LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

MASTER OF SCIENCE IN
FINANCE

MASTERS FINAL WORK
PROJECT

EQUITY RESEARCH:
MONDI PLC

ROGIER SCHAEFFERS

NOVEMBER 2020

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Abstract

During this equity research the stock price of Mondi plc was fluctuating heavily due to COVID-19. However, Mondi plc is a mature and vertical integrated company, two important aspects why Mondi plc is strong to survive the uncertainties of COVID-19. This pandemic will have a structural change on the value chain of Mondi plc.

This valuation has as a valuation date as of Friday the 6th of November 2020, on which the stock price was on €17,64/sh. This valuation is assessed as medium risk. For the valuation four different valuation methods were used: The discounted Cash Flow Method (DCF), Adjusted Present Value Method (APV), Relative valuation Method (Multiples) and the Dividend Discount Model. These different valuations led to a target price of €20,0/sh for 2021YE.

COVID-19 had a heavy impact on the valuation of Mondi plc. The risks regarding COVID-19 are hard to interpret since it is unknown how long this pandemic will last. To HOLD is my recommendation for Mondi plc with an upside potential of 13,4%.

JEL Classification: G10, G17, G30, G32, G34

Keywords: Equity Research, Valuation, WACC, DCF, APV, FCFF, FCFE, DDM, Mergers & Acquisitions, Paper & Forest, COVID-19.

Resumo

No decorrer deste Equity Research o preço das ações da Mondi plc sofreu grandes flutuações devido à pandemia COVID-19. Apesar disto, a Mondi plc é uma empresa matura e verticalmente integrada, dois factores importantes sobre a força da Mondi que a ajudam a sobreviver as incertezas trazidas pela pandemia.

Esta avaliação contem informação até dia 6 de novembro de 2020, onde o preço de fecho foi 17,64€ por ação. De acordo com a avaliação feita foi definido um nível de risco médio. Foram utilizados quatro métodos de avaliação diferentes: método Discounted Cash Flow (DCF), método Adjusted Present Value (APV), Método de avaliação relativa através de múltiplos e o Dividend Discount Model. Através destes métodos foi obtido um preço-alvo de 20,0€ por ação para 2021YE.

A Covid-19 teve um grande impacto na avaliação da Mondi plc. Os riscos derivados da pandemia Covid-19 são difíceis de interpretar, uma vez que não se sabe durante quanto tempo a pandemia vai durar. A minha recomendação de investimento para a Mondi plc é HOLD, com um upside potencial de 13,4%.

Classificação JEL: G10, G17, G30, G32, G34

Palavras-Chave: Equity Research, Avaliação de Empresas, Fusões e Aquisições, COVID-19, Papel & Floresta

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Index

List of Figures

List of Tables

1 | Research Snapshot

Date: November 6th, 2020
Ticker: MDNI (LON)

Current price: EUR 17,64
EUR 1,000 : GBX 90,69

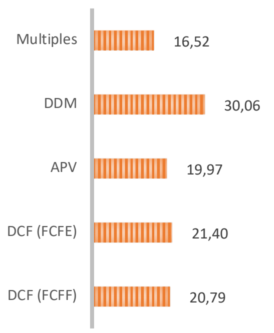
Recommendation: HOLD (13,4% upside)
Price Target: EUR 20,0 (GBp 1814)

Table 1: Market profile

Market Profile	
Current price, 6th of november.	**€17,64**
52 weeks price range	**€7,03**
Volume	**1,1m**
Number of shares 2020H1	**484,8m**
Market Capitalizaiton	**€7,6B**
D/E 2021YE	**0,58**
Dividend Yield 2021YE	**3,02%**
ROE 2021YE	**10,33%**
EPS 2021YE	**0,91**

Source: Mondi plc, Authors' estimates

Figure 1: Target price

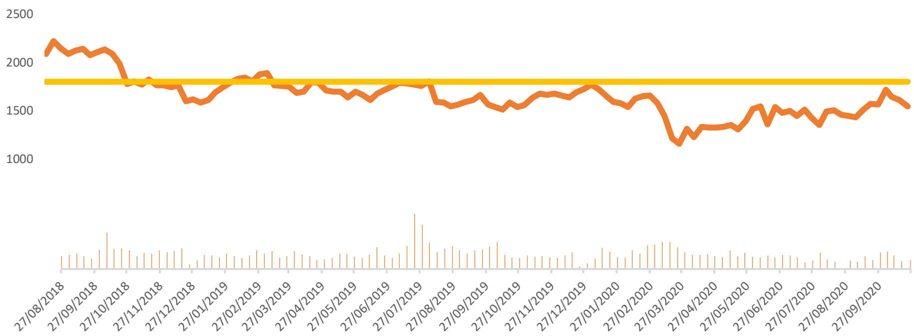


Source: Authors' Estimates

Table 2: Abbreviations

Abbreviations	
P&P	**Paper and Pulp**
BSKP	**Bleached Softwood Kraft Pulp**
BHKP	**Birch Hardwood Kraft Pulp**
CP	**Corrugated Packaging**
FP	**Flexible Packaging**
EM	**Engineered Materials**
UFP	**Uncoated Fine Paper**

Source: Authors' decisions



HOLD

To HOLD is my recommendation for Mondi plc, with a price target of €20,0/sh for 2021YE. This represents an 13,4%. upside potential, considering a current share price of €17,64/sh at date November 6th, 2020. This assessed as a medium risk. This increase in the stock price clearly has mainly to do with the COVID-19 crisis we are currently in and had recently it's impact on the stock prices. However, the impact of this virus is mitigated partly by the vertically integrated value chain of Mondi plc, the differentiation in products, geographical position and the mature status of Mondi plc with the corresponding ability to anticipate promptly. Mondi plc has a leading position in pulp and paper industry with a market cap of €7.6 billion.

Maturity

This industry is heavily mature, the paper and pulp business exist for decades now. This have led to a stable global revenue where the consumption and production is balanced extremely well. Consequently, will this well-balanced situation lead to a high impact on prices of pulp and paper when capacity increases or decreases. Since it is a mature industry the competitiveness is mainly based on cost advantage and efficient operational business cycles. This constantly finetuning of the operational cycle made Mondi plc experienced and able to anticipate rapidly on the COVID-19 situation. This partly mitigated the impact of the virus on the stock price.

COVID-19 and the structural changes

Obviously, the uncertainty in the current times is the major driver of the valuation. In March, the virus had an immediate impact on the stock price of Mondi plc and the peer companies of approximately 40% downwards, this have been recovered partly (Figure 25). The 2020H1 revenue went down approximately 20% compared to the same period 2019. The COVID-19 pandemic is expected to have a structural impact on the consumers' behavior and so as well on the value chain of Mondi plc. Mondi plc is operational in 4 different business segments. In this valuation, all segments are expected to decrease in the upcoming year. However, some will enjoy a more rapidly recover than other business segments due to structural economic changes. Corrugated Packaging and Flexible Packaging, covering 70% of the groups' revenue, is expected to be back on the same level in 2019 of revenue again in 2024. While Engineered Materials and Uncoated Fine Paper is not expected to keep the downtrend. Fortunately, those 2 business segments cover a lower percentage of the groups' revenue.

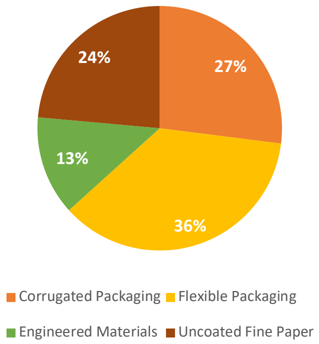
Table 3: Financial highlights

	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F
Revenue	7.096	7.481	7.268	5.760	6.031	6.333	6.537	6.747	6.965	7.190
EBITDA	*1.459*	*1.719*	*1.697*	*789*	*1.205*	*1.474*	*1.598*	*1.661*	*1.726*	*1.794*
Total Assets	*7.376*	*8.042*	*8.540*	*8.697*	*8.707*	*8.813*	*8.935*	*9.058*	*9.463*	*9.858*
Total Liabilities	*3.369*	*4.217*	*4.155*	*4.402*	*4.225*	*3.988*	*3.764*	*3.530*	*3.571*	*3.616*
Net Debt	*1.533*	*2.218*	*2.202*	*2.607*	*2.467*	*2.214*	*1.963*	*1.729*	*1.557*	*1.485*
EBITDA Margin		0,23	0,23	0,14	0,20	0,23	0,24	0,25	0,25	0,25
ROE		0,17	0,24	0,03	0,10	0,14	0,16	0,16	0,16	0,15
EPS		1,25	1,94	0,26	0,91	1,35	1,56	1,67	1,78	1,86

Source:: Authors' Estimates

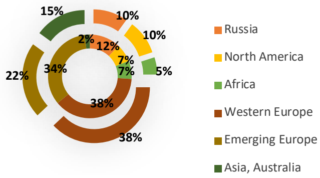
2 | Business description

Figure 2: Revenue, (total €7.268m)



Source: Financial Statements Mondi plc

Figure 3: Revenue per region, production inner | consumption outer

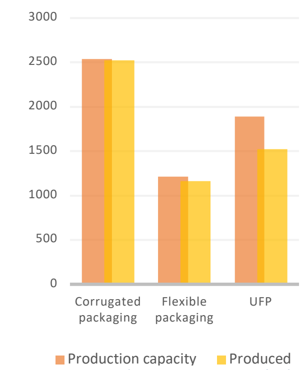


Source: Financial Statements Mondi plc

Figure 4: Acquisitions' timeline

Source: Financial Statements Mondi plc

Figure 5: Capacity vs. production



Source: Financial Statements Mondi plc

Mondi is an international packaging and paper company operating globally across 33 countries with 102 production sites. The company was founded in 1967 in South Africa, under the name Mondi South Africa. Nowadays its headquarters are based in London, Vienna and Johannesburg and it is a dual-listed company on the London Stock Exchange (LSE) and the Johannesburg Stock Exchange Limited (JSE). The annual paper and market pulp production 2019YE was approximately 4,4m/tonnes with a revenue of €7.268m. For this valuation the share price on the LSE is valuated.

Mondi clearly has a broad strategy and a wide value chain from managing their own sustainable forests (based in Russia and South Africa) to manufacturing industrial and consumer packaging solutions. The main focus is to convert the raw materials, by using pulp and paper mills, into pulp, packaging paper and uncoated fine paper. The small surplus of pulp is sold externally (approx. 0,2m/tonnes). Mondi is a price taker and can be considered as a producer predominantly focused on 4 different products: Corrugated Packaging (27%), Flexible Packaging (36%), Engineered Materials (13%) and Uncoated Fine Paper (24%), Figure 2. Mondi plc occupies a strong position in the market as a market leader in verging containerboard in Europe and Emerging Europe, third largest supplier of corrugated solutions in Emerging Europe as well as being the world's largest kraft paper and paper bag producer. The operational activities take place in Western- and emerging Europe, Russia, North America, South Africa and Asia/Australia. More than 50% of the revenue is generated in Europe (Figure 3). The production in Emerging Europe and Western Europe is approximately the same, although, the revenue in Western Europe is significantly higher. About 4 million m^3 of pulp was procured through their own managed forests, while the annual allowable cut from these forests is 8 million m^3 of pulp. Around 14 million m^3 was procured externally and not through their own managed forests due to sustainability, logistic and commercial considerations.

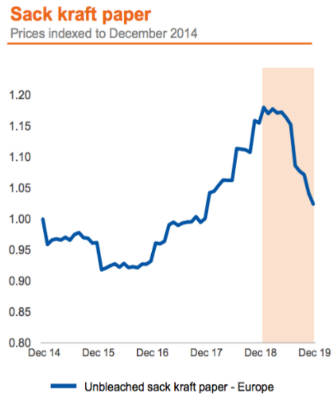
Acquisitions

After the Mondi Group was formed, the acquisition of 2 businesses in Austria was the first step into the European industry of packaging and paper. After this, several significant mergers and acquisitions occurred (Figure 4). All those acquisitions served different purposes: the main purposes were scaling, supporting developments of certain processes, strengthening the position in a certain product/market and being geographically closer to the consumer. For the same purposes, Mondi Group acquired many mills and sites over the years. Next to acquiring mills, sites and companies, Mondi Group also demerged and sold off divisions, companies, sites and mills. This in order to put more focus on the core business or to generate cash and repay the net debt. All those acquisitions have been included in the combined and consolidated financial statements.

Performance overview

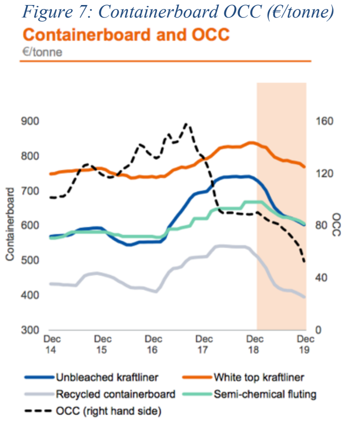
In 2019, Mondi generated a total revenue of €7.268m, a remarkable decrease of 4.1% YoY, due to lower average selling prices and lower sales volumes combined with longer planned maintenance shuts and restructuring initiatives. Quite remarkable in a way that the 5y CAGR from 2014-2018 was 3.6%, without any decrease since 2016. However, this perfectly follows the trend of the industry. In terms of revenue per region, Figure 3 is divided in revenue on production (the inner circle) and revenue on consumers in that region (outer circle). In Emerging Europe, a significant larger amount is produced than it is consumed, which might indicate in either cheaper production and/or smaller offset market. Even though the company was founded in Africa, all of the Europe endeavors cover around 60% of the total revenue on production and 72% of the total revenue on consumers. The underlying EBITDA of €1.658 million decreased by 6% during the prior year. But enjoyed a 5y CAGR of 8,4% since 2014. The strong performance of the Flexible Packaging and Engineered Materials divisions keep the margin on a stable level despite the fact of a significant decrease in margins of Corrugated Packaging and Uncoated Fine Paper divisions, figure 9. Currency movements had a net positive impact on the EBITDA compared to the prior year. The basic earnings were €171,1 cents per share, a downtrend of 10% compared to 2018. The costs mainly came from input costs, like raw materials, and the impact of planned maintenance. The average benchmark of paper for recycling costs were decreased by 21% on the prior year. Energy costs were lower and cash fixed costs were on average higher due to mill maintenance shuts effects. Those maintenance shuts effects had an impact of €150m on the underlying EBITDA in 2019. After a positive 4y CAGR of 10.4% till 2018 in the EPS, last year the EPS declined with a

Figure 6: Sack kraft paper price index



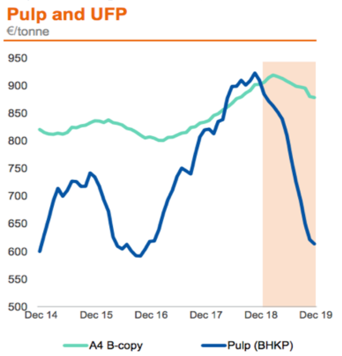
Source: Financial Statements Mondi plc

Figure 7: Containerboard OCC (€/tonne)



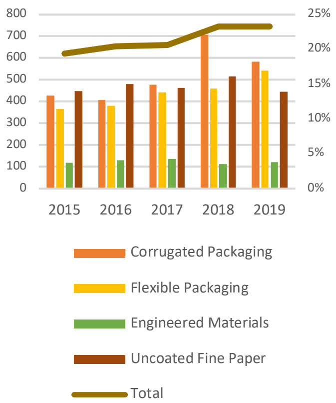
Source: Financial Statements Mondi plc

Figure 8: Pulp and UFP (€/tonne)



Source: Financial Statements Mondi plc

Figure 9: EBITDA per segment and Total EBITDA Margin



Source: Financial Statements Mondi plc

significant 9.5% YoY. The capacity and efficiency of usage of the mills and sites in the segments Corrugated packaging, Flexible packaging and UFP are 99%, 96% and 81% respectively.

