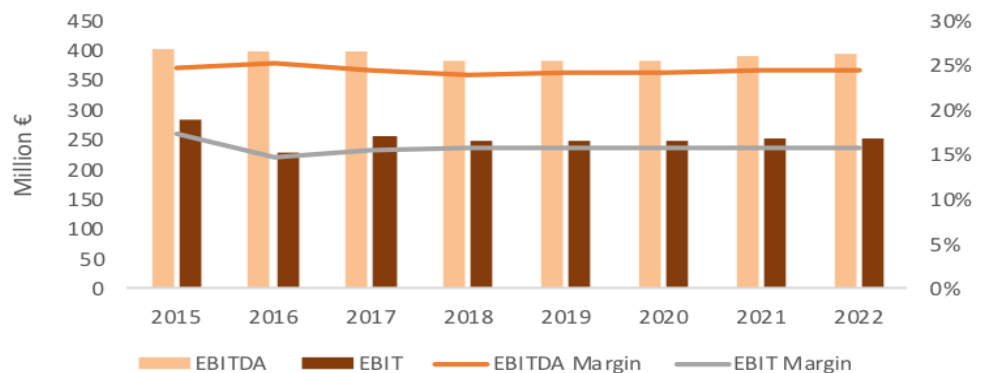
ROIC	2016	2017	2018F	2019F	2020F	2021F	2022F
Pulp Market	15.2%	16.6%	14.0%	12.9%	13.1%	14.0%	12.9%
UWF Paper	19.9%	19.5%	17.0%	12.5%	12.7%	12.9%	12.9%
Tissue Paper	4.7%	8.2%	5.5%	7.9%	7.9%	8.1%	7.9%
Others	-3.4%	0.7%	0.7%	5.3%	5.2%	5.4%	5.2%
Navigator	14.6%	13.9%	12.9%	12.1%	12.3%	12.6%	12.4%

Source: Analyst Estimates

When comparing Navigator’s Cost of Equity and ROE, we end up with similar conclusions, i.e., a very positive capacity to create value from Navigator, having a very low Cost of Equity (6.6%), when compared to its ROE (see exhibit 38).

Navigator’s EBIT and EBITDA are expected to face a smooth upper trend, being predicted to reach 250 million € and near 400 million € in 2022, respectively. This upper trend represents three key situations: the credit positive exit from the Pellets business (sold by \$135 million, against a \$120 million initial investment), impacting Navigator’s financial performance positively; expected positive impact of Navigator’s new operation in Mozambique; and, finally, the new Tissue plant that started to operate during this year. EBITDA and EBIT margins are also very significant, being close to 25% and 15%, respectively.

Exhibit 39: Navigator’s profitability levels



Source: Company Report, Analyst Estimates

Credit Constraints

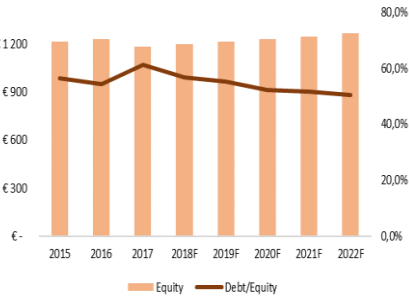
Despite the solid financial performance, Navigator’s ability to compete with the biggest firms in the sector is weak²⁴, essentially due to what rating agencies

²⁴“The Navigator Company – Update of key credit factors”, Moody’s Investors Services

identify as: “credit challenges”. In Navigator’s case, these challenges are mainly related with three specific characteristics of the firm’s operations:

- Its **modest size**, which can be observed by Navigator’s low level of revenues, when compared with its peers;
- **Limited product diversification**, despite Navigator’s recent strategy for diversifying its operations beyond UWF Paper, more than 80% of its sales still come from a declining market, mostly concentrated in Europe;
- Navigator major shareholder, Semapa, relies heavily on Navigator’s dividends to finance its own dividends payment and large debt level. Which has been responsible for some restrictions in Navigator’s recent growth, due to: large payout ratios, large increase in dividends expenses and decreasing capacity of generating significant FCFs since 2015.

Exhibit 40: Navigator’s forecasted equity (in millions €) and D/E value



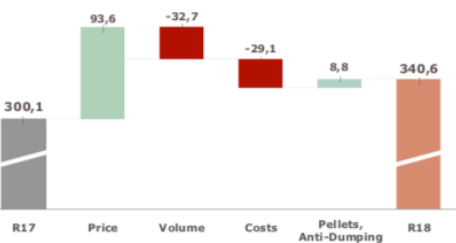
Source: Company Report, Analyst Estimates

Credit Advantages²⁴

Nevertheless, Navigator also presents strong competitive advantages relatively to its peers, which soften its credit constraints. These advantages are primarily related with its solid operational and financial results and investment strategy:

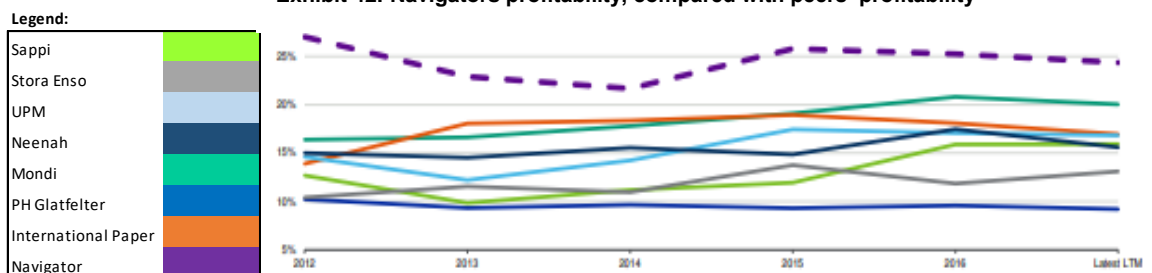
- Despite being too exposed to the UWF Paper sector, Navigator’s leading position in the European market and high level of vertical integration lightens the firm’s pricing pressure. Moreover, despite the decreasing level of demand in this segment, this decrease has been lower when compared to the decreasing demand in other paper products;
- Diversification strategy based on investing in growing sectors, without comprising its conservative capital structure (net leverage below 2.0x);
- Finally, its strong profitability and credit metrics. Some examples are Navigator’s D/EBITDA ratio (below 2.5x), low level of D/E and high EBITDA margin (above 20%). This is only possible due to: an efficient asset base; low maintenance capital spending needs, enabling the generation of high operating CFs; and its focus on the premium segment, giving Navigator some pricing power and protection against cheap imports from new competitive geographies (Asia and South America).