Business segments

Corrugated Packaging (CP) | Revenue: €2.014m. EBITDA: €583m. EBITDA margin: 28,9%

In this business segment the raw materials Hardwood pulp and softwood pulp are both used to make containerboard. This containerboard was sold as a product (1,6m/tonnes) and used to develop corrugated solutions (1,7 bn m^2). In 2018, strong pricing environment in containerboard markets was created by a strong demand and a limited supply. Figure 7 shows a significant decrease in the price of containerboard and its elements and Old Corrugated Containers (OCC). All the different elements declined in price with at least 10% to almost 30% YoY in 2019. After a significant growth in the EBITDA Margin of CP in the previous 3 years, last year it declined with 4,5%. The underlying EBITDA was down 18% on the prior year to €583m (Figure 9). The corrugated solutions grew in volume with 3%, due to a strong growth in central and eastern Europe, helped by a good demand. However, this was partly offset by weaker sales volumes in Turkey. The business benefited from the lower input paper prices. Because of weaker domestic market conditions, a recycled containerboard machine of Mondi plc in Turkey was shut.

Flexible Packaging (FP) | Revenue: €2.708m. EBITDA: €543m. EBITDA margin: 20,1%

In this business segment, of which approximately 0,4m/tonnes is sold externally, innovative flexible consumer goods packaging solutions (2,5 bn m^2) and paper bags (5,2 bn bags) are developed out of kraft paper. Resin, films and other raw materials are necessary as well in order to create consumer flexibles. In 2019, the underlying EBITDA grew with 18% in comparison to the prior year to €543m, due to higher average selling prices, positive currency effects and good cost containment which offset the lower paper bag volumes. The lower paper bags sales occurred because of a combination of pricing discipline and weaker markets in the Middle east. The price of kraft paper grew around 6%, due to strong demand growth during the end of 2018 and during the early 2019. However, slowing economic activity, in particular in constructions related sectors in export markets, together with increased competition, resulted in a significant reduction in the kraft paper price in the second half of 2019, approximately a decline of 14% YoY (figure 7). The consumer flexibles have been through a positive progress during the year. It benefitted from an improved product mix through implemented restructuring initiatives and well managed cost control.

Engineered Materials (EM) | Revenue: €979m. EBITDA: €122m. EBITDA margin: 12,5%

This business segment is made by the material Kraft paper in combination with resin, films and other raw materials. These materials are converted in a converting plant to create Engineered materials, which was approximately 5,5 bn m^3 in 2019. The underlying EBITDA grew by 9% in comparison to the prior year to €122m. This was due to an improved product mix, innovations with customers, good cost control and implemented restructuring initiatives, improved performance in personal care, strong demand for sustainable coating solutions. The performance in personal care components improved YoY, but the expectation is that this will keep facing pressure as a key product matures.

Uncoated Fine Paper (UFP) | Revenue: €1.758m. EBITDA: €444m. EBITDA margin: 25,3%

In this business segment a range of quality papers are produced for use in offices and professional printing houses are produced. The focus in this business segment is to develop the cost-efficiency, high-performance and obtain environmentally responsible solutions. The underlying EBITDA declined with 14% to €444m due to lower average selling prices, longer planned maintenance shuts and higher costs. The EBITDA margin declined with 2% to 25,3%. The sales declined last year due to an extended maintenance shut and the closing of a site in South Africa. The sales volumes were lower and the structural decline in demand for UFP is prolonged in mature markets, with a decline of 5% YoY in 2019 in Europe. The average UFP selling prices were flat YoY but down in the second half of 2019. The pulp price decreased remarkably with approximately 33% in one year (Figure 8).

The ROCE of all the 4 business segments together was 19,8% in 2019. CP and UFP realized the highest ROCE, 25% both. FP and EM are both approximately 15%. Over the last 4 years, the ROCE constantly exceeded the expectations that the board of Mondi plc had, since the ROCE every year beat the expected range and an additional bonus was rewarded. The ROCE was calculated by dividing the trailing 12-month underlying operating profit, including share of equity accounted investees' net profit/(loss), by the trailing 12-month average capital employed. Capital employed is adjusted for expenses on major CAPEX projects which are not yet in production. This is mainly the reason for a significant high ROCE. Those major projects are increasing the capacity of the Ružomberok mill, increasing capacity and conversion of the Štětí machine, and various upgrades at the Syktyvkar mill. The information is too limited to support the impact of the adjustment on major CAPEX, since it doesn't provide information about which projects are not in production yet.

Competitiveness

Since paper is a homogeneous product, Mondi is forced to compete based on cost advantages. Mondi achieves those competitive advantages by having operations strategically located with access to cost-competitive fibre, by managing their own 100% certified forests in Russia and South Africa for homegrown fibre supply, being 100% electricity self-sufficient which leads to lower energy costs and using 64% of mill fuel consumption from biomass-based renewable sources. Next to those competitive advantages in forestry and raw materials, Mondi plc also make use of a natural hedge by competing through their operations by having a vertically integrated asset base which reduces the exposure to price volatility of Pulp.

Since the competitive atmosphere in this industry is related to cost advantages, it might be interesting to have a more detailed look on the operating expenses. The operating expenses are visible by looking at the EBITDA Margin per segment and the total EBITDA. The UFP and CP clearly have the better EBITDA margins (Figure 10). By far the most considerable costs are materials, energy and consumables used (47,5% of revenue). At first sight, it looks like there is room for improvements in the operating expenses of EM. The total EBITDA Margin consecutively improved over the last 5 years. This might indicate that the operating process of Mondi plc has improved over the years. Compared to the industry numbers, extracted from Reuters, the profitability of Mondi plc is high in this industry (Figure 11). Mondi plc has 6 R&D centers where they spent €22m on R&D in 2018.

Key drivers of profitability

There are several key drivers of profitability. The price of the raw material wood has an enormous impact on the profitability of the company. The prices of the raw materials mainly depend on the global commodity cycle. The BHKP declined in 2019 with approximately 33% being 900€/ton 2018YE to 600€/ton 2019YE . Since Mondi plc manages their own forests, the impact of volatility in the price of wood is partly mitigated. Next, the operational process can be optimized by using cost advantaged assets. This might be done by using green sources of energy and recycling waste. Constantly seeking for and developing more efficient and sustainable processes are significant key drivers of profitability in the short run but in specific the long run. Another key driver of profitability is monitoring the demand of consumers. Digitalization cuts out certain products such as photopaper and newspapers. As last, regulations have great impact on the profitability, since plastic bags are forbidden in parts of Europe, the demand of paper bags will increase. Monitoring this well could be a driver of profitability.

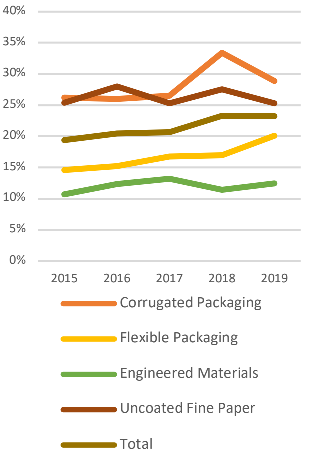
Companies' strategies

To maintain growth Mondi plc focusses on four strategic value drivers. The first one is to drive performance along the value chain. This is done by focusing on finding innovative ways to implement digital technology. With this, improvement systems and processes to enhance productivity, increase efficiency and to reduce waste. As second, investing in assets with a cost advantage asset base. This to improve the competitiveness in the pulp and paper operations where the products are more standardized. Mondi plc has focus on cost competitiveness, quality and service and improving the environmental footprint, this is reflected in their investments and acquisitions. The third strategy is the focus on their own people but more importantly on the sustainability. For this, 16 commitments were set up to cover in 2020. The last strategic value driver is the partnership with customers for innovation. This is mainly an important factor to maintain success in the long-term.

Dividend policy

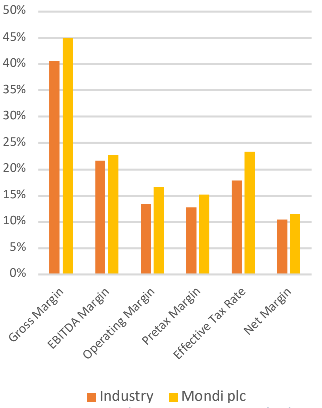
The DPS shows a stable growth since 2007, with a 12y CAGR of 23,4% till 2019 (Figure 12). The 5y CAGR is 10,6% till 2019. This is in line with their goal to sustain a long-term dividend growth. The DPS in 2019 was €0,83, 9,2% increase YoY, to be paid in May and September, respectively in the proportions of two-thirds (final divided) and one-third (interim dividend). The total cash paid was €396m for ordinary dividends, without any additional special dividend. Representing a DPR of 49%, a percentage that fluctuates over time.

Figure 10: EBITDA Margin per segment



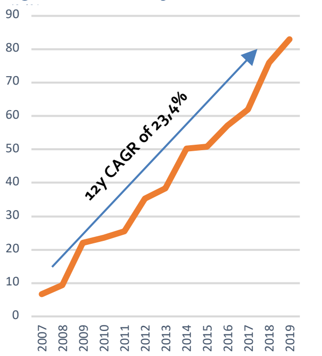
Source: Financial Statements Mondi plc

Figure 11: Profitability industry vs. Mondi plc



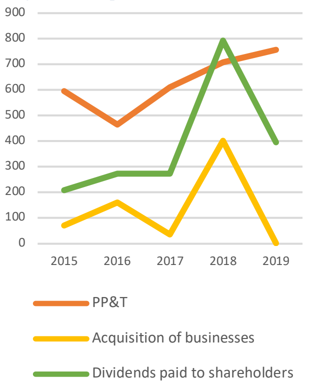
Source: Financial Statements Mondi plc, Reuters

Figure 12: Dividend per share Euro cents



Source: Financial Statements Mondi plc

Figure 13: Expenditures



Source: Financial Statements Mondi plc

Table 4: Sustainability performance

Sustainability performance		
Action Areas	**Commitment**	**Status**
Employee and contractor safety	Avoid fatalities	✗
	Prevent injuries	✗
	Reduce TRCR by 5 % compared to 2015	–
A skilled and committed workforce	Engage with people to create better workplace	✓
Fairness and diversity	Promote fair working conditions and diversity	✓
Sustainable fibre	Maintain FSC certification for owned forests	✓
	Procure at least 70% of wood from FSC or PECF certified sources	✓
Climate change	Reduce CO2-emissions from mills with 15% from 2014 to 2030.	✓
	Reduce GHG emissions from mills	✓
Constrained resources and environmental impacts	Reduce water consumption from mills with 5%, 2015 bl.	–
	Reduce waste to landfill by 7.5%	✗
	Reduce ox emissions from mills by 7.5%	✓
	Reduce effluent load by 5%	✗
Biodiversity and ecosystems	Promote ecosystem stewardship	✓
Supplier conduct and responsible procurement	Supply chain transparency + fair conditions key suppliers	✓
Relationships with communities	Enhance social value in communities	✓
Solutions that create value for customers	Sustainable responsibly produced products	✓

Source: Financial Statements Mondi plc

Table 5: Board of directors

Board of Directors	
Philip Yea	Chair
Andrew King	Group CEO
Enoch Godongwana	NED
Tanya Fratto	NED
Stephen Harris	Sr. Independent Director
Dominique Reiniche	NED
Stephen Young	NED
Jenny Hampshire	Secretary

Source: Financial Statements Mondi plc

With an in euros calculated share price of €20,95 on the 31st of December 2019 and DPS of €0,83, the dividend yield is 3,96%. The dividend pay-out is on a stable level, except for the year 2018, where it was extraordinary high. Dividends paid to shareholders and the acquisition of businesses seems to be highly correlated. Mondi plc isn't lowering the dividend payments in order to raise the CAPEX, which is a stable positive trend.

Shareholder structure

As of March 2020, the shareholders structure exists out of 487 shareholders. The biggest shareholder is Public Investment Corporation (SOC) ltd, a South African investor who covers 6,95% of the shares. The rest of the investors have outstanding shares of at most 4,19%. The major investors are from UK, the USA and South Africa. Mondi plc has a negligible amount of treasury shares in 2018, in 2019 no treasury shares are accounted. Since the transformation of Mondi ltd into Mondi plc no significance changes in the shareholders structure occurred.

Sustainability performance

The pulp and paper industry are highly affected by environmental changes and regulatory decisions. Especially in the current times where global warming is in the center of attention and has a major worldwide impact. Furthermore, sustainability in terms of commitment from your employees, customers and suppliers is a major factor to sustain long term success. In order to achieve this success and to be environmentally sustainable Mondi plc created a model which covers 10 areas. With those areas, 16 public commitments were set up to be achieved by 2020. With those 10 areas Mondi plc can more easily monitor their performance and contribute to the UN Sustainable Development Goals (SDGs). Mondi plc opt to make a real difference in the following 6 SDGs: affordable & clean energy, decent work & economic growth, responsible consumption & production, climate action, life on land and industry, innovation & infrastructure. In table 4, the status of the current commitments regarding the action areas displayed in an overview. Most of those commitments are on track or already achieved. Only the reduction of the waste to landfill and the effluent load are clearly behind.

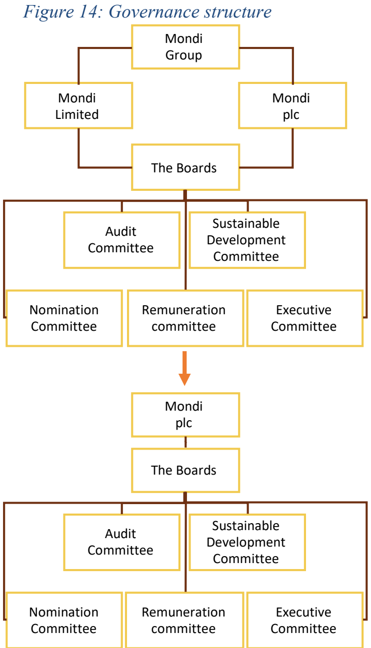
3 | Corporate governance

Since 2018, Mondi Group was a dual listed company (DLC) consisting of Mondi Limited, listed in South Africa, and Mondi plc, listed in the UK. Both entities had their own board of directors consisting out of the same individuals. This leads to an effective management of the DLC/Mondi Group. The joint chairs lead the board and brings diversity of knowledge and experience to the board. But on the 9th of May 2019, the shareholders of the Group approved the Simplification of the structure from a DLC structure into a single holding company, under Mondi plc. This transformation occurred on the 29th of July and neither changes anything in voting rights nor changes in management, operations, locations, activities or staffing levels, nor did it have any impact on the reported profits or net assets of the Group. The simplification should simplify the cash and dividend flows, increase transparency, remove the complexity associated with the previous structure and enhance strategic flexibility.

The board of Mondi plc consists out of 8 members: The Chair, 4 independent non-executive directors (NED) and1 executive directors (Table 5). This is all in line with The UK Corporate Governance Code of July 2018. 25% of the boards is female and all the NED's possess less than 9 years' experience in the company. In terms of nationalities is the boards divers, 2 members are from South African, 3 from Britain and 1 from Austria, France and the USA. Philip Yea, The chair, was appointed in April 2020. He has extensive listed company experience, both as an executive and non-executive director, across a range of sectors. The CEO, Andrew King was appointed in as group CEO in April 2020 as well. Before this he was appointed as CFO. Andrew King is an insider of Mondi plc with more than 16 years' experience through the whole strategy of Mondi plc. He defined the strategic direction and played an important role in the capital structure when Mondi plc got listed.

The renumeration of the CEO and CFO contain of a salary, benefits, pension, LTIP and Bonus Share Plan (BSP) 2019 the remuneration of the CEO contains of 40% salary income, 21% of annual bonus and 39% of long-term incentive plans (LTIP) based on performance shares. For the CFO the distribution was 46%, 18% and 36% respectively. For the year 2020 the maximum bonus opportunity in the policy will be 200% (in 2019: 175%). The LTIP maximum in the policy increases to 250% of base salary.

Figure 14: Governance structure



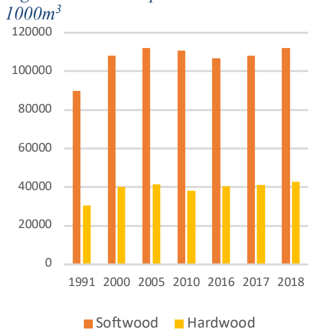
Source: Financial Statements Mondi plc

Table 6: Executive committee

Executive committee	
Andrew King	Group CEO
Markus Gärtner	CEO (CP)
Lars Mallasch	Group Technical & Sustainability Director
Michael Hakes	Group HR Director
Vivien McMenamin	CEO (South Africa)
Peter Orisich	CEO (FP and EM)
Gunilla Saltin	CEO (UFP)
Sara Sizer	Group Communication & Marketing Director

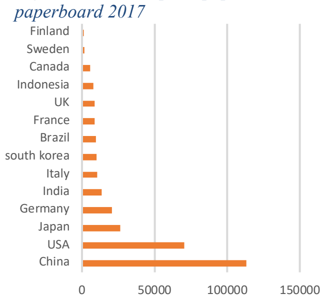
Source: Financial Statements Mondi plc

Figure 15: Consumption worldwide in 1000m³



Source: Statista

Figure 16: Consumption paper and paperboard 2017



Source: Statista

For the Bonus Share Plan, 4 metrics have targets to enable the bonus: An EBITDA of 35%, a ROCE of 35%, Safety of 10% and personal performance of 20%. Safety takes into account if the business is meeting its sustainability goal of zero harm. The personal performance is the contribution an executive director is making to the overall success of the management team.

For the LTIP, 2 metrics have targets to enable the bonus: a TSR (the total return to shareholders) of 50% relative to a peer group of competitors and a ROCE of 50%.

The contracts of both the CEO and the CFO is terminable on 12 months' notice.

The board of Mondi plc is supported by 5 committees (figure 14) knowing:

- Nominations committee (6 members), recommends on the composition of the board;
- Audit committee (3 members), in charge of the integrity and monitoring of the financial statements;
- Remuneration committee (4 members), recommends the board on the policy regarding the remuneration of senior management, renumeration of the joint chairs and packages for the executive directors and members of the senior management and implementation of employee share plans.
- Sustainable development committee (5 members), oversees the policy, targets and performance on safety, health, environment, social responsibility, sustainable developments and business ethics.
- The executive committee (8 members), oversees the day to day management of the company (table 6)

4 | Industry Overview & Competitive positioning

P&P industry has a variety of players in a sector relatively concentrated with medium and large firms around the world. Currently pulp is the most abundant raw material worldwide and it's categorized in Bleached Softwood Kraft Pulp (BSKP), Birch Hardwood Kraft Pulp (BHKP) and Bleached Chemi-Thermo Mechanical Pulp (BCTMP). BSKP has a higher quality and is mainly produced in North America and Scandinavia. BHKP has lower quality, is more cost-efficient and is mainly produced in LATAM, Asia and Iberia. Over the past 30 years, BSKP has a 2,8x higher consumption than BHKP (Figure 15). BSKP is made of long thin strong fibers, what gives the paper more quality. Paper of BSKP features the character of being flexible, high folding strength, good tensile strength and is printable which makes it perfect for text paper, industrial and technical paper manufacture. On the other hand, BHKP is made of short thick fibers and has more impurities. Paper of BHKP features the characteristic of being loose with strong absorptivity, not transparent, thick and stiff, which makes it perfect to use for manufacturing coated paper, lightweight coated paper and offset paper. In 2017, 61% of all the paper is produced for corrugated material and printing & writing paper (Figure 17). According to a data research of MarketLine, the global paper & paperboard market reached a value of €333,7 billion in 2018, with a 5y CAGR of 1,5%. In Europe this was €72,2 billion, with a 5y CAGR of 2,3%.

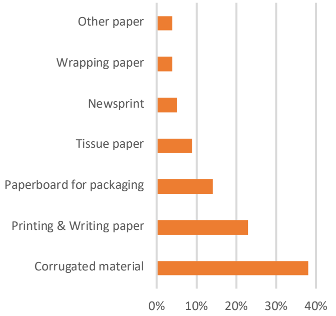
Characteristics of the industry

The P&P industry is a mature industry where growth is rather limited. Improving the internal efficiencies and extending the successful products has way more focus than reinvesting or developing. The global M&A activities in this sector continuously declined over the years. Comparing the first 3Q of 2019 with the first 3Q of 2018, the total deal value declined by 74%. The total deal volume 'only' declined by 19%. Which leads us to the conclusion that there is occurring a lack of large deals since the average deal size declined 71%.

The global P&P industry contains around 300 companies, of which 34 companies with a market cap of more than €1 billion. Mondi plc, Stora Enso Oyj, Suzano SA and UPM-Kymmene Oyj are the largest companies in terms of market cap. In Europe, 12 companies generate over €1 billion of revenues, and the 5 biggest companies have revenues of more than €10 million. Hence, major companies in the industry, as well as in Europe as globally, are quite concentrated.

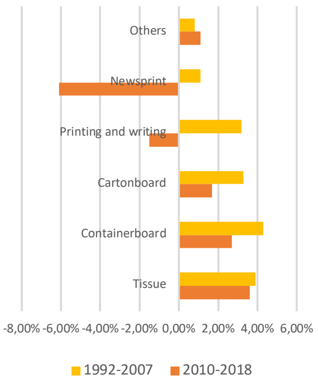
Considering this information, the market can be considered an oligopoly, with some elements of a monopolistic competition. There are a few significant players and several smaller players, the product is homogeneous and the barriers to enter the market are high, because of initial capital requirements.

Figure 17: Distribution of production by grade worldwide (2017)



Source: Statista

Figure 18: CAGR by type worldwide



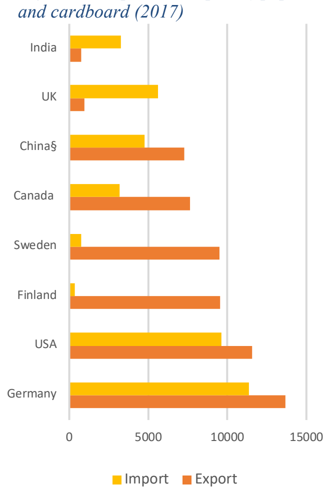
Source: Statista

Table 7: PEST

PEST
Political: High environmental regulations focused in water and air pollution.
Economic: High impact of exchange rates since the industry operates globally.
Social: Increase of population leads to increase in demand but environmental and sustainability concerns don't seem to impact the growing consumption.
Technological: Necessary to decrease the negative impact of the process/ manufacturing on the environment and increase cost efficiency.

Source: Authors' Estimates

Figure 19: Import and export of paper and cardboard (2017)



Source: Statista

Paper is a stable product. The product life cycle of paper is mature, since it is an old well-used product, thus advertisement is barely necessary and influence on the price is limited. In this industry there are two types of end consumers: companies and individuals. Individuals have no switching costs, so will not be loyal to the product. However, companies buy paper in bigger amounts which might lead to higher switching costs. The major reason for consumers not to switch supplier is the reason it is a homogeneous product. On the other hand, brands could be relevant, especially for graphic paper.

Products might be different, but all based on pulp. Those products are corrugated material, printing & writing paper, paperboard for packaging, tissue paper, newsprint and wrapping paper. The first three cover 75% of the total production worldwide (figure 17). There are not many opportunities in differentiating the products. Macro-economic factors are further exemplified through the PEST analysis (Table 7).

Demand Drivers

Structural demographic changes, environmental changes and resource scarcity are the main drivers for demand. There has been a shift in consumer choice mainly due to the increased awareness of sustainability, plastic decomposition and the shift to a digitalization era. Many multinationals aim to be plastic free and shift to paper and paperboard in the upcoming years, which eventually will lead to a higher demand in those materials. In 2017 the global consumption of paper and paperboard was 423,3 million metric tons with a 5y CAGR of 0,7%, this. This low CAGR reading is due to the negative CAGR of printing/writing paper and newsprint, which are 23% and 5% of the total paper consumption respectively. Tissue and containerboard consumption increased (figure 18). The demand for packaging solutions has increased significantly due to a globally online retail sector which is growing rapidly. In China this market grew 17,8% YoY in the first half of 2019. Moreover, in the same year the online U.S. retail sales was higher than general merchandise sales for the first time in history.
China and the USA together occupy about 60% of the global consumption (Figure 16). While China has a paper consumption per capita of 78 kg, US and Japan consumed more than 200 kg per capita. In Europe, summing up the countries with the most consumption of paper together amount to approximately 17% of the global consumption (Figure 16). The demand for paper board has contributed to an increase of 1,3% in the global paper industry generating a revenue of 333 billion. This demand allowed to reach a €11,9 billion of market revenue worldwide. According to MarketLine, the global market consumption grew with a 5y CAGR of 1.1% till 2018 and is expected to grow with a 5y CAGR of 2.2% till 2023 to 448.2 million tonnes. All these arguments are providing a rise in demand for non-wood pulp production as a fiber source for pulp.

Supply drivers

North America, Asia and Europe account for the main producers in the world where the Asian countries combined are the largest paper producers worldwide. The global production is 419,69 million metric tons. China and the USA account for already 45% of global production. China produces 99,3 million tons of pulp yearly, followed by the USA with 75 million tons. Europe represents 25% of the global production, mainly concentrated in Finland and Sweden (23 million tons) and Germany (22 million tons). Demand on wood and pulp is highly driven by the number of mills in a continent. When a mill or site is built, the supply on wood and pulp will increase significantly.

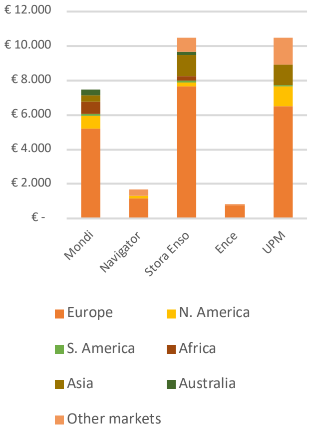
Export and import considerations

P&P are among the major export's commodities in the world. In 2018, global sales from export paper were approximately €130 billion. Germany is the export leader, followed by the USA, Finland and Sweden (Figure 19). The value of global exports accelerated by 9,7% YoY from 2017 to 2018. European countries exported the most paper, 56,20% of global exports. While Asia exported 25,1% and North America 14,7% of the worldwide paper export industry. The market for imported paper accompanied a cost total of around €160 billion. From 2017 to 2018, purchases expanded by 7,7%. Like in exports, Europe is also the major leader, given Europe accounts for 49% of global purchases. While Asia imported 23,4% and North America 16,8% of worldwide imported paper. Among these continents, the fastest-growing markets for paper since 2014 is China (up 43.9%), India (up 13.9%) and Poland (up 11.8%).