Exhibit 41: Navigator’s EBITDA evolution, 9M 2017 – 9M 2018 (in millions €)



Source: Company results presentation, 9M 2018

Exhibit 42: Navigators profitability, compared with peers’ profitability



Source: Moody’s Financial Metrics

Valuation

One of the main objectives of this report is to perform Navigator's valuation, so, in order to execute it, it was used the Discounted Cash Flow (DCF) method, which requires the calculation of Navigator's FCFs and Weighted Average Cost of Capital (WACC), to discount those FCFs. A Multiples Valuation was also performed, to understand how Navigator is performing relatively to the sector. Finally, to take into account the uncertainty that is present in some of the DCF analysis' inputs, a Sensitivity analysis was held, considering possible variations in some key drivers of the forecasted share price.

The forecasted share price as of December 2019 for The Navigator Company is 5.17 €, which represents a total upside of 46.9%. Therefore, is recommended a BUY position on Navigator's stock.

DCF

The DCF analysis was performed for a total period of 8 years, from which 5 are forecast years (2018 – 2022), after that period, FCF are expected to grow at a constant rate. In order to perform this analysis and reach the firm's FCFs, it was needed to calculate an annual discount rate (WACC), as well as identify the firm's main drivers and forecast its evolution. The main inputs and most important assumptions used during Navigator's valuation are described below:

Cost of Debt

Companies' cost of debt is often assumed to be equal to its debt's YTM, however, this methodology overstates the cost of debt, as the yield does not take default risk into account²⁵. Therefore, in order to take default risk into account, an adjustment in cost of debt's calculation has to be done, using three variables: the YTM of Navigator's long-term debt (1.2%), its annualized probability of default (1.6%) and the expected value of loss in case of default (46.2%)²⁶. Using these three inputs, cost of debt was calculated as: $R_d = Yield - Prob. of default * Loss given default$ ²⁵. Resulting in a cost of debt of 0.43%, also, the cost of debt was assumed to remain constant over the analysed period.

The risk free rate used throughout this valuation procedure (0.38%) is based on the 10-year German government bond, mainly due to three reasons: it is perceived, by the market, as a risk free asset; it is geographically coincident with Navigator's main market (as 64% of the firm's activity is in the European

“The yield to maturity of a firm's debt reflects the promised return of the bond, absent default. (...) [when there is risk] the debt yield will overestimate the debt cost of capital”

Jonathan Berk and Peter DeMarzo in
Corporate Finance

²⁵ Source: “Corporate Finance”, Berk, Jonathan and DeMarzo, Peter

²⁶ Calculated as: $1 - \text{Average corporate debt recovery rate} = 1 - 53.85\% = 46.15\%$

Recovery rates vary according to the bond's priority position, in this case, Sr. Unsecured Bond, implying an issuer-weighted recovery rate of 53.85%. Source: “Annual default study: Corporate default and recovery rates, 1920 – 2017”, Moody's Investors Service

continent); and, finally, because it is expressed in the same currency unit as Navigator’s cash flows (euro).

Cost of Equity

The cost of equity was calculated using the CAPM, which has as inputs the risk-free rate, the market risk premium (MRP) and a beta (which represents the risk of Navigator’s stock relative to the market). The MRP, i.e., the difference between the return of investing in the market portfolio and the return of investing in the risk-free rate, is pointed by literature to be between of 4.5% and 5.5%²⁷. Hence, it was assumed a 5% MRP.

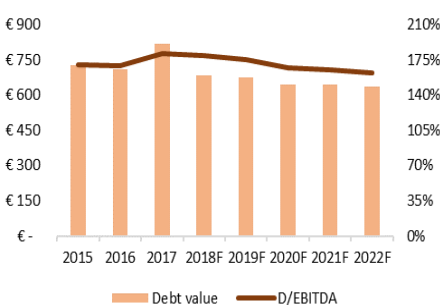
The calculation of beta was divided in two different steps, first, the raw beta was computed by regressing Navigator’s excess returns against a market index excess returns. The chosen market index was the EuroStoxx 600 (a diversified index composed of European firms), as Europe is Navigator’s main market and 86% of its shareholders are also European. In the second step, in order to smooth the estimate of beta, the adjusted beta was calculated (the one which is actually going to be used). Literature defends the need to smooth beta as a strategy to dampen “extreme observations toward the overall average”²⁵. Hence, the adjusted beta was calculated by using Bloomberg’s smoothing process: $\frac{2}{3} * Raw Beta + \frac{1}{3}$. Through this procedure, we get an adjusted beta of 1.24. When introducing the three inputs – risk-free rate, MRP and beta – into the CAPM model, we obtain a Cost of equity of 6.6%.

Debt Value

The weight of debt in Navigator’s enterprise value was calculated, for the period 2015 – 2017, using Navigator’s reported financial information, after that, for the forecast period, the value of Debt/EV was assumed to be the average of the previous years’ values. The main reason behind this assumption, is that Navigator completed, in 2017, a process of debt restructuring, meaning that its debt level will decrease at a controlled pace in the near future. The measures that make this assumption possible were focused on five parameters:

- **Increase in Navigator’s debt maturity**, with a repayment plan that takes into account Navigator’s CapEx strategy. Which means that, in the medium-term, it is not expected that Navigator will have any refinancing needs;
- **Increase in the level of liquidity**, through the issue of commercial paper programmes, used to back up short-term financial needs;

Exhibit 43: Navigator’s forecasted debt value (in million €) and D/EBITDA (%)



Source: Company Report, Analyst Estimates

²⁷ Source: “Measuring and Managing the Value of Companies”, Mckinsey&Company

- **New interest rate risk management strategy**, based on issuing variable rate debt and then contracting interest rate swaps with fixed rate debt, reducing financing costs;
- **Cost optimisation**, allowed a cut in the average cost of debt, represented by the lowest ever interest rates in short-term loans by the end of 2017 (1.5%);
- **Diversification of financing sources** (several national and international banks), which is only possible due to Navigator’s solid financial performance and its ratings’ long-term “stable” outlook: BB by S&P and Ba2 by Moody’s.

Revenues

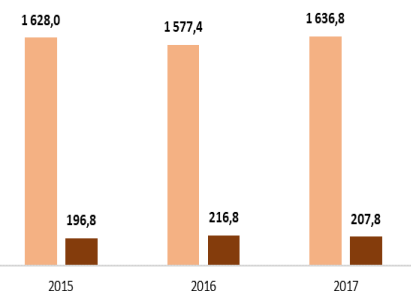
Revenues are, perhaps, Navigator’s main driver, with approximately 1.6 billion € in 2017, its forecast is one of the most important aspects when forecasting the firm’s future results, as several other components are directly related with its absolute value and growth rate. For a more precise and correct approach, revenues were divided according to Navigator’s operational segments. Navigator is one of the biggest paper and pulp firms in Europe, nevertheless, recently, it has been suffering from an imbalance in the demand of its main product (UWF Paper). This imbalance results of an increase in competition, especially from Asia and South America, where firms are able to produce with lower production costs. So, is expected that graphic paper firms will keep suffering significant pressure to restructure their production capacities and face decreasing levels of demand²⁸.