Competitive positioning

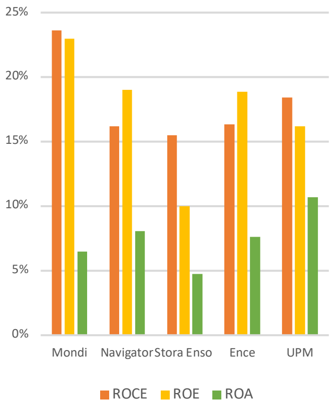
The peer companies for the research of the industry overview contain only European based companies, which operate globally. 5 peer companies were chosen, of which UPM and Stora Enso are the largest in terms of revenue, followed by Mondi plc. Navigator and Ence are almost 10 times smaller. The companies

Figure 20: Revenue per continent



Source: Financial Statements

Figure 21: Profitability

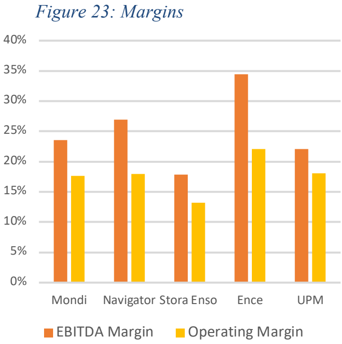


Source: Financial Statements

Figure 22: Results

Source: Financial Statements

Figure 23: Margins



Source: Financial Statements

with the smallest revenues (Figure 20) have the highest EBITDA and Operating Margins (Figure 22). This might indicate that there is no profit on scaling. Two of the five companies have greater ROCE than ROE (Figure 21). This might indicate to an intelligent use of debt. All 5 companies operate mainly in Europe (Figure 20).

Peer Companies

Navigator | Navigator consists out of four industrial units in Portugal. The whole process chain is managed, from planting trees to final distribution worldwide. The strategy is framed with only production from the Eucalyptus tree, 1,6 million tons yearly of which roughly 80% is integrated in paper production. The 4 main businesses where the Eucalyptus tree is applied, are the production of pulp, paper, tissue and energy. It is the top manufacturer of bleached eucalyptus pulp and is also responsible for 4% of Portugal's power production, of which 52% is produced from biomass. Navigator exports to 130 countries. The main markets in terms of sales are Europe (64%), Africa (12%), Middle East (10%) and North America (9%).

Stora Enso | Stora Enso is the second largest paper producer of renewable solutions based on paper in Europe with an established customer base and a wide product portfolio for print and office use in more than 30 countries. The raw materials are renewable, recyclable and fossil-free. This provides them with knowledge to address the global megatrends in bio-economics. Hence, the strategy of Stora Enso is to develop business models that can replace fossil-based and non-renewable materials to meet the demands of the circular bio-economy. Stora Enso doesn't manage their own forests. The share of sales of new products and services has risen from 1,5% in 2015 to 9% in 2018. They operate mainly in Europe. The segments are as follows: paper (29%), consumer board (25%), packaging solutions (13%), biomaterials (16%), wood products (15%). The segment wood products are different from the other peer companies.

Ence | Ence almost produced 1 million tons of pulp in 2018 and only uses eucalyptus timber acquired locally in Spain. The activity of the company involves the production and sale of pulp partly managed from their own forests (67.000 hectares), generation and co-generation of energy using renewable biomass, supply and sale of wood from the plantations. Pulp sales represents 86% of revenues, contributed through the sales of tissue paper (55%), specialty paper segment (32%), printing and writing papers (9%) and packaging segment (4%). Ence is present mainly in Europe, this market represents 91% of the revenues.

UPM-Kymmene Oyj | UPM-Kymmene Oyj is a Finish group structured into 6 separate business groups supported with forest-based bioindustry: Energy (4%), Biorefining (24%), Specialty Papers (12%), Communication Papers (40%), Plywood, Raflatac (4%). UPM has 54 production plants and is present in 46 countries with customers in 120 countries. Europe is the largest market accounting for 62% of total sales and their market capitalization was €16.485 million in 2019YE. The different strategy of UPM has to do with their operating model in which they don't follow a traditional vertically integrated operating model, as most of the companies do in this industry. Their businesses operate as separate market-facing business in various parts of the value chain, both in terms of customers and suppliers.

Porter's Five Forces (figure 24)

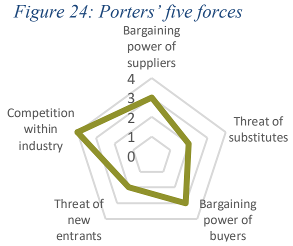
Bargaining power of suppliers (Moderate)

Two main products are used for the production of paper, energy and wood. Most of the companies integrate the production of biomass in their production process, which makes them partly self-sufficient in terms of energy. This mitigates the power of energy suppliers. Secondly, the raw material wood is a global traded commodity. A lot of suppliers are in the market and switching costs are not high, since it is publicly traded. Several companies also manage their own forests. Lastly, recycled paper leads to a lower demand for wood as a raw material. All these arguments weaken the power of suppliers, but on the other hand, since there are only two product drivers where production companies rely on, volatility in prices always affects the companies in a way.

Threat of substitutes (low/moderate)

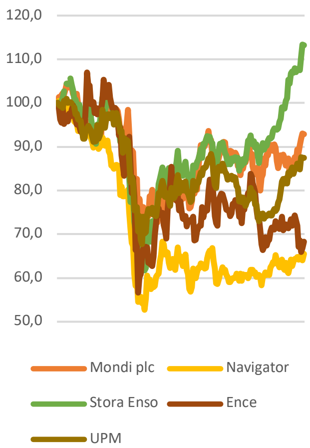
The paper consumption in Europe has stagnated, as a result of the economic slowdown and structural developments. End users swung more and more toward electronic communication. For example, according to an article on Statista, the global non-digital newspaper industry revenues declined by 3% from 2015 to 2020, while digital newspaper revenues grew by 9,8% in the same period of time. However, this lifestyle change is offset by growing demand in packaging and hygiene papers, mainly due to demographic trends in

Figure 24: Porters' five forces



Legend:
Threat to the industry
1 Insignificant
2 Low
3 Moderate
4 Significant
5 High
Source: Authors' Estimates

Figure 25: Influence COVID-19 on the stock price (basis 100)



Source: Yahoo Finance

Table 8: SWOT

SWOT analysis
Strengths
Mature industry
Skilled personnel and management
Control over the whole value chain
Stable demand
Depends on a single raw material
Opportunities
Increasing packaging market
Shorting the vertical chain
Sustainability trends
Efficiency of AI in operations
Plastic reduction
Weaknesses
Prices highly depend on the supply
Vulnerable to regulations of sustainability
Depends strongly on exchange rates
Highly rely on suppliers of wood
No extremely large stock opportunities
Threats
Increasing energy and transportation costs
New regulations on chopping wood
Digitalization
Increase in supply of paper products
Extreme environmental changes

Source: Authors' Estimates

Europe. Additionally, within the industry, BHKP is the main pulp used in paper production with 53% of the global production market. As an alternative, BSKP, recycling paper and cotton can substitute BHKP. However, the cost-efficiency of BHKP makes it more attractive for manufacturers.

Bargaining power of buyers (Moderate)

Most companies concentrated in this industry are medium to large firms, including a list of well-known global group of buyers with strong environmental policies and high standard regulations. Producers of pulp, paper and related products boast about creating and maintaining lasting relationships with their customers, but demographic changes have increased the demand which leads to higher discount expectations from the buyers' side. Buyers are able to put pressure on the pulp prices because producers cannot afford it to sit on their stocks and are in this way forced to yield to buyers' demand. Also, when a mill is shutdown a significant change in demand will occur instantly, what leads to direct changes in the pulp prices. On the other hand, different industries are shifting from plastic to paper which enlarges the type of buyers, this eventually lowers the bargaining power of buyers. Furthermore, because of the high capital entry costs, buyers are not able to start manufacturing the needed paper themselves.

Threat of new entrants (Low)

P&P industry participants benefits from a brand recognition build and maintained throughout time; high capital expenditures comprise the major expenditures component that hinder the possibility to compete as a new member. Those expenditures are mainly in fixed assets and inventories. As an example, 68% of the assets of Mondi consist of inventories and fixed assets in 2019YE. The value of those two elements together is 79% of the groups' revenue. In order to harvest and profit from this natural raw material, companies must fulfil high environmental requirements to acquire the certifications, restricting the prospect for additional actors.

Competition within industry (Significant)

This industry can be considered as a highly competitive oligopoly. Since the companies cannot supply a unique or differentiated product, naturally a price war will be established. Companies are forced to develop highly efficient processes to decrease the company's operations costs. The supply and demand over the years is in equilibrium. If additional plants get build, prices of paper will decrease. This industry is very sensitive in that aspect. Furthermore, barriers to exit are high, which means that companies are willing to ask low prices to stay in the industry.

Impact of coronavirus and its longer term effects

The coronavirus has an incredible impact on the worldwide economy, as well as on the paper and pulp industry. The 4 peer companies and Mondi plc all experienced a significant decrease in the value of the stock from the period of January 2020 to 16th of March 2020. The biggest losses were more than 40% over 2 months (Figure 25). Obviously, this have a massive impact on the valuation. This impact was taken into account in the forecast of the financial statements of Mondi plc. To give this forecast more power, an article of McKinsey (April 15, 2020) was reviewed about the impact of COVID-19 on the packaging industry. 5 elements were pointed out.

Sustainability | This always has been a major element in this industry. However, due to COVID-19 the focus shifted a bit from sustainability to hygiene concerns. Nonetheless, when COVID-19 has passed sustainability will remain a key industry-shaping trend.

E-commerce demands | This pandemic provided drastic changes on the consumer habits. During COVID-19 a rapidly increasing home-delivery services and e-commerce shipments occurred. This is expected to remain high post COVID-19. Especially in China this event is already playing.

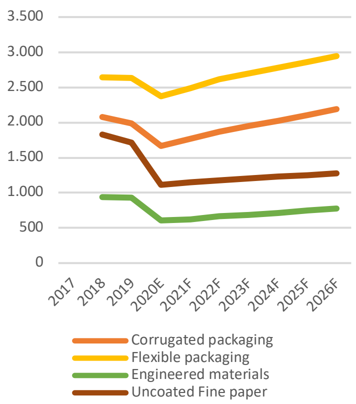
Shifting consumer preferences | Consumers behavior shifted in terms of the decision of category and channels. Consumer are more aiming for essentials and are returning to more well-known brands. Next to this, consumers were forced to quickly search for new channels, with an enormous shift to online shopping.

FMCG and more regional supply needs | Consumers are expected to have less income and are trying reducing costs already. This has impact on the customers of packaging companies. A recent global survey shows that 27% of the respondents (customers) are expected to reduce packaging budgets by 4 to 10 percent. 24% is even expecting to reduce it by more than 11%. To keep plants cost competitive, packaging companies need to reduce costs of their plants. Customers are also considering relying on a more regional supply.

Digitization of packaging | Packaging companies are expected digitize more parts of the value chain, in order to reduce supply-chain and production risk. Furthermore, automation, AI and remote support are expected to grow during the upcoming years.

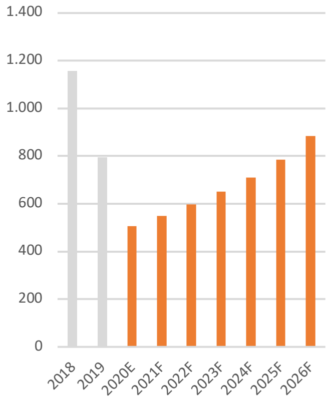
5 | Investment Summary

Figure 26: Revenue different segments



Source: Authors' Estimates

Figure 27: Investing activities



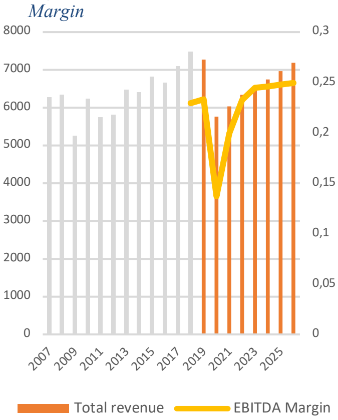
Source: Authors' Estimates

Table 9: Range share price

Method	Valuation	Range
DCF (FCFF)	20,79	
DCF (FCFE)	21,40	21,40
APV	19,97	
DDM	16,52	16,52
Multiples	30,06	

Source: Authors' Estimates

Figure 28: Total revenue to EBITDA Margin



Source: Authors' Estimates

The investment recommendation for Mondi plc is to HOLD, with a 2021YE target price of €20,0/sh, which implies an upside potential of 13,4% to Mondi plc's stock price of €17,64/sh as of the 6th of November 2020. The mispricing of the current stock price is a result of the uncertainties around the COVID-19 virus and the uncertain vision of investors. Next to this, the current stock price made vast jump and falls in the last months from March to the end of October. However, the long-term forecast shows significant changes in the focus of Mondi plc. Upcoming structural changes in the business of Mondi plc are the basis of this valuation.

Prices of commodities | This industry, and so does Mondi plc, highly depend on the pulp and paper prices. As shown in figure 8, in the whole year 2019 the prices of pulp and paper went down extremely. Since the beginning of 2020 the prices seems to be quite stable over time. If demand stays on a lower level, prices of pulp and paper are expected to stay on a lower level as well. Since Mondi plc is vertical integrated, manages their own forests and sells pulp as well, this risk is reasonably mitigated.

COVID-19, shift in preferences of consumer and structural changes at Mondi plc | Mondi plc operates in 4 different segments. For the investment it is interesting to understand which segments attracts the greatest focus and what the developments will be in the upcoming years. These developments might have a great impact on the investment. COVID-19 will shift the preferences of the consumer (i.e. staying more at home) and eventually will be followed by an adjustment of the business focus of Mondi plc. Corrugated packaging will take a larger part of the groups' revenue, and the opposite will happen for Uncoated Fine Paper. This new behavior of the consumer and the adjustments in business units at Mondi plc are considered as not temporary. These changes have a structural impact on Mondi plc (figure 26).
Since the economy is changing and Mondi plc respond to that, Mondi plc might sell some of their business units, plants or sites. This eventually would have a downside effect on the target price of Mondi plc. However, since (de)acquisitions or mergers can't be expected, these kinds of events are not taken into account in the current target price. For the investing activities a stable growth after a significant drop in 2020 is expected (figure 27)

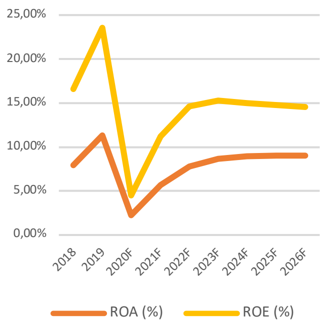
Valuation methods | To obtain the target price of Mondi plc, the Enterprise Discounted Cash Flow model (DCF) based on the weighted average cost of capital (WACC) was used through the FCFE and the FCFF. Next to this method the Adjusted Present Value (APV) was used. To complement these methods, a relative valuation has been done. This relative valuation was done by using an average of the multiples. As last the dividend discount model was used, however less reliable than the other ones.

6 | Valuation

Valuation of Mondi plc is done by different valuations methods, that provide a range of different prices per share. The Discounted Cash Flow Method (DCF), Adjusted Present Value Method (APV) and Relative valuation (Multiples) are therefore used. Unfortunately, due to COVID-19 the Dividend Discount Model is harder to interpret because of the more unstable payout of dividends. The range in the share price in the different valuation models, where DDM is excluded, is valued at €16,52 to €21,40 (table 9)

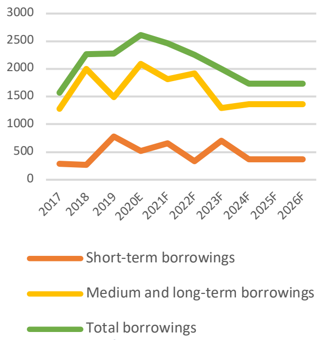
An anticipation on COVID-19 to keep the profitability level stable | Due to the COVID-19, revenue and expenses have more impact on the valuation than during regular times. During the financial crisis, revenue went down with by 19%, see figure 28. The current crisis is expected to have more (structural) impact on the revenue. Since it insufficient to keep the plants operating at lower capacity, the volumes will maintain the same, which eventually will lead to lower P&P prices. On the other hand, if players exit the market, some plants might be shut down. However, the more considerable companies are not expected to exit the market. Total revenue of Mondi plc goes down by 21% in 2020 of which UFP and EM got affected the most (-35%), followed by CP (-16%) and FP (-10%) respectively. Only CP and FP are expected to recover to the current level within 4 years. The decrease in the different segments are highly based on the half year results report 2020 of Mondi plc. At a mature company and industry, costs are managed efficiently. However, Mondi plc never forecasted a pandemic, so are obviously not well prepared for this loss in revenue. The decreasing costs will show delayed when revenue decreases due to COVID-19. All costs increase a couple of percentage points, relatively to total revenue, even the variable costs, but will be back on level the year after. This all is visible in

Figure 29: Evolution ROE and ROA



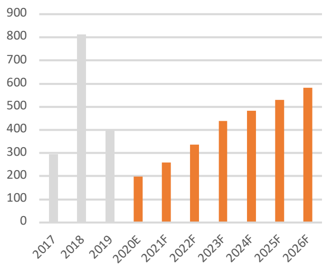
Source: Authors' Estimates

Figure 30: Evolution of debt (millions)



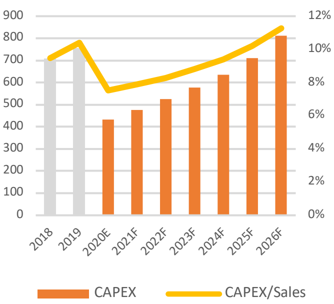
Source: Authors' Estimates

Figure 31: Evolution of dividends



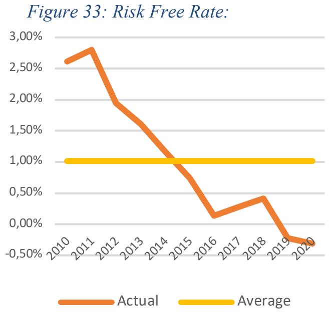
Source: Authors' Estimates

Figure 32: CAPEX to Sales



Source: Authors' Estimates

Figure 33: Risk Free Rate:



Source: Reuters

figure 28 where the EBITDA Margin from 2018 to 2026 is set out. The EBITDA Margin drops heavily, however, the years after with still lower revenue the EBITDA Margin seems to be back on level again. This due to experience in the industry and the efficient management of the vertical integrated cycle in the company. Obviously, the COVID-19 outbreak has a huge impact on the profitability of Mondi plc. The EBITDA Margin used to be approximately 23%. This value will down 9% in 2020 to 14% and will reach the 23% mark again in 2022 and remains stable the years after. ROA is 11% in 2019 and it is assumed quite safely that Mondi plc will not reach this value again before 2026. This is the same for the ROE which accounted for 24% in 2019, where this value also was quite a high reading compared to the year before (17%). See figure 29 for the expected evolution of ROE and ROA from 2018 to 2026.

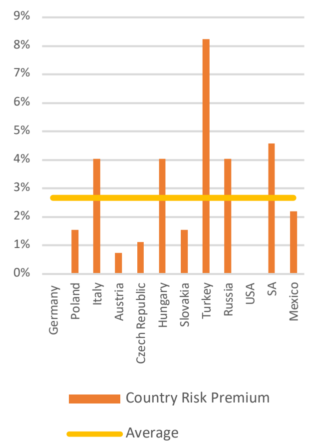
Cash problems and an overload in assets | As mentioned in the previous subparagraph; plants and sites cannot be closed or shut down easily, it is unprofitable to lower the production. This leads to a decrease in price and an increase in inventories. Felling costs are plussed in inventories. The increase in inventories is 24% YoY from 2019 to 2020, this is expected to decrease with a 4y CAGR of 3,6% to 2026. Inventories always have been on a stable level of 12% of the assets. However, from 2020 until 2022 the inventories are expected to be 1% and 2% higher and will be back on a regular level from 2023 and onwards. Furthermore, the fact that customers might be slow paying their invoices, the receivables still decreases due to lower sales. This issue is the same for payables. However, the amount of receivables and payables compared to revenue will increase due to cash problems. Receivables to revenue grows from 16% to 18% in 2020, with 17% in 2026. Payables will be affected in the same way.
The impressive growth of total non-current assets (2Y CAGR of 9,3%) of the last years will stop in 2020 and is about to be quite stable over the 2 years after 2020. A more rapid growth afterwards will occur, this due to a significant growth in Forestry Assets. However, it will still only increases with a 6y CAGR of 2,4%. The risks of COVID-19 and the recently heavy investments in PP&E will make the PP&E barely grow.

Stable level of Cash and Cash Equivalents by raising debt and adjusted dividends | To obtain a reliable amount of debt, two restrictions were taken into account. The first one is to maintain a debt to equity ratio between 0,30 and 0,55, the second restriction is to keep the amount of cash on a stable level not higher than 2%. Despite the fact that Mondi plc always paid dividends, this exceptional situation makes them distribute less dividends. Additional funded debt will not be used to pay dividends. A decrease of 50% in dividends payments occur in 2020 and the payment of dividend should be back on level only in 2024. The payout ratio stays above the 50% from 2020 onwards. The amount of debt grew significant till 2020 and is reduced in the years in a stable way. Before the begin of the pandemic, Mondi plc already raised debt due to different acquisitions and shutdowns of plants and sites.

Stable D&A and only necessary CAPEX | D&A is the sum of 10%-change in PP&E and 30% of intangibles assets based on historical data of this ratio. Goodwill is considered to be stable, since this can't be forecasted well. D&A will barely get affected by COVID-19. After vast investments in the past 2 years, and reducing a significant amount of long-term debt, it looks like that no major CAPEX are planned, this will be eventually in the years after. Due to COVID-19, Mondi plc will focus on investments in maintenance of the current plants and sites and will cut additional CAPEX. As shown in figure 27, investing activities will drop 36% in 2020, followed by a 6y CAGR of 9% to 2026. CAPEX to sales percentage follows the shape of the value of CAPEX. 2019 and 2026 have approximately the same CAPEX, around 10% of total revenue.

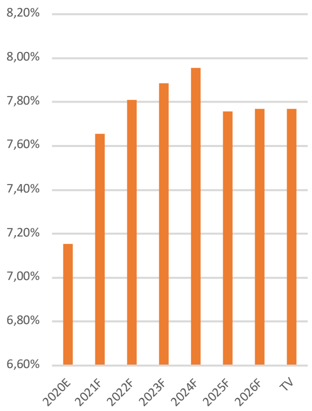
Breakdown of the WACC | Since Mondi plc is predominantly represented in Europe, of which strongly represented in Germany, the Risk-Free Rate is considered as the normalized return on a 10y German bond, 1,01% (figure 33). Furthermore, the country risk premium (2,67%) is calculated as an average of European countries, American countries and South Africa where Mondi plc operates. Not all countries are included, only the countries Mondi plc has at least three or more sites or plants established, ignoring the type of segment (figure 34). For the Market Risk Premium (6,50%), a source of KPMG of 30th of June 2020 is used in which the COVID-19 outbreak is included. An Unlevered Beta of 0,68 is used, this value is the average of the peers from InFrontAnalytics. As a benchmark data from Damodaran and monthly Beta unlevered from Reuters are presented (table 10). In order to reach a reliable Cost of Debt, for each year the average was taken of the interest to debt ratio and the Synthetic ratings of Damodaran (Synthetic Rating is 2,27% for every year), where leases are included as well. Input for the Synthetic Ratings of Damodaran shows an interest coverage ratio of 10,35 which makes the estimated Bond Rating for a large manufacturing firm Aaa/AAA. This rating corresponds with an estimated default spread rate of 1,26%. Adding the Risk-Free Rate results in

Figure 34: Country Risk Premium



Source: Financial Statements Mondi plc, Damodaran, Authors' Estimates

Figure 35: WACC:



Source: Authors' Estimates

Table 10 Unlevered Beta:

Unlevered Beta	Beta
Average of peers	0,68
Monthly Beta unlevered 5y	0,74
Damodaran	0,87

Source: Reuters, Damodaran, InForntAnalytiocs

Table 11: Quality measure peer companies

Quality	p1	p2	p3	p4
Stora Enso				
DS Smith				
Ence				
Sappi				
UPM				
Suzano				
Altri				
Smurfit Kappa				

Source: Authors' Estimates

a cost of debt, based on synthetic rating of Damodaran, of 2,27%. This data results in a WACC in the terminal value of 7,77%, figure 35.

Growth Rate based on the Reinvestment rate | Two different models were used, the Stable Growth Model based on the Reinvestment Rate and one based on the Dividend Sustainable Growth Rate. However, the latter is less reliable due to the unstable dividend payout in this year (g = 5,7%). Based on the Reinvestment Rate and taking all the years into account until 2026, a constant growth rate of 1,3% is established for the perpetual period.

Choosing the peer companies | Four parameters (p1 till p4) were taken into account to identify the right peer companies. Is the amount of revenue comparable (p1)? Is it geographical comparable (p2)? Is the process of the company comparable, is it vertical integrated (p3)? Are the segments comparable (p4)?
This method is used to complement the DCF valuation. The most important multiples are EV/Sales, EV/EBITDA, EV/EBIT, P/Sales, P/Earnings and P/Book.

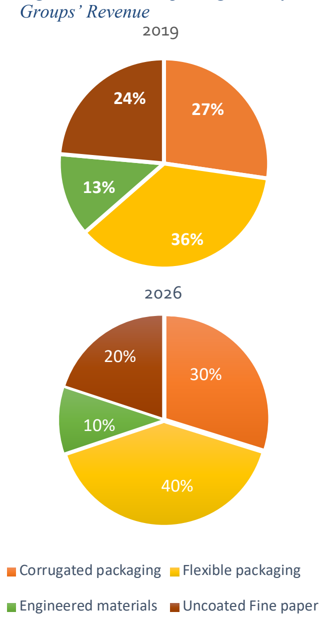
8 Peer companies | Table 11 presents the quality of comparing the following companies. Only the bold marked companies were used in the multiples.
Stora Enso| The sa les of Stora Enso are approximately 25% higher than the sales of Mondi plc. More than 75% of the operations of Stora Enso are in Europe. The different segments are Consumer Board, Packaging Solutions, Biomaterials, Wood Products and Paper. From managing their own forests to selling packaging solutions, they show a comparable supply chain.
DS Smith | The sales of DS Smith are approximately the same. The difference is only 7% lower. More than 90% of the operations are in Europe. The different segments are Packaging, Paper and Recycling of which packaging is the strongest segment. DS Smith doesn't manage their own trees or manufactures wood.
Ence | The sales of Ence account for only 10% of the sales of Mondi plc. Ence is mainly present in Europe and managed their own forests. The segments they operate in are Pulp sales, sale of tissue paper, specialty paper, printing and writing papers and packaging.
Sappi | The sales of Sappi are approximately 31% less than the sales of Mondi plc. 50% of the production of Sappi is executed in Europe, 25% in Southern Africa and 25% in South America as well. Sappi manages their own forest and provide their customers of packaging and specialty papers, Dissolving Pulp and Graphic Papers.
UPM | The sales of UPM are 39% higher than that of Mondi plc. They manage their own sustainable forest. The sales are mainly done in Europe (62%), next to this 19% of the sales are done in Asia, 13% in North America and 6% in the rest of the world. UPM has a wide range of different business i.e.: Biorefining, paper and labeling material.
Suzano | Only 64% of the sales Mondi plc is achieved by Suzano. They manage their own sustainable forest, but the products from these forests are different and smaller. The products contain pulp (has by far the most focus), paper, Hygiene product like toilet paper, Lignin and Eucafluff (a material for diapers and used in hospitals). The company is operating worldwide of which mostly in Brazil and after in Europe.
Altri |The sales of Altri are 90% lower than the sales of Mondi plc. They are based in Portugal and their biggest market is Europe. The products are limited, since they only focus on Eucalyptus Pulp. aside to the Eucalyptus Pulp they also develop renewable energy from their forests.
Smurfit Kappa | The sales of Smurfit Kappa are quite comparable; it differs 20% from the sales of Mondi plc. The operations are in Europe and Latin America. From managing their own forests to providing packaging solutions, they show a similar supply chain. The business segments are Containerboard, Other paper and board, Corrugated and other paper-based packaging.

7 | Financial Analysis

A financial analysis during this period, in the middle of an economic crisis, makes comparing more complicated and at the same time more interesting. The difference between the 2y CAGR from 2017 to 2019, the YoY change from 2019 to 2020 and the 6y CAGR from 2020 to 2026 is extreme in almost every single item on the balance sheet and the income statement.