One of the most important determinants of paper and pulp prices are its worldwide production capacities. So, future evolution of production capacities will impact paper and pulp prices and, therefore, impact Navigator’s future revenues in those segments. In order to incorporate this variable into revenues’ forecast, it was assumed that each segment’s revenues will grow at the same rate as the segment’s world production capacity. The FAO database presents forecasts until 2022 of the world’s production capacity evolution in the UWF paper, Tissue paper and BEKP segments, that closely track the expectations that have been discussed throughout this work. This is, a constant decrease in UWF paper sales in the near future, a constant and smooth increase in BEKP sales and also a constant increase in Tissue’s sales, representing the segment’s growth potential.

The exception is the forecast of the “Others” segment revenues, which are mainly composed by the revenues of the Forestry, Energy and Pellets business units. These revenues were assumed to be growing at the average rate of the previous years. The main reason for this assumption is related with the historical small and constant weight of this segment’s revenues on the firm’s total revenues (between 2% and 3%). However, it was excluded from the growth rate calculation the

²⁸ “Pulp, paper and packaging in the next decade: Transformational change”, McKinsey&Company

Exhibit 44: Navigator’s total revenues vs net income (in million €)



Source: Company Report

Table 4: Navigator’s expected revenue growth rate

	UWF Paper	BEKP	Tissue Paper
2018	-2.6%	-0.6%	1.8%
2019	-0.5%	0.8%	1.0%
2020	-0.7%	0.9%	0.6%
2021	-0.1%	6.4%	0.4%
2022	0.7%	-0.7%	0.5%

Source: FAO database, Analyst Estimates

Pellets effect, as this business unit was sold at the end of 2017 (only generated revenues for 1 year). Therefore, its seasonal effect was not taken into account when calculating the growth rate of this segment's future revenues.

CapEx and Net Working Capital

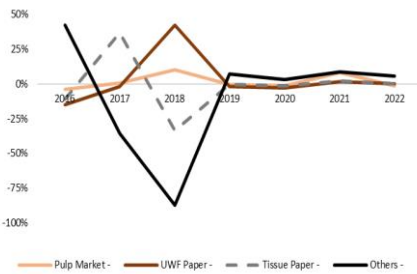
The CapEx segment is composed of PP&E, which, in a firm like Navigator, is predominantly comprised of industrial units and machinery used in those units. The investment in CapEx, whether to increase or decrease the production capacity, to buy new machinery or even to promote changes in industrial units, is directly related with the results obtained by the firm. This is, in a scenario of growth and prosperity, Navigator may feel the need to increase its production capacity, by buying more machinery or building new industrial units (and the opposite case in a scenario of decreasing results). As revenues are one of Navigator's main drivers and the firm's CapEx is not expected to suffer significant changes in the near future, it was assumed, for the forecast period, that CapEx weight relative to revenues would be equal to the average of last years' weights.

The Working capital segment of Navigator is mainly composed by four items: Inventories, Operating cash, Receivables and Payables. From these items, the main remark goes to Inventories, as the only caption that has been constantly decreasing in recent years, especially from 2016 to 2017, with a decrease of over 20 million €, mainly due to a large reduction in the value of finished products (in inventory) and to an even bigger increase in the net balance payable amount to the State and Other Public Entities (43 million €). Regarding the other captions, the value of Payables and Receivables has been increasing at a smooth rate, while the value of Operating Cash has been constant over the last years.

Usually, Working Capital is directly related with the level of revenues, this is, an increase in revenues leads to an increase in Working Capital needs. In order to take this relation into account, working capital was distributed across segments based on the percentage of revenues attributable to each segment. Naturally, the main share of Working Capital is attributed to the UWF Paper segment, as it is Navigator's segment that generates more revenues.

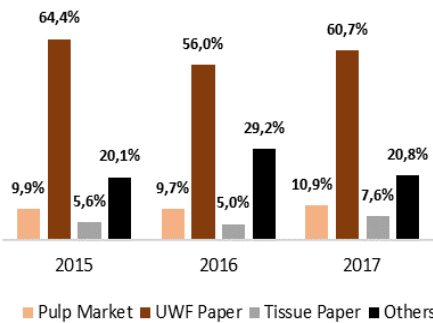
When forecasting working capital components, there were three different situations: the first one, operating cash, which is always calculated in the same scheme, 2% of total revenues; Inventories, which are forecasted in the same way as CapEx, this is, assuming that its weight, in percentage of revenues, is equal to the average of last years' weights; and, finally, Receivables and Payables, that are calculated as the average number of days that Navigator needs to receive from clients and pay its obligations, respectively.

Exhibit 45: Navigator's CapEx evolution, per segment



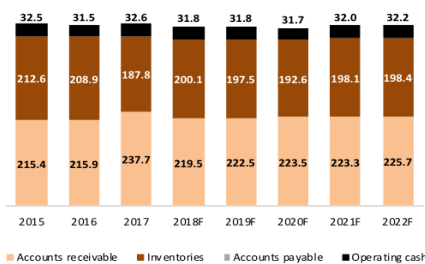
Source: Company Report, Analyst Estimates

Exhibit 46: Navigator's CapEx distribution per segment



Source: Company Report

Exhibit 47: Navigator's NWC components (in million €)



Source: Company report, Analyst Estimates

Operating Expenses

The final driver being analysed relates with operating expenses, which is composed of six items: Cost of inventories sold and consumed, cost of materials and services consumed, provisions, payroll costs, variation in production and other costs and losses. Historically, this value has been relatively constant, however, from 2016 to 2017, it experienced a 40 million € increase related with the beginning of the Pellets activity, which suffered from initial operating problems. Nevertheless, the Pellets activity was discontinued at December 2017, conferring an occasional effect to this increase in operating expenses.

The first step was to split operating expenses across business units, as these expenses are directly correlated with the level of revenues – the higher the value of revenues, the higher will be operating expenses –, they were divided according to the percentage of revenues attributable to each business unit. Then, for the forecast period, as the level of operating expenses has been relatively constant over the last years and there is no indicator that it will suffer significant changes in the near future, it was assumed that operating expenses weight on revenues would be equal to the average of last years' weights.

Multiples Valuation

The valuation of a company can also be done through a comparison between its financial performance and its peers'. Therefore, the key point of this process is the peers selection, given the difficulty to find perfect comparable firms. Hence, the following companies were chosen based on specifics like size, correlation level with Navigator's activity, Market Capitalization, similarity in financial ratios and geography. In order to reflect the increasing level of competition originated in new geographies, firms like Suzano Papel e Celulosa (one of the biggest Brazilian paper and pulp firms) were also included.

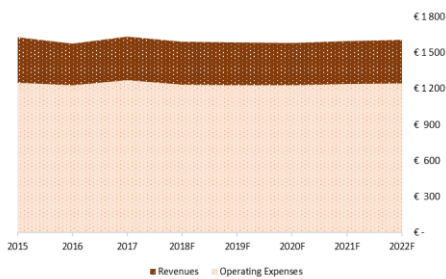
Table 5: Navigator's comparables multiples

Name	Ticker	Corr	Market Cap (EUR)	P/E	EV/EBITDA	EV/EBIT	EV/REV	P/BV
Navigator Co SA/The	NVG PL		2963275000	11,0133	7,5918	10,1244	2,0116	2,5749
Altri SGPS SA	ALTR PL	0,5676	1524128323	8,7104	6,3359	7,0491	2,3837	3,8054
Semapa-Sociedade de Investimen	SEM PL	0,5617	1284066000	7,4283	5,3399	8,1539	1,3571	1,5555
Ence Energia y Celulosa SA	ENC SM	0,4601	1537971763	8,7834	4,9859	6,4142	1,8256	2,2515
Stora Enso OYJ	STERV FH	0,3653	10601050100	10,5343	6,5694	9,2942	1,2053	1,6187
UPM-Kymmene OYJ	UPM FH	0,3273	14763129434	12,2389	7,694	9,6988	1,4008	1,6071
Holmen AB	HOLMB SS	0,2887	3435551753	17,1366	10,8408	14,9291	2,2754	1,5081
Svenska Cellulosa AB SCA	SCAB SS	0,2262	5688266803	16,5407	11,0174	14,465	3,1665	1,5134
Rottneros AB	RROS SS	0,1015	163959121,7	8,2655	4,9788	6,7819	0,7352	1,1885
Mondi PLC	MNDI LN	0,3659	10180873805	11,2598	7,3198	10,0202	1,6622	3,1915
Iberpapel Gestion SA	IBG SM	0,0106	912334403,2	18,2083	7,0459	10,3117	1,1302	1,4293
Suzano Papel e Celulose SA	SUZB3 BZ	0,0601	9289190276	8,3628	4,8181	6,4639	2,8133	3,6994

Source: Bloomberg

This analysis was elaborated based on non-financing ratios – EV/EBITDA, EV/EBIT and EV/Revenues – to avoid the impact of different growth rates and capital structures between firms. The valuation performed was based on the

Exhibit 48: Navigator's operating expenses weight on revenues (in million €)



Source: Company report, Analyst Estimates

calculation of the implied share price for each of the three ratios, using its mean and median values.

Tables 6 and 7: Implied Enterprise multiples and Share price for each ratio

	Enterprise Multiples			Implied Share Price			
	EV/EBITDA	EV/EBIT	EV/REVENUES	EV/EBITDA	EV/EBIT	EV/REVENUES	
Mean	7,00	9,42	1,81	Mean	€ 2,89	€ 2,34	€ 3,13
Median	6,57	9,29	1,66	Median	€ 2,65	€ 2,29	€ 2,78
Max	11,02	14,93	3,17	Max	€ 5,13	€ 4,30	€ 6,21
Min	4,82	6,41	0,74	Min	€ 1,67	€ 1,27	€ 0,67
Range	6,20	8,51	2,43				

Source: Bloomberg, Analyst Estimates

As we can observe from the tables above, this method led us to a significantly lower valuation, when compared to Navigator's current share price and to the one forecasted in the DCF analysis. However, it is always important to notice that this is not the most accurate analysis, as we are valuing Navigator based on several other firms and there is no such thing as two equal firms.

Sensitivity Analysis

The DCF method, analysed above, was executed by relying on some assumptions when calculating its inputs. Therefore, in order to consider the uncertainty that is inherent to the model and possible deviations in some of the most important variables, a Sensitivity Analysis of the target share price was made. By changing some crucial inputs – the WACC and the terminal growth rate – the obtained share price may suffer variations. The terminal growth rate has a very important role in the valuation process, as it is a crucial variable to compute Navigator's enterprise value. However, this growth rate is not expected to assume a large value, as we are dealing with a mature firm that operates in a mature market and already holds very significant market shares within the sector. The WACC is also one of the most important inputs in the DCF analysis, as it is the rate used to discount the firm's future cash flows to the present. It was considered 0.2% up and down movements for each variable, mostly because both Navigator and the sector are stable and mature, therefore, no significant changes are expected in the short/medium-term, neither large growth levels.

Table 8: Sensitivity analysis, considering changes in the WACC and growth rate

		WACC				
		3.7%	3.9%	4.1%	4.3%	4.5%
Growth rate	0.07%	€ 4.66	€ 4.65	€ 4.64	€ 4.63	€ 4.62
	0.27%	€ 4.91	€ 4.90	€ 4.89	€ 4.88	€ 4.87
	0.47%	€ 5.20	€ 5.18	€ 5.17	€ 5.16	€ 5.15
	0.67%	€ 5.51	€ 5.50	€ 5.48	€ 5.47	€ 5.46
	0.87%	€ 5.86	€ 5.85	€ 5.83	€ 5.82	€ 5.81

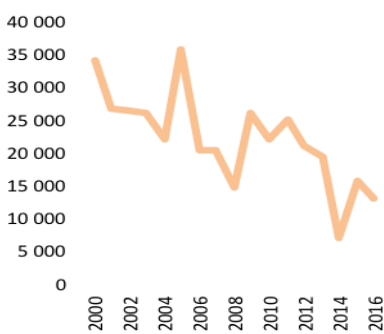
Source: Analyst Estimates

By analysing table 8, the main conclusion is that, in most cases, the expected share price is still higher than the current share price, which represents a positive return for investors and, therefore, does not imply a change in the recommendation of buying Navigator’s stock. Also, it is possible to conclude that the share price suffers largest changes when the growth rate varies, i.e., the share price is more sensitive to changes in the growth rate than changes in the WACC.

Risks

Despite the analysis made throughout this equity research, investing in Navigator is subject to numerous risks that cannot be controlled by the firm. In this section, three major risks inherent to the firm’s operations will be discussed. Firstly, one of the main risks faced by Navigator, forest fires. As Portugal’s largest forestry owner, forests are, perhaps, Navigator’s most valuable asset, as they are the base of the firm’s operational activities. Forest fires are responsible for the destruction of present and future wood inventories, which may lead to increasing costs (forestry and land preparation) and, eventually, to losses in revenues. Despite the decreasing number of forestry fires in Portugal during the period 2000 – 2016, in 2017, this number increased again due to the “October Fires”, that devastated the Portuguese forest.