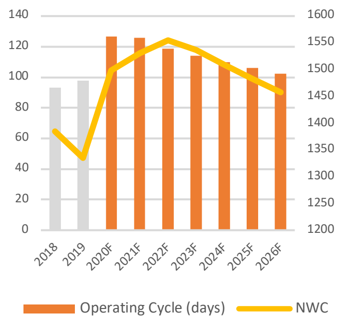
Shift in the source where the cash comes from | Revenue depends on the sales volumes, price of pulp and plant performances (maintenance shuts). As a benchmark, after the financial crisis the revenue of Mondi plc decreased by 19% and went back on level with a 4y CAGR of 5,2% (figure 28). After a downward trend of

Figure 36: Revenue per segments of Groups' Revenue



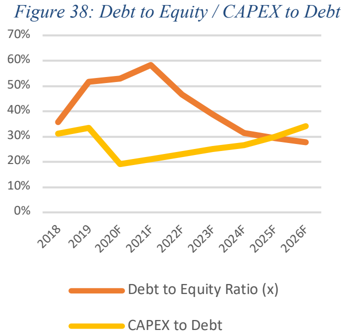
Source: Authors' Estimates

Figure 37: Operating Cycle and NWC



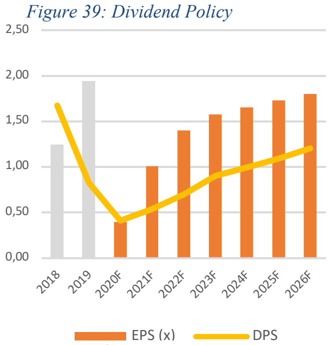
Source: Authors' Estimates

Figure 38: Debt to Equity / CAPEX to Debt



Source: Authors' Estimates

Figure 39: Dividend Policy



Source: Authors' Estimates

33% in pulp prices in 2019, this price is expected to remain at this level for upcoming years. However, from 2020 this low price of pulp is complemented with lower sales volumes which negatively impacts the group revenue. Because of COVID-19, revenue decreases by 21% in 2020, with a CAGR of 3,8% afterwards until 2026, still a lower CAGR compared to the recovery after the financial crisis.

More specific on business segments, a shift in business focus will occur. **Corrugated packaging** should decrease 16% YoY in 2020, and cover 29% of the groups' revenue, an increase of 2% compared to 2019. COVID-19 let the volumes of corrugated packaging grow. The acquisition of Powerflute in Finland supports this occassion, the maintenance on the plant and sites will finish while the containerboard prices already experienced a significant drop in 2019. **Flexible packaging** should decrease 10% YoY in 2020, due to lower volumes, and covers 41% of the groups' revenue, an increase of 5%. In 2019 kraft paper prices were volatile, volumes of flexible packaging declined, average selling prices increased. **Engineered materials** is expected to decrease with 35% YoY in 2020, and covers 11% of the groups' revenue, a decrease of 2%. This business segment steadily decreased with a 5y CAGR of 2,32% towards 2019. In 2026 the revenue is expected to be 17% lower than the revenues in 2019. **Uncoated Fine Paper** is expected to decrease 35% YoY in 2020 as well, due to lower volumes, and covers 19% of the groups' revenue, a decrease of 5%. While overall demand already declined, in Europe this decline in demand was 5% YoY in 2019. Selling prices went down after being flat for a half a year. Nonetheless the fact that a plant will reopen again after a maintenance shut, the demand is expected to be never the same as it was, a structural lower volume to be expected.

As you can see in figure 36, COVID-19 is having a structural impact on the revenue of the different segments. EM and UFP decreased, and CP and FP increased.

A mature company can anticipate quickly | Materials, energy and consumables used (currently 47% of revenue) are expected to grow 2% to 49% of total revenues in 2020. However, due to innovative solutions in the use of energy, expectations are that these costs will slightly decrease over the years on a minimum basis. In 2026 it is expected to be 45% of revenues. Variable expenses in 2019 at 8% of revenues and at 11% in 2020, need more time to adjust to the lower revenues, this will take approximately 3 years. Personnel costs will, in relation to revenues, grow with 3% YoY to 17% in 2020. However, these costs will be stable at 14% for all the years after.

To ensure profitability, this mature company will anticipate fast by reducing costs quickly. EBITDA margin used to be approximately at 23%. After a drop to 14% in 2020, the EBITDA margin will be back on level by 2022 based on lower revenue (figure 28). So are the gross profit margin (46%), EBIT margin (17%), net profit margin (11%) and ROA (8%) all back on approximately the same level in 2022 again.

Efficiency problems leads to higher NWC | The operating cycle is affected heavily. The collection period, Days in Inventory and the Payables period will grow by 17%, 47% and 32% respectively. Summed up, the operating cycle increases from 98 days to 127 days in 2 years, an increase of 30%. At the end 2026 the operating cycle is forecasted on 102 days. Now that the collection period has increased, more working capital is necessary as well. NWC increases with 17% until 2022YE, followed by a 4y decrease of 1,6% CAGR. Figure 37 shows the pattern of the Operating Cycle in comparison to the NWC.

Raise debt, decrease CAPEX | CAPEX decreases 43% YoY in 2020, followed by a 6y CAGR of 10%. Medium- and long-term borrowings to Total Assets increases from 18% to 24% in 2020. Short-term borrowings fluctuate between 4% and 8% over the upcoming years. All the raised loans are not to finance any CAPEX, as shown in Figure 38 CAPEX to debt dropped significantly. The additional debt is to reflect the impact of COVID-19 and maintain a cash level up to 2%. Due to COVID-19 the debt to equity ratio is increasing till 2022, this is expected to decrease the years after, see Figure 38.

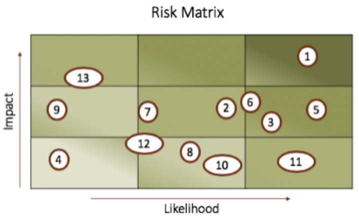
Dividend policy not stable anymore | Besides 2018, where the dividend pay-out was extraordinarily high, Mondi plc always paid a stable dividend. However, due to COVID-19 Mondi plc needs to cut dividends. In 2024 dividend payments will be to 2019 levels again. Therefore, the Dividend Discount Model cannot be used. In the forecast, a stable increase in dividends is expected.

8 | Investment Risks

Mondi plc is exposed to different types of risk: Market risks, Operational risks, Financial risks, Regulatory Issues and legal proceedings.

Figure 40: Risk Matrix

Strategic	
1	Industry productive capacity
2	Product substitution
3	Competition and market demand
Financial	
4	Capital structure
5	Currency risk
6	Tax risk
Operational	
7	Cost and availability of raw materials
8	Energy security and related input costs
9	Environmental impact
Compliance	
10	Information technology risk
11	Legislation
12	Ethics
13	Natural disasters



Source: Authors' Estimates

Table 12: Blue- and Grey-sky sencario

Blue- and grey-sky scenario		
Scenario	Price	Potential
Current	17,64	0%
Valuated	20,00	13%
Grey	16,23	-8%
Blue	23,12	31%

Source: Authors' Estimates

Table 13: WACC sensitivity analysis

	Price target	Downside /upside	
4,00%	55,04	212,02%	Buy
5,00%	39,29	122,73%	Buy
6,00%	30,16	70,98%	Buy
7,00%	24,2	37,19%	Buy
8,00%	19,99	13,32%	Hold
9,00%	16,87	-4,37%	Sell
10,00%	14,45	-18,08%	Sell
11,00%	12,53	-28,97%	Sell

Source: Authors' Estimates

Table 14: Growth rate sensitivity analysis

G	Price target	Downside/ upside	
0,30%	17,76	0,68%	Hold
0,80%	18,99	7,65%	Hold
1,30%	20	13,38%	Buy
1,80%	22,03	24,89%	Buy
2,30%	23,95	35,77%	Buy

Source: Authors' Estimates

Market risks

Industry productive capacity

New plants have major impact on the supply/demand balance, which influences the market price. If capacity increases faster than the market growth, lower prices will be established. To mitigate this risk, it is essential to monitor the industries developments which helps evaluating the market and makes a company more prepared for changes in the industry's productive capacity.

Product Substitution

The negative environmental impact of plastic leads to new environmental considerations. This is seen in changes in legislation and the altering consumers' attitude. Possible substitutes are electronic substitution, recycled materials and flexible packaging. By monitoring the trends of new developments and innovations, and also the legislative developments, to mitigate the risk companies might take market shares in substitutes or develop new products which are sustainable and competitive.

Competition and market demand

The current competition could develop new unknown products or significantly reduce their operational costs by developing a highly efficient operational processes. The impact is medium high, since those converting processes are time consuming. This gives the market the opportunity to anticipate quickly. To approach this risk and try to mitigate it, companies should keep investing in their own R&D.

Operational risks

Cost and availability of raw materials

The wood and pulp prices are based on the availability of wood. Climate change, increased disease outbreaks and the increase of wood as biofuel lower the availability of wood. Countries with weaker governance may face environmental risks related to pollution and poor safety. By diversifying the regions of the suppliers and maintaining own forests mitigates the potential impacts of this risk.

Energy security and related input costs

This business is energy-intensive. Part of the energy is obtained from gas, oil and coal. Relying on global supply chains makes Mondi plc face physical and regulatory risks related to climate change. This risk can be reduced by being self-sufficient. Next to this is monitoring and managing the right amount of energy, a key element to reduce this risk. Being up to date about the current energy market and maintaining good contact with local energy regulators mitigates this risk.

Financial risks

Currency risk

Mondi plc operates in different currencies. Appreciation in a certain currency can lower the profitability. However, this negative effect is reversely positive. Obtaining hedge positions is the best way to reduce this risk. Different positions Mondi plc can obtain are positions in future or option contracts to fix prices.

Tax risk

When operating in different countries with different tax systems. A way to reduce this risk is continuously being up to date about tax legislation. The worldwide businesses could avoid taxes by selling products in a certain country and transport it to another, if taxes on the profits are lower. External advisory a good way to have a better understanding of the tax risk.

Social and Regulatory Issues

Environmental impact

This business is highly water, energy and carbon intensive. Different regulations and laws have huge impact on the operations. The operations have a negative impact on the biodiversity and ecosystems. This can all be controlled by monitoring and knowledge of laws and regulations and effective responses.

Compliance

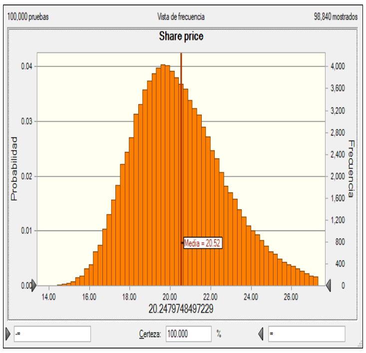
Technology risk, ethics and legislation are risks with small impact. Monitoring the developments in these different fields provide companies of the right information to well-understand those fields and hence mitigate the risk. Based on this information decisions can be made well.

Table 15: COVID-19 impact and recovery analysis

Drop revenue first year \ Revenue 5y CAGR till 2026	1%	2%	3%	4%	5%
15%	16	19	22	25	29
18%	13	16	19	22	25
21%	10	13	16	19	22
24%	7	10	13	16	19
27%	4	7	9	12	15

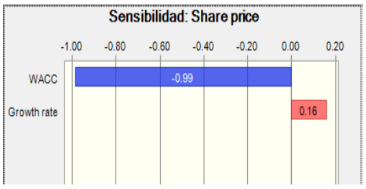
Source: Authors' Estimates

Figure 41: Monte Carlo Simulation



Source: Authors' Estimates

Figure 42: Monte Carlo Simulation Sensitivity WACC and Growth Rate



Source: Authors' Estimates

The blue- and the grey-sky scenarios (table 12)

Blue-sky scenario

The drop in 2020 is quite safely assumable, so this won't be adjusted in the blue-sky scenario. However, the recovery afterwards could eventually happen more rapidly. If all other variables stay the same and the groups' revenue grows with a 6y CAGR of 4,5% to 2026 (instead of 3,8%), the share price will reach the €23,12/sh. This is considered the average of the DCF and APV method. This means an upside potential of 31% to the current share price.

Grey-sky scenario

In the grey-sky scenario, the recovering of revenue will happen more slowly than the valuated scenario. If all other variables stay the same and the groups' revenue grows with a 6Y CAGR of 3% to 2026 (instead of 3,8%), the share price will be €16,23/sh. Again, this is considered the average of the DCF and APV method. This means a downside potential of 8% to the current share price.

Sensitivity analysis

For the sensitivity analysis the sensitivity to the WACC (Table 13), the Growth Rate (Table 14) and the impact and recovery of the COVID-19 (table 15) has been developed. In these analyses, all other parameters and variables are kept the same. At least a WACC of 8% is necessary to maintain a HOLD recommendation. The growth grade may be quite low and still maintains a HOLD recommendation. Mondi plc has a low chance of maintaining a HOLD recommendation if the revenue drops with more than 21%. However, we might expect a higher CAGR when a heavier drop in revenue occurs.

Monte Carlo Simulation

The Monte Carlo Simulation is based on 3 different variables: the WACC, the growth rate and the CAPEX over the years. The full range of the simulation is from €13,56 to €41,94. The base scenario is €20,25. After 100.000 tests the standard error of the average is €0,01. The standard deviation is €2,42 with a variance of €5,85. As you can see there is a small negative skew. The kurtosis is €4,30.

Awareness investors

The crisis we are currently in is highly unpredictable. For example, while unemployment rates were rising due to COVID-19 the stock prices were heavily rising as well, an unpredictable event happening in the United States. This valuation and recommendation are based on structural changes in this industry. However, in case these structural changes do not occur, the recommendation might be different.