Exhibit 49: Number of forest fires in Portugal



Source: PORDATA

Recently, with the aim of outperforming competition, Navigator has been following a diversification strategy, investing in different markets and sectors, such as the Pellets (USA) and Mozambican markets. This leads us to the second risk faced by Navigator, which is country specific risk, by diversificate its business geographically, Navigator is subject to different risks that are inherent to each country, such as: political and social context, changes in regulations and taxes or Anti-dumping measures.

Finally, the third risk being explored is related with a present and future problem, the worldwide digital transformation, which is leading to a decrease in P&W paper’s demand. This may create a medium/long-term challenge to firms like Navigator, as paper revenues represent around 80% of the its total revenues. In the corporate world, some firms are already reducing the use of paper, mainly due to environmental and cost reduction reasons, as some of its traditional functions can be easily replaced by new technologies.

Appendix

Financial Statements

The Navigator Company – Consolidated Balance Sheet

The Navigator Company Consolidated Balance Sheet
(in euros)

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Assets								
Goodwill	€ 377 339 466	€ 377 339 466	€ 377 339 466	€ 377 339 466	€ 377 339 466	€ 377 339 466	€ 377 339 466	€ 377 339 466
Other Intangible Assets	€ 4 931 507	€ 4 300 642	€ 3 878 245	€ 4 370 131	€ 4 183 006	€ 4 143 794	€ 4 232 311	€ 4 186 370
PP&E	€ 1 320 799 086	€ 1 294 978 932	€ 1 171 125 052	€ 1 243 873 023	€ 1 227 729 371	€ 1 198 624 877	€ 1 231 778 963	€ 1 233 804 916
Investment properties	€ 426 838	€ 426 838	€ 99 174	€ 317 617	€ 281 210	€ 232 667	€ 277 164	€ 263 680
Biological assets	€ 116 996 927	€ 125 612 948	€ 129 396 936	€ 124 002 270	€ 126 337 385	€ 126 578 864	€ 125 639 506	€ 126 185 252
Available-for-sale financial assets	€ -	€ 81 636	€ -	€ -	€ -	€ -	€ -	€ -
Deferred tax assets	€ 50 934 325	€ 44 198 753	€ 44 727 571	€ 46 620 216	€ 45 182 180	€ 45 509 989	€ 45 770 795	€ 45 487 655
Non-current assets held for sale	€ -	€ -	€ 86 237 049	€ 28 745 683	€ 38 327 577	€ 51 103 436	€ 39 392 232	€ 42 941 082
Other financial assets	€ 229 136	€ 260 486	€ 424 428	€ 304 683	€ 329 866	€ 352 992	€ 329 180	€ 337 346
Total Non-current assets	€ 1 871 657 285	€ 1 847 199 701	€ 1 813 227 921	€ 1 825 573 090	€ 1 819 710 060	€ 1 803 886 086	€ 1 824 759 618	€ 1 830 545 768
Inventories	€ 212 554 956	€ 208 888 472	€ 187 795 595	€ 200 121 808	€ 197 506 044	€ 192 635 290	€ 198 100 305	€ 198 400 326
Receivables and other current assets	€ 215 370 516	€ 215 877 823	€ 237 704 322	€ 219 540 379	€ 222 462 240	€ 223 468 815	€ 223 349 310	€ 225 741 481
State and other public entities	€ 57 642 795	€ 69 619 349	€ 75 076 422	€ 67 446 189	€ 70 713 987	€ 71 078 866	€ 69 746 347	€ 70 513 066
Cash and cash equivalents	€ 72 657 585	€ 67 541 588	€ 125 331 036	€ 31 789 067	€ 31 764 952	€ 31 666 794	€ 31 958 135	€ 32 173 593
Total Current Assets	€ 558 225 852	€ 561 927 232	€ 625 907 375	€ 518 897 443	€ 522 447 222	€ 518 849 765	€ 523 154 097	€ 526 828 465
Total Assets	€ 2 429 883 137	€ 2 409 126 933	€ 2 439 135 296	€ 2 344 470 533	€ 2 342 157 282	€ 2 322 735 851	€ 2 347 913 715	€ 2 357 374 233
Liabilities								
Deferred tax liabilities	€ 88 296 253	€ 59 859 532	€ 83 023 517	€ 77 059 767	€ 73 314 272	€ 77 799 185	€ 76 057 742	€ 75 723 733
Provisions	€ 59 205 593	€ 31 048 808	€ 19 536 645	€ 36 597 015	€ 29 060 823	€ 28 398 161	€ 31 352 000	€ 29 603 661
Interest-bearing liabilities	€ 686 570 753	€ 638 558 905	€ 667 851 880	€ 606 245 800	€ 584 119 668	€ 551 635 402	€ 560 482 684	€ 551 364 358
Liability for defined benefits	€ -	€ 6 457 116	€ 5 090 242	€ 3 849 119	€ 5 132 159	€ 4 690 507	€ 4 557 262	€ 4 793 309
Other non-current liabilities	€ 38 538 726	€ 33 301 140	€ 25 466 139	€ 31 970 198	€ 30 062 209	€ 28 816 800	€ 30 489 062	€ 30 140 515
Total Non-current liabilities	€ 872 611 325	€ 769 225 501	€ 800 968 423	€ 755 721 900	€ 721 689 130	€ 691 340 055	€ 702 938 748	€ 691 625 576
Interest-bearing liabilities	€ 40 578 590	€ 69 702 381	€ 150 205 591	€ 76 932 970	€ 88 476 996	€ 91 738 270	€ 82 947 874	€ 85 572 423
Payables and other current liabilities	€ 225 084 110	€ 255 831 284	€ 259 509 848	€ 243 179 355	€ 250 798 207	€ 247 765 261	€ 248 946 968	€ 252 126 820
State and other public entities	€ 77 345 911	€ 81 098 059	€ 43 571 785	€ 67 338 585	€ 64 002 810	€ 58 304 393	€ 63 215 263	€ 61 840 822
Total current liabilities	€ 343 008 611	€ 406 631 724	€ 453 287 224	€ 387 450 910	€ 403 278 012	€ 397 807 925	€ 395 110 104	€ 399 540 064
Total liabilities	€ 1 215 619 936	€ 1 175 857 225	€ 1 254 255 647	€ 1 143 172 810	€ 1 124 967 143	€ 1 089 147 979	€ 1 098 048 853	€ 1 091 165 641
Equity								
Shareholder's Equity	€ 1 205 640 898	€ 1 230 997 102	€ 1 184 459 371	€ 1 200 877 446	€ 1 216 769 862	€ 1 233 167 594	€ 1 249 444 584	€ 1 265 788 314
Non-controlling interests	€ 8 622 303	€ 2 272 606	€ 420 278	€ 420 278	€ 420 278	€ 420 278	€ 420 278	€ 420 278
Total Equity	€ 1 214 263 201	€ 1 233 269 708	€ 1 184 879 649	€ 1 201 297 724	€ 1 217 190 140	€ 1 233 587 872	€ 1 249 864 862	€ 1 266 208 592
Total liabilities and equity	€ 2 429 883 137	€ 2 409 126 933	€ 2 439 135 296	€ 2 344 470 533	€ 2 342 157 282	€ 2 322 735 851	€ 2 347 913 715	€ 2 357 374 233

The Navigator Company – Consolidated Income Statement

The Navigator Company Consolidated Income Statement
(in euros)

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Revenues								
Total revenues	€ 1 628 023 107	€ 1 577 385 207	€ 1 636 834 436	€ 1 589 453 364	€ 1 588 247 622	€ 1 583 339 692	€ 1 597 906 742	€ 1 608 679 628
Pulp Market	€ 140 797 243	€ 151 376 654	€ 180 497 850	€ 179 401 607	€ 180 769 507	€ 182 379 013	€ 194 119 150	€ 192 769 281
UWF Paper	€ 1 390 958 386	€ 1 324 545 285	€ 1 328 554 225	€ 1 294 442 582	€ 1 287 757 385	€ 1 278 415 252	€ 1 277 729 591	€ 1 286 386 063
Tissue Paper	€ 58 982 144	€ 67 449 698	€ 74 385 809	€ 75 747 432	€ 76 507 643	€ 76 936 739	€ 77 267 854	€ 77 680 057
Others	€ 37 285 334	€ 34 013 570	€ 53 396 552	€ 39 861 743	€ 43 213 087	€ 45 608 688	€ 48 790 148	€ 51 844 228
Other Operating Income	€ 29 235 326	€ 50 135 375	€ 33 810 518	€ 25 240 322	€ 27 362 382	€ 28 879 269	€ 30 893 758	€ 32 827 591
Operating Expenses	-€ 1 374 405 342	-€ 1 397 161 244	-€ 1 415 595 320	-€ 1 364 274 634	-€ 1 365 765 757	-€ 1 363 435 211	-€ 1 377 954 444	-€ 1 389 242 732
Pulp Market	-€ 108 337 046	-€ 118 087 193	-€ 140 144 393	-€ 139 094 571	-€ 140 155 138	-€ 141 403 028	-€ 150 505 452	-€ 149 458 864
Cost of inventories sold and consumed	-€ 59 560 808	-€ 63 499 878	-€ 71 918 232	-€ 74 209 578	-€ 74 775 410	-€ 75 441 183	-€ 80 297 498	-€ 79 739 124
Variation in Production	€ 1 662 303	€ 264 118	€ 2 790 031	€ 322 674	€ 325 134	€ 328 029	€ 349 145	€ 346 717
Cost of materials and services consumed	-€ 36 453 050	-€ 38 818 068	-€ 44 963 075	-€ 45 714 167	-€ 46 062 728	-€ 46 472 853	-€ 49 464 413	-€ 49 120 446
Payroll costs	-€ 13 383 415	-€ 13 868 500	-€ 17 207 455	-€ 16 863 970	-€ 16 992 555	-€ 17 143 850	-€ 18 247 437	-€ 18 120 548
Other costs and losses	-€ 1 861 480	-€ 1 596 249	-€ 2 815 186	-€ 2 353 908	-€ 2 371 856	-€ 2 392 974	-€ 2 547 015	-€ 2 529 304
Provisions	€ 1 259 404	€ 40 381	€ 450 414	€ 369 726	€ 372 545	€ 375 862	€ 400 057	€ 397 275
UWF Paper	-€ 1 070 278 934	-€ 1 033 262 597	-€ 1 031 532 651	-€ 1 003 613 839	-€ 998 430 639	-€ 991 187 448	-€ 990 655 838	-€ 997 367 418
Cost of inventories sold and consumed	-€ 588 410 709	-€ 555 623 745	-€ 529 354 064	-€ 535 446 917	-€ 532 681 582	-€ 528 817 203	-€ 528 533 579	-€ 532 114 334
Variation in Production	€ 16 422 151	€ 2 311 032	€ 20 536 024	€ 2 328 201	€ 2 316 177	€ 2 299 374	€ 2 298 141	€ 2 313 711
Cost of materials and services consumed	-€ 360 125 482	-€ 339 657 987	-€ 330 950 663	-€ 329 842 997	-€ 328 139 511	-€ 325 758 998	-€ 325 584 282	-€ 327 790 078
Payroll costs	-€ 132 216 891	-€ 121 349 332	-€ 126 655 457	-€ 121 679 185	-€ 121 050 769	-€ 120 172 597	-€ 120 108 144	-€ 120 921 863
Other costs and losses	-€ 18 389 860	-€ 13 967 170	-€ 20 721 171	-€ 16 984 235	-€ 16 896 519	-€ 16 773 942	-€ 16 764 946	-€ 16 878 526
Provisions	€ 12 441 856	€ 353 330	€ 3 315 273	€ 2 667 697	€ 2 653 920	€ 2 634 666	€ 2 633 253	€ 2 651 093
Tissue Paper	-€ 45 384 065	-€ 52 616 736	-€ 57 755 558	-€ 58 728 886	-€ 59 318 297	-€ 59 650 986	-€ 59 907 707	-€ 60 227 299
Cost of inventories sold and consumed	-€ 24 950 944	-€ 28 293 977	-€ 29 638 557	-€ 31 332 969	-€ 31 647 430	-€ 31 824 926	-€ 31 961 892	-€ 32 132 400
Variation in Production	€ 696 364	€ 117 684	€ 1 149 813	€ 136 240	€ 137 608	€ 138 379	€ 138 975	€ 139 716
Cost of materials and services consumed	-€ 15 270 747	-€ 17 296 373	-€ 18 529 942	-€ 19 301 559	-€ 19 495 272	-€ 19 604 612	-€ 19 688 985	-€ 19 794 020
Payroll costs	-€ 5 606 520	-€ 6 179 461	-€ 7 091 445	-€ 7 120 351	-€ 7 191 812	-€ 7 232 148	-€ 7 263 273	-€ 7 302 020
Other costs and losses	-€ 779 803	-€ 711 249	-€ 1 160 179	-€ 993 873	-€ 1 003 848	-€ 1 009 478	-€ 1 013 823	-€ 1 019 231
Provisions	€ 527 584	€ 17 993	€ 185 622	€ 156 107	€ 157 673	€ 158 558	€ 159 240	€ 160 090
Others	-€ 28 689 361	-€ 26 533 596	-€ 41 458 817	-€ 30 905 811	-€ 33 504 192	-€ 35 361 561	-€ 37 828 227	-€ 40 196 132
Cost of inventories sold and consumed	-€ 15 772 643	-€ 14 268 102	-€ 21 275 520	-€ 16 488 833	-€ 17 875 118	-€ 18 866 060	-€ 20 182 073	-€ 21 445 395
Variation in Production	€ 440 204	€ 59 346	€ 825 373	€ 71 696	€ 77 724	€ 82 032	€ 87 755	€ 93 248
Cost of materials and services consumed	-€ 9 653 343	-€ 8 722 224	-€ 13 301 395	-€ 10 157 358	-€ 11 011 330	-€ 11 621 764	-€ 12 432 447	-€ 13 210 671
Payroll costs	-€ 3 544 140	-€ 3 116 182	-€ 5 090 469	-€ 3 747 053	-€ 4 062 083	-€ 4 287 272	-€ 4 586 334	-€ 4 873 421
Other costs and losses	-€ 492 949	-€ 358 669	-€ 832 814	-€ 523 021	-€ 566 994	-€ 598 426	-€ 640 170	-€ 680 242
Provisions	€ 333 510	€ 9 073	€ 133 246	€ 82 150	€ 89 057	€ 93 994	€ 100 551	€ 106 845
Depreciations	-€ 121 715 935	-€ 166 661 122	-€ 144 703 900	-€ 131 931 527	-€ 134 357 492	-€ 135 832 187	-€ 139 057 221	-€ 141 993 020
Pulp Market	-€ 5 644 221	-€ 9 921 973	-€ 10 711 941	-€ 10 646 883	-€ 10 728 063	-€ 10 823 582	-€ 11 520 319	-€ 11 440 209
UWF Paper	-€ 82 429 315	-€ 78 980 298	-€ 82 319 848	-€ 80 206 223	-€ 79 791 995	-€ 79 213 138	-€ 79 170 653	-€ 79 707 025
Tissue Paper	-€ 7 389 500	-€ 10 939 324	-€ 9 213 309	-€ 9 381 957	-€ 9 476 116	-€ 9 529 263	-€ 9 570 275	-€ 9 621 329
Others	-€ 26 252 899	-€ 66 819 527	-€ 42 458 802	-€ 31 696 464	-€ 34 361 318	-€ 36 266 204	-€ 38 795 974	-€ 41 224 456
Operating Result	€ 282 853 091	€ 230 359 338	€ 255 049 634	€ 250 419 052	€ 249 844 247	€ 248 783 750	€ 250 846 056	€ 252 264 487
Net Financial costs	-€ 50 258 882	-€ 20 795 889	-€ 7 696 970	-€ 2 485 710	-€ 3 419 004	-€ 2 383 128	-€ 3 041 669	-€ 3 054 516
Profit before tax	€ 232 594 209	€ 209 563 449	€ 247 352 664	€ 247 933 342	€ 246 425 243	€ 246 400 622	€ 247 804 387	€ 249 209 972
Income Tax	-€ 35 828 685	€ 7 266 333	-€ 39 583 528	-€ 73 122 215	-€ 73 250 967	-€ 72 696 044	-€ 73 498 570	-€ 73 934 910
Net Income	€ 196 765 524	€ 216 829 782	€ 207 769 136	€ 174 811 127	€ 173 174 276	€ 173 704 578	€ 174 305 817	€ 175 275 062