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Appendices

Appendix 1: Statement of Financial Position

Balance Sheet (€ million)

	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F
ASSETS										
Property, plant and equipment	4.128	4.340	4.800	4.805	4.800	4.845	4.927	5.041	5.222	5.484
Goodwill	698	942	948	948	948	948	948	948	948	948
Intangible assets	111	91	81	82	83	83	84	85	86	87
Forestry assets	325	340	411	444	480	521	566	618	675	739
Investment in equity accounted investees	3	9	14	14	14	14	14	14	14	14
Financial instruments	23	21	31	31	31	31	31	31	31	31
Deferred tax assets	26	49	49	49	49	49	49	49	49	49
Net retirement benefit asset	7	6	17	17	17	17	17	17	17	17
Total non-current assets	**5.321**	**5.798**	**6.351**	**6.389**	**6.421**	**6.508**	**6.637**	**6.803**	**7.042**	**7.369**
Inventories	867	968	984	1.220	1.166	1.110	1.077	1.044	1.012	982
Trade and other receivables	1.106	1.190	1.111	1.061	1.097	1.137	1.162	1.187	1.213	1.240
Cash and cash equivalents	38	52	74	5	1	36	38	2	174	246
Current tax assets	29	22	15	15	15	15	15	15	15	15
Assets held for sale	1	3	0	0	0	0	0	0	0	0
financial instruments	14	9	5	7	7	7	7	7	7	7
Total current assets	**2.055**	**2.244**	**2.189**	**2.308**	**2.286**	**2.305**	**2.298**	**2.256**	**2.421**	**2.489**
Total assets	**7.376**	**8.042**	**8.540**	**8.697**	**8.707**	**8.813**	**8.935**	**9.058**	**9.463**	**9.858**
Balance check	0	0	0	0	0	0	0	0	0	0
LIABILITIES										
Short-term borrowings	291	268	780	521	655	335	702	363	363	363
Trade and other payables	1.074	1.186	1.143	1053	1021	1002	1026	1060	1101	1146
Current tax liabilities	126	140	101	101	101	101	101	101	101	101
Provisions	50	61	47	47	47	47	47	47	47	47
Financial instrument	8	13	9	9	9	9	9	9	9	9
Total current liabilities	**1.549**	**1.668**	**2.080**	**1731**	**1833**	**1494**	**1885**	**1580**	**1621**	**1666**
Medium and long-term borrowings	1.280	2.002	1.496	2091	1813	1914	1299	1368	1368	1368
Net retirement benefits liability	232	234	225	226	227	228	230	231	232	233
Deferred tax liabilities	248	253	301	301	301	301	301	301	301	301
Provisions	41	46	37	36	36	35	34	33	33	32
Other non-current liabilities	19	14	16	16	16	16	16	16	16	16
Total non-current liabilities	**1.820**	**2.549**	**2.075**	**2671**	**2393**	**2494**	**1879**	**1949**	**1950**	**1950**
Total liabilities	**3.369**	**4.217**	**4.155**	**4402**	**4225**	**3988**	**3764**	**3530**	**3571**	**3616**
EQUITY										
Share capital and stated capital	542	542	97	97	97	97	97	97	97	97
Retained earnings	3.541	3.589	3.963	4148	4320	4651	4977	5314	5657	5989
Other reserves and treasury shares	-400	-620	-20	-304	-306	-322	-330	-339	-349	-360
Total attributable to shareholders	**3.683**	**3.485**	**4.015**	**3941**	**4112**	**4426**	**4744**	**5072**	**5406**	**5726**
Non-conttrolling interests in equity	340	340	370	355	370	398	427	456	487	515
Total equity	**3.825**	**3.825**	**4.385**	**4295**	**4482**	**4824**	**5171**	**5529**	**5892**	**6242**
Total equity and liabilities	**7.376**	**8.042**	**8.540**	**8697**	**8707**	**8813**	**8935**	**9058**	**9463**	**9858**

Appendix 2: Income Statement

Income statement (€ million)

	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F
Group revenue	**7.096**	**7.481**	**7.268**	**5.760**	**6.031**	**6.333**	**6.537**	**6.747**	**6.965**	**7.190**
Corrugated packaging		*2.074*	*1.984*	*1.667*	*1.767*	*1.873*	*1.947*	*2.025*	*2.106*	*2.191*
Flexible packaging		*2.639*	*2.637*	*2.373*	*2.492*	*2.617*	*2.695*	*2.776*	*2.859*	*2.945*
Engineered materials		*939*	*934*	*607*	*625*	*663*	*689*	*717*	*746*	*775*
Uncoated Fine paper		*1.829*	*1.713*	*1.113*	*1.147*	*1.181*	*1.205*	*1.229*	*1.254*	*1.279*
Materials, energy and consumables used	-3.452	-3.526	-3.449	-2.823	-2.834	-2.913	-2.942	-3.036	-3.134	-3.235
Variable selling expenses	-525	-534	-549	*-634*	*-603*	*-507*	*-523*	*-540*	*-557*	*-575*
Gross margin	**3.119**	**3.421**	**3.270**	**2.304**	**2.593**	**2.913**	**3.072**	**3.171**	**3.273**	**3.379**
Maintenance and other indirect expenses	-319	-346	-363	-363	-363	-363	-363	-363	-363	-363
Personnel costs	-1.062	-1.054	-1.032	-979	-844	-887	-915	-945	-975	-1.007
Other net operating expenses	-279	-302	-178	-173	-181	-190	-196	-202	-209	-216
EBITDA	**1.459**	**1.719**	**1.697**	**789**	**1.205**	**1.474**	**1.598**	**1.661**	**1.726**	**1.794**
Corrugated packaging		707	583							
Flexible packaging		461	543							
Engineered materials		112	122							
Uncoated Fine paper		516	444							
Depreciation, amortisation and impairments	-491	-527	-476	-519	-513	-512	-516	-524	-535	-552
Operating profit (EBIT)	**968**	**1.192**	**1.221**	**271**	**692**	**962**	**1.082**	**1.137**	**1.192**	**1.242**
Net profit from equity accounted investees	1	1	0	0	0	0	0	0	0	0
Net finance costs	-85	-88	-118	-109	-125	-118	-108	-96	-83	-83
Profit before tax (EBT)	**884**	**1.105**	**1.103**	**161**	**567**	**843**	**974**	**1.041**	**1.109**	**1.159**
Tax (charge)/credit	-173	-239	-257	-32	-113	-169	-195	-208	-222	-232
Profit for the year (net income)	**711**	**866**	**846**	**129**	**453**	**675**	**779**	**833**	**887**	**927**
Other comprehensive income net of tax	-65	-231	121	0	0	0	0	0	0	0
Total comprehensive income for the year	**646**	**635**	**967**	**129**	**453**	**675**	**779**	**833**	**887**	**927**
Attributable to non-controlling interests	41	30	25	4	14	20	23	25	27	28
Attributable to Shareholders	605	605	942	125	440	654	756	808	860	899

Appendix 3: Cash Flow Statement

Cash Flow statement (€ million)

	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F
EBIT	1.192	1.221	271	692	962	1.082	1.137	1.192	1.242
D&A	446	435	519	513	512	516	524	535	552
Non-operating items*	13	-74	-43	24	21	11	6	0	-6
Income Tax	-248	-248	-32	-113	-169	-195	-208	-222	-232
Change in NWC	-88	49	-163	-32	-24	18	27	26	25
Operating activities	**1.315**	**1.383**	**551**	**1.083**	**1.302**	**1.432**	**1.486**	**1.531**	**1.581**
CAPEX	709	757	434	477	525	566	606	679	774
Other investments**	448	37	73	74	74	74	74	75	75
Investing activities	**1.157**	**794**	**507**	**550**	**598**	**641**	**681**	**754**	**849**
Interest paid	73	96	109	125	118	108	96	83	83
Dividends	811	399	200	259	337	438	482	530	583
Change in debt***	-749	94	-336	145	219	249	270	0	0
Other Financing costs****	59	35	40	8	-5	-6	-7	-7	-6
Financing activities	**194**	**624**	**13**	**537**	**669**	**789**	**841**	**606**	**661**
C&CE beginning of the year	-66	8	-26	5	1	36	38	2	174
Change in cash and cash equivalents	**-36**	**-35**	**31**	**-4**	**34**	**2**	**-35**	**171**	**72**
Effects of changes in foreign exchange rates	7	1	0	0	0	0	0		
C&CE at the end of the year	-95	-26	5	1	36	38	2	174	246
Bank overdraft included in short-term borrowings	44	81	0	0	0	0	0	0	0
C&CE on Financial statement	**-51**	**55**	**5**	**1**	**36**	**38**	**2**	**174**	**246**
Non-operating items									
Decrease in provisions and net retirement benefits	-7	-23	0	0	0	0	0	0	1
Fair value gains on forestry assets	-43	-71	-48	-51	-56	-61	-66	-72	-79
Felling costs	60	64	63	63	63	63	63	63	63
Net profit(-)/loss from disposal of businesses and equity accounted investees	3	-9	0	0	0	0	0	0	0
Change in non-operating items		-35	-59	12	13	8	9	9	9
Total	**13**	**-74**	**-43**	**24**	**21**	**11**	**6**	**0**	**-6**
Other investments									
Investment in intangible assets	10	12	25	26	26	26	26	27	27
Investment in forestry assets	53	48	48	48	48	48	48	48	48
Investment in equity accounted investees	7	5	0	0	0	0	0	0	0
Acquisition of businesses, net of C&CE	399	-18	0	0	0	0	0	0	0
Other investing activities	-21	-10	0	0	0	0	0	0	0
Total	**448**	**37**	**73**	**74**	**74**	**74**	**74**	**75**	**75**
Change in debt									
Repayments/proceeds (-) from medium and long-term borrowings	-765	48	-595	279	-101	616	-69	0	0
Net repayment/proceeds(-) from short-term borrowings	16	46	259	-134	320	-367	339	0	0
Total	**-749**	**94**	**-336**	**145**	**219**	**249**	**270**	**0**	**0**
Other Financing costs									
Transaction costs relating to the issue of share capital		6	0	0	0	0	0	0	0
Purchases of treasury shares	15	12	12	12	12	12	12	12	12
Financing special item		14	0	0	0	0	0	0	0
Net cash inflow/outflow from derivatives	25	-3	2	0	0	0	0	0	0
Other financing activities	8	-5	15	-15	-28	-29	-30	-30	-29
Share based payments	11	11	11	11	11	11	11	11	11
Total	**59**	**35**	**40**	**8**	**-5**	**-6**	**-7**	**-7**	**-6**

Appendix 4: Key Financial Ratios

Key Financial Ratios

	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Liquidity Ratios									
Current Ratio (x)	1,35	1,05	1,33	1,25	1,54	1,22	1,43	1,49	1,49
Quick Ratio (x)	0,76	0,58	0,63	0,61	0,80	0,65	0,77	0,87	0,90
Cash Ratio (x)	0,03	0,04	0,00	0,00	0,02	0,02	0,00	0,11	0,15
Efficiency Ratios									
Total Assets Turnover (x)	0,97	0,88	0,67	0,69	0,72	0,74	0,75	0,75	0,74
Accounts Receivables Turnover (x)	7,56	7,49	6,41	6,80	6,87	6,88	6,95	7,02	7,08
Collection Period (days)	48,25	48,76	56,91	53,71	53,12	53,06	52,54	52,03	51,53
Inventory Turnover (x)	8,15	7,45	5,23	5,06	5,57	5,98	6,36	6,77	7,21
Days in Inventory (days)	44,77	49,01	69,82	72,19	65,58	61,05	57,36	53,88	50,62
Payables Turnover (x)	6,05	5,84	4,43	5,11	5,74	5,98	6,04	6,04	6,03
Payables Period (days)	60,37	62,46	82,32	71,47	63,55	61,05	60,43	60,47	60,51
Operating Cycle (days)	93,02	97,78	126,73	125,90	118,70	114,11	109,90	105,91	102,14
Cash Cycle (days)	32,65	35,32	44,42	54,42	55,14	53,06	49,47	45,44	41,63
Profitability Ratios									
Gross Profit Margin (%)	0,46	0,45	0,40	0,43	0,46	0,47	0,47	0,47	0,47
EBITDA Margin (%)	0,23	0,23	0,14	0,20	0,23	0,24	0,25	0,25	0,25
EBIT Margin (%)	0,16	0,17	0,05	0,11	0,15	0,17	0,17	0,17	0,17
Net Profit Margin (%)	0,12	0,12	0,02	0,08	0,11	0,12	0,12	0,13	0,13
ROA (%)	7,90%	11,32%	1,48%	5,21%	7,66%	8,72%	9,20%	9,37%	9,40%
ROE (%)	16,60%	23,56%	2,97%	10,33%	14,50%	15,59%	15,57%	15,53%	15,28%
EPS (x)	1,25	1,94	0,26	0,91	1,35	1,56	1,67	1,78	1,86
DPS	1,67	0,82	0,41	0,54	0,70	0,90	0,99	1,09	1,20
Solvency Ratios									
Long- and short-term Debt Ratio (%)	0,13	0,52	0,25	0,36	0,18	0,54	0,27	0,27	0,27
Long-term Debt Ratio (%)	0,25	0,18	0,24	0,21	0,22	0,15	0,15	0,14	0,14
Debt to Equity Ratio (x)	36%	52%	53%	58%	47%	39%	31%	29%	28%
Debt to EBITDA	0,79	1,34	2,88	2,05	1,53	1,25	1,04	1,00	0,96