The Navigator Company – Cash Flows map

	2015	2016	2017	2018F	2019F	2020F	2021F	2022F
Pulp Market								
Noplat	€ 21 705 907	€ 23 095 231	€ 24 102 783	€ 20 910 408	€ 21 069 846	€ 21 257 444	€ 22 625 832	€ 22 468 496
Depreciation	-€ 5 644 221	-€ 9 921 973	-€ 10 711 941	-€ 10 646 883	-€ 10 728 063	-€ 10 823 582	-€ 11 520 319	-€ 11 440 209
Operational CF	€ 27 350 128	€ 33 017 204	€ 34 814 724	€ 31 557 291	€ 31 797 908	€ 32 081 025	€ 34 146 152	€ 33 908 705
Δ Other Assets		-€ 745 144	-€ 363 137	€ 594 883	-€ 263 564	€ 27 484	€ 108 201	-€ 66 299
Δ Other Liabilities		-€ 2 888 064	-€ 1 856 686	€ 2 598 509	-€ 1 065 965	-€ 217 171	€ 532 863	-€ 254 737
CAPEX investment		€ 5 069 738	-€ 1 184 279	-€ 12 984 508	€ 659 535	-€ 1 671 274	-€ 11 575 558	€ 1 792 937
Net CAPEX		-€ 4 852 235	-€ 11 896 220	-€ 23 631 390	-€ 10 068 528	-€ 9 152 308	-€ 23 095 877	-€ 9 647 272
Δ NWC		€ 1 119 336	-€ 2 671 447	-€ 1 603 931	€ 637 837	-€ 168 093	-€ 1 800 686	€ 370 522
Investment CF	-€ 7 366 107	-€ 16 787 491	-€ 16 787 491	-€ 22 041 929	-€ 10 760 220	-€ 9 565 056	-€ 24 255 499	-€ 9 597 786
FCF	€ 25 651 097	€ 18 027 233	€ 18 027 233	€ 9 515 361	€ 21 037 689	€ 22 515 970	€ 9 890 653	€ 24 310 919
UWF Paper								
Noplat	€ 192 849 041	€ 209 828 830	€ 174 583 144	€ 148 488 876	€ 147 722 000	€ 146 650 339	€ 146 571 685	€ 147 564 692
Depreciation	-€ 82 429 315	-€ 78 980 298	-€ 82 319 848	-€ 80 206 223	-€ 79 791 995	-€ 79 213 138	-€ 79 170 653	-€ 79 707 025
Operational CF	€ 275 278 356	€ 288 809 128	€ 256 902 992	€ 228 695 099	€ 227 513 995	€ 225 863 477	€ 225 742 338	€ 227 271 717
Δ Other Assets		-€ 7 361 398	-€ 3 177 451	€ 4 378 638	-€ 1 901 705	-€ 195 792	€ 758 453	-€ 436 393
Δ Other Liabilities		-€ 28 531 647	-€ 16 245 997	€ 19 126 322	-€ 7 691 293	€ 1 547 071	€ 3 735 192	-€ 1 676 726
CAPEX investment		€ 125 292 813	€ 14 772 470	-€ 302 295 522	€ 17 555 967	€ 27 657 774	-€ 17 173 881	-€ 1 652 358
Net CAPEX		€ 46 312 515	-€ 67 547 378	-€ 382 501 745	-€ 62 236 028	-€ 51 555 364	-€ 96 344 534	-€ 81 359 384
Δ NWC		€ 32 774 454	€ 7 060 021	-€ 8 393 258	€ 6 696 648	€ 1 430 972	-€ 2 004 454	€ 212 307
Investment CF	€ 43 193 924	-€ 79 910 804	-€ 79 910 804	-€ 367 390 043	-€ 65 132 378	-€ 51 867 255	-€ 93 855 343	-€ 83 260 195
FCF	€ 332 003 052	€ 176 992 188	€ 176 992 188	-€ 138 694 944	€ 162 381 617	€ 173 996 222	€ 131 886 995	€ 144 011 522
Tissue Paper								
Noplat	€ 5 025 468	€ 3 848 272	€ 6 031 032	€ 5 383 795	€ 5 437 827	€ 5 468 326	€ 5 491 860	€ 5 521 157
Depreciation	-€ 7 389 500	-€ 10 939 324	-€ 9 213 309	-€ 9 381 957	-€ 9 476 116	-€ 9 529 263	-€ 9 570 275	-€ 9 621 329
Operational CF	€ 12 414 968	€ 14 787 596	€ 15 244 341	€ 14 765 752	€ 14 913 943	€ 14 997 589	€ 15 062 134	€ 15 142 487
Δ Other Assets		-€ 312 152	-€ 161 805	€ 245 160	-€ 111 283	-€ 11 632	€ 45 645	-€ 26 390
Δ Other Liabilities		-€ 1 209 855	-€ 827 293	€ 1 070 884	-€ 450 075	-€ 91 914	€ 224 789	-€ 101 396
CAPEX investment		€ 8 094 327	-€ 24 081 500	€ 30 114 265	€ 137 279	€ 898 184	-€ 1 320 602	-€ 14 576
Net CAPEX		-€ 2 844 997	-€ 33 294 809	€ 20 732 308	-€ 9 338 837	€ 8 631 080	-€ 10 890 877	-€ 9 635 906
Δ NWC		-€ 43 822	-€ 457 418	-€ 898 620	€ 246 201	-€ 39 298	-€ 168 279	€ 26 963
Investment CF	-€ 4 410 826	-€ 34 741 326	-€ 34 741 326	€ 21 149 732	-€ 9 653 994	€ 8 773 923	-€ 10 788 722	€ 9 736 729
FCF	€ 10 376 770	-€ 19 496 985	€ 19 496 985	€ 35 915 484	€ 5 259 950	€ 6 223 665	€ 4 273 412	€ 5 405 758
Others								
Noplat	€ 9 372 013	-€ 9 096 939	€ 2 674 793	€ 1 762 353	€ 1 910 521	€ 2 016 435	€ 2 157 092	€ 2 292 118
Depreciation	-€ 26 252 899	-€ 66 819 527	-€ 42 458 802	-€ 31 696 464	-€ 34 361 318	-€ 36 266 204	-€ 38 795 974	-€ 41 224 456
Operational CF	€ 35 624 912	€ 57 722 588	€ 45 133 595	€ 33 458 817	€ 36 271 840	€ 38 282 639	€ 40 953 066	€ 43 516 574
Δ Other Assets		-€ 197 326	-€ 81 595	€ 175 984	-€ 58 562	-€ 6 570	€ 27 059	-€ 16 664
Δ Other Liabilities		-€ 764 805	-€ 417 188	€ 768 715	-€ 236 850	-€ 51 915	€ 133 257	-€ 64 026
CAPEX investment		-€ 112 636 725	€ 134 347 189	€ 212 417 794	-€ 2 209 128	-€ 1 122 739	-€ 3 084 044	-€ 2 151 956
Net CAPEX		-€ 179 456 252	€ 91 888 387	€ 180 721 330	-€ 36 570 446	-€ 37 388 943	-€ 41 880 018	-€ 43 376 412
Δ NWC		€ 1 068 033	-€ 2 158 367	€ 1 256 531	-€ 243 816	-€ 294 191	-€ 481 726	-€ 337 589
Investment CF	-€ 179 350 350	€ 89 231 237	€ 89 231 237	€ 182 922 560	-€ 37 109 673	-€ 37 741 619	-€ 42 201 428	-€ 43 794 690
FCF	-€ 121 627 762	€ 134 364 831	€ 134 364 831	€ 216 381 377	-€ 837 834	€ 541 020	-€ 1 248 362	€ 278 116
Non core								
Noplat	€ 7 352 661	-€ 19 444 013	€ 8 437 458	€ 10 590 607	-€ 15 469 436	-€ 9 744 512	-€ 12 405 711	-€ 12 755 169
Invested Capital Non Core Business	-€ 51 477 563	-€ 28 608 639	-€ 78 757 345	-€ 442 952	€ 16 568 585	€ 31 627 659	€ 15 917 764	-€ 21 371 336
Δ Invested Capital Non Core Business		-€ 22 868 924	-€ 107 365 984	€ 79 200 297	-€ 17 011 537	-€ 15 059 075	€ 15 709 895	-€ 5 453 572
FCF	€ 7 352 661	-€ 42 312 937	-€ 98 928 526	€ 68 609 690	-€ 32 480 972	-€ 24 803 587	€ 3 304 184	-€ 18 208 741
Financial								
Financial result	-€ 39 310 737	-€ 19 220 289	-€ 12 361 352	-€ 1 774 078	-€ 1 746 599	-€ 1 670 712	-€ 1 670 860	-€ 1 653 997
Net Financial assets	-€ 686 973 807	-€ 672 108 461	-€ 725 368 987	-€ 683 178 770	-€ 672 596 663	-€ 643 373 672	-€ 643 430 558	-€ 636 936 782
Investment in net financial assets		-€ 14 865 346	€ 53 260 527	-€ 42 190 217	-€ 10 582 106	-€ 29 222 991	-€ 56 886	-€ 6 493 777
Net cash transactions with shareholders		-€ 170 004 585	-€ 251 857 916	-€ 147 762 672	-€ 143 031 744	-€ 147 579 587	-€ 146 492 908	-€ 147 093 567
FCF	-€ 204 090 220	-€ 210 958 741	-€ 210 958 741	-€ 191 726 968	-€ 155 360 449	-€ 178 473 291	-€ 148 106 882	-€ 155 241 341

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Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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