Appendix 5: Common-Size Statement of Financial Position

Balance Sheet - Common Size

	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2024F	2024F
ASSETS										
Property, plant and equipment	56%	54%	56%	55%	55%	55%	55%	56%	55%	56%
Goodwill	9%	12%	11%	11%	11%	11%	11%	10%	10%	10%
Intangible assets	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Forestry assets	4%	4%	5%	5%	6%	6%	6%	7%	7%	7%
Investment in equity accounted investees	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Financial instruments	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Deferred tax assets	0%	1%	1%	1%	1%	1%	1%	1%	1%	0%
Net retirement benefit asset	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total non-current assets	**72%**	**72%**	**74%**	**73%**	**74%**	**74%**	**74%**	**75%**	**74%**	**75%**
Inventories	12%	12%	12%	14%	13%	13%	12%	12%	11%	10%
Trade and other receivables	15%	15%	13%	12%	13%	13%	13%	13%	13%	13%
Cash and cash equivalents	1%	1%	1%	0%	0%	0%	0%	0%	2%	2%
Current tax assets	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Assets held for sale	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
financial instruments	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total current assets	28%	28%	26%	27%	26%	26%	26%	25%	26%	25%
Total assets	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
LIABILITIES										
Short-term borrowings	4%	3%	9%	6%	8%	4%	8%	4%	4%	4%
Trade and other payables	15%	15%	13%	12%	12%	11%	11%	12%	12%	12%
Current tax liabilities	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%
Provisions	1%	1%	1%	1%	1%	1%	1%	1%	0%	0%
Financial instrument	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total current liabilities	**21%**	**21%**	**24%**	**20%**	**21%**	**17%**	**21%**	**17%**	**17%**	**17%**
Medium and long-term borrowings	17%	25%	18%	24%	21%	22%	15%	15%	14%	14%
Net retirement benefits liability	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%
Deferred tax liabilities	3%	3%	4%	3%	3%	3%	3%	3%	3%	3%
Provisions	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Other non-current liabilities	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total non-current liabilities	**25%**	**32%**	**24%**	**31%**	**27%**	**28%**	**21%**	**22%**	**21%**	**20%**
Total liabilities	**46%**	**52%**	**49%**	**51%**	**49%**	**45%**	**42%**	**39%**	**38%**	**37%**
EQUITY										
Share capital and stated capital	7%	7%	1%	1%	1%	1%	1%	1%	1%	1%
Retained earnings	48%	45%	46%	48%	50%	53%	56%	59%	60%	61%
Other reserves and treasury shares	-5%	-8%	0%	-3%	-4%	-4%	-4%	-4%	-4%	-4%
Total attributable to shareholders	**50%**	**43%**	**47%**	**45%**	**47%**	**50%**	**53%**	**56%**	**57%**	**58%**
Non-conttrolling interests in equity	5%	4%	4%	4%	4%	5%	5%	5%	5%	5%
Total equity	**52%**	**48%**	**51%**	**49%**	**51%**	**55%**	**58%**	**61%**	**62%**	**63%**
Total equity and liabilities	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix 6: Common-Size Income Statement

Income statement - Common Size

	2017	2018	2019	2020E	2021F	2022F	2023F	2024F	2024F	2024F
Group revenue	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Corrugated packaging	*0%*	*28%*	*27%*	*29%*	*29%*	*30%*	*30%*	*30%*	*30%*	*30%*
Flexible packaging	*0%*	*35%*	*36%*	*41%*	*41%*	*41%*	*41%*	*41%*	*41%*	*41%*
Engineered materials	*0%*	*13%*	*13%*	*11%*	*10%*	*10%*	*11%*	*11%*	*11%*	*11%*
Uncoated Fine paper	*0%*	*24%*	*24%*	*19%*	*19%*	*19%*	*18%*	*18%*	*18%*	*18%*
Materials, energy and consumables used	49%	47%	47%	49%	47%	46%	45%	45%	45%	45%
Variable selling expenses	7%	7%	8%	11%	10%	8%	8%	8%	8%	8%
Gross margin	**44%**	**46%**	**45%**	**40%**	**43%**	**46%**	**47%**	**47%**	**47%**	**47%**
Maintenance and other indirect expenses	4%	5%	5%	6%	6%	6%	6%	5%	5%	5%
Personnel costs	15%	14%	14%	17%	14%	14%	14%	14%	14%	14%
Other net operating expenses	4%	4%	2%	3%	3%	3%	3%	3%	3%	3%
EBITDA	**21%**	**23%**	**23%**	**14%**	**20%**	**23%**	**24%**	**25%**	**25%**	**25%**
Depreciation, amortisation and impairments	7%	7%	7%	9%	9%	8%	8%	8%	8%	8%
Operating profit (EBIT)	**14%**	**16%**	**17%**	**5%**	**11%**	**15%**	**17%**	**17%**	**17%**	**17%**
Net profit from equity accounted investees	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Net finance costs	1%	1%	2%	2%	2%	2%	2%	1%	1%	1%
Profit before tax (EBT)	**12%**	**15%**	**15%**	**3%**	**9%**	**13%**	**15%**	**15%**	**16%**	**16%**
Tax (charge)/credit	-2%	-3%	-4%	-1%	-2%	-3%	-3%	-3%	-3%	-3%
Profit for the year (net income)	**10%**	**12%**	**12%**	**2%**	**8%**	**11%**	**12%**	**12%**	**13%**	**13%**
Other comprehensive income net of tax	1%	3%	-2%	0%	0%	0%	0%	0%	0%	0%
Total comprehensive income for the year	**9%**	**8%**	**13%**	**2%**	**8%**	**11%**	**12%**	**12%**	**13%**	**13%**
Attributable to non-controlling interests	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Attributable to Shareholders	9%	8%	13%	2%	7%	10%	12%	12%	12%	13%

Appendix 7: Forecasting Assumptions Financial Position

Assumptions

Balance Sheet (€ million)	Notes	2020F	2021F	2022F	2023F	2024F	2025F	2026F	Assumptions
Assets									
Property, plant and equipment	XXX								Based on following:
CAPEX	YoY	-50%	10%	10%	8%	7%	12%	14%	After huge investments in the past 2 years, and reducing a significant amount of long term debt, it looks like that no major CAPEX are planned. But will be probably after some years.
Goodwill	YoY	0%	0%	0%	0%	0%	0%	0%	Follows 50% of the trend of CAPEX but than a year later. Because it highly depends on acquirement of new businesses.
Intangibles assets	YoY	1%	1%	1%	1%	1%	1%	1%	Mature industry. Slow grow in intangible assets
Forestry assets	XXX								Based on following:
Capitalized expenditure	YoY	0%	0%	0%	0%	0%	0%	0%	The forestry assets needs to be maintained on a continously basis. Average investments in forestry assets has been in a range between 45 and 49 since 2016. So the Capitalized Expenditures will be stabilized.
Acquisitions of assets	YoY	0%	0%	0%	0%	0%	0%	0%	Non material. Will be stabilized on € 2 million
Fair value gains	%forestry	12%	12%	12%	12%	12%	12%	12%	Percentage of Forestry assets (without gains included). Lower than the average of the last years
Fellings costs	Fixed	63	63	63	63	63	63	63	Average of the last 5 years. There is no trend. It keeps floating around.
Investment in equity accounted investees	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
Financial instruments	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
Deferred tax assets	XXX								Based on following:
Transformation to current tax	Absolute	0	0	0	0	0	0	0	Non material
Added to deferred tax assets	Absolute	0	0	0	0	0	0	0	Non material
Net retirement benefit assets	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
Inventories excluding Fellings costs	YoY	26%	-5%	-5%	-3%	-3%	-3%	-3%	Contra to revenue. If revenue decreases, than the amount of inventories will grow
Trade and other receivables	XXX								Based on following:
Trade receivables	%rev	-6%	4%	4%	2%	2%	2%	2%	Collect 1% of past year + % change in revenue. + a delay in collection in 2020
Allowance for doubtful debts	%receivables	3%	3%	3%	3%	3%	3%	3%	Average of the last years.
Other receivables	YoY	2%	2%	2%	2%	2%	2%	2%	Average grow for Non operating receivables
Tax and social security	YoY	2%	2%	2%	2%	2%	2%	2%	Average grow for Non operating receivables
Prepayments and accrued income	YoY	2%	2%	2%	2%	2%	2%	2%	Average grow for Non operating receivables
Current tax assets	XXX								Based on following:
Credt current tax assets	Absolute	0	0	0	0	0	0	0	Non material
Assets held for sale	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
Financial instruments	Average	7	7	7	7	7	7	7	Non material
LIABILITIES									
Short-term borrowings									See 'Borrowings' Sheet
Long term Lease Liabilities	YoY	1%	1%	1%	1%	1%	1%	1%	
Trade and other payables	XXX								Based on following:
Operating Trade payables	%COGS	21%	19%	17%	17%	17%	17%	17%	Percentage of Materials, energy and consumables.
CAPEX payables	%CAPEX	15%	15%	15%	15%	15%	15%	15%	Percentage of CAPEX
Tax and social security	YoY	2%	2%	2%	2%	2%	2%	2%	Same as receivables
Other payables	YoY	2%	2%	2%	2%	2%	2%	2%	Same as trend of tax and securities
Accruals and deferred income	%rev	5%	5%	5%	5%	5%	5%	5%	Percentage of revenue
Current tax liabilities	XXX								Based on following:
Credit current tax liability	Absolute	0	0	0	0	0	0	0	Non material
Provisions	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
Financial instrument	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
Net retirement benefits liability	YoY	1%	1%	1%	1%	1%	1%	1%	
Deferred tax liabilities	XXX								Based on following:
Transformation to current tax	Absolute	0	0	0	0	0	0	0	Non material
Added to deferred tax liabilities	Absolute	0	0	0	0	0	0	0	Non material
Provisions	YoY	-2%	-2%	-2%	-2%	-2%	-2%	-2%	Non material
Other non-current liabilities	YoY	0%	0%	0%	0%	0%	0%	0%	Non material
EQUITY									
Share capital and stated capital	YoY	0%	0%	0%	0%	0%	0%	0%	No difference. There was only difference because of the restructuring. They years before that, no changes occured.
Other reserves and treasury shares	XXX								Based on following:
Translation adjustment reserve	%rev	9%	9%	9%	9%	9%	9%	9%	Average % of revenue
Post retirement benefit reserve	Absolute	66	66	66	66	66	66	66	Average last 3 years
Merger reserve	Absolute	259	259	259	259	259	259	259	Kept the same over the years, only 2019 differ, because of corporate restructuring.
Other (non material) reserve	Absolute	26	26	26	26	26	26	26	Non material
Treasury shares	YoY	-5%	-5%	-5%	-5%	-5%	-5%	-5%	5% of treasury hold are distributed.
Non-conttrolling interests in equity	%Equity	9%	9%	9%	9%	9%	9%	9%	Percentage of shareholders equity

Appendix 8: Forecasting Assumptions Income Statement

Assumptions

Income statement (€ million)	Notes	2020F	2021F	2022F	2023F	2024F	2025F	2026F	Assumptions
Revenue	XXX								Total Revenue went down 19% after the financial crisis and needed 4 years to be back on level again with a CAGR of 5,2%.
Corrugated packaging	YoY	-16%	6%	6%	4%	4%	4%	4%	Maintenance shut are planned to stop and the powerflute acquisition in Finland will have its effect on the revenue. Containerboard prices were down significantly last year. They seem to dcline a bit more and recover in the 3rd year.
Flexible packaging	YoY	-10%	5%	5%	3%	3%	3%	3%	Kraft paper price was volatile in 2019. Volumes of flexible packaging declined. Average selling prices increased. EBITDA grew with 18% while revenu stay approx the same. Volumes will decrease a bit more and average sellings price will be stable, which leads to a decrease in the first year and increase in the following years due to increase of volumes again.
Engineered materials	YoY	-35%	3%	6%	4%	4%	4%	4%	Steadily declining over the past 5 years, 5y CAGR of 2.32%
Uncoated Fine paper	YoY	-35%	3%	3%	2%	2%	2%	2%	Overal demand declined. In europe this was 5% YoY in 2019. Selling prices went down after being flat for an half a year. Pulp price decreased 33% in one year. Next year stable revenue due to opening of the plant which was in maintenance. But overall it will decline due to less demand in this segment worldwide.
Materials, energy and consumables used	%rev	49%	47%	46%	45%	45%	45%	45%	Percentage of revenue, due to innovative solutions in use of energy, expectations is that these costs will slightly decrease. But on a minimum basis. Might need to substantiate better.
Variable selling expenses	%rev	11%	10%	8%	8%	8%	8%	8%	Stable on 8% of revenue
Maintenance and other indirect expenses	YoY	0%	0%	0%	0%	0%	0%	0%	Every year Mondi approximately has the same maintenance shuts and thus the regarding maintenance costs.
Personnel costs	%rev	17%	14%	14%	14%	14%	14%	14%	It is a mature industry so personnel costs should be managed efficient. 14% is the average of the last two years. However, due to corona the first year the personnel costs will be higher relative to the revenue
Other net operating expenses	%rev	3%	3%	3%	3%	3%	3%	3%	Mainly consists of green energy and value of forestry assets
D&A	XXX								Based on following:
Depreciation & impairments PP&E	%ΔPP&E	10%	10%	10%	10%	10%	10%	10%	On top of the difference of PP&E of the 2 year before.
Impairments PP&E (special item)	YoY	0%	0%	0%	0%	0%	0%	0%	Hard to identify
Amortisation	%Intang	30%	30%	30%	30%	30%	30%	30%	As a percentage of intangible assets
Net profit from equity accounted investees	Absolute	0	0	0	0	0	0	0	non material
Net finance costs	%EBIT	9%	9%	9%	9%	9%	9%	9%	Of EBIT
Tax (charge)/credit	%EBT	20%	20%	20%	20%	20%	20%	20%	Of EBT
Other comprehensive income	Absolute	0	0	0	0	0	0	0	Not core business and can fluctuate heavily. So for valuations purposes considered as 0
Due to Non-controlling interests	%income	3%	3%	3%	3%	3%	3%	3%	% of total comprehensive income
Due to Shareholders	%income	97%	97%	97%	97%	97%	97%	97%	% of total comprehensive income

Appendix 9: Forecasting Assumptions Cash Flow Statement

Assumptions

Cashflow statement (€ million)	Notes	2020F	2021F	2022F	2023F	2024F	2025F	2026F	Assumptions
Bank overdrafts	Absolute	0	0	0	0	0	0	0	No bank overdraft in upcoming years
Purchases of Treasury shares	YoY	0%	0%	0%	0%	0%	0%	0%	Not forecasted
Dividends	YoY	-50%	30%	30%	30%	10%	10%	10%	5y CAGR of 15% from 2014 on. This is on ordinary shares. Only in 2018 once a special dividend was paid. This one is excluded from the forecasting
Share based payments	YoY	0%	0%	0%	0%	0%	0%	0%	Not forecasted

Appendix 10: The WACC

WACC	2020E	2021F	2022F	2023F	2024F	2025F	2026F	TV	Notes
Risk Free Rate	1,01%	1,01%	1,01%	1,01%	1,01%	1,01%	1,01%	1,01%	German 10y bund, normalized
Country risk premium	2,67%	2,67%	2,67%	2,67%	2,67%	2,67%	2,67%	2,67%	Average of European Countries Mondi operates
Beta Unlevered	0,68	0,68	0,68	0,68	0,68	0,68	0,68	0,68	Average of peers
Effective Tax Rate	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	Based on historical data
Beta Levered	0,96	1,01	0,98	0,93	0,89	0,85	0,84	0,89	
Market Risk Premium	6,50%	6,50%	6,50%	6,50%	6,50%	6,50%	6,50%	6,50%	KPMG input
Cost of equity (l)	**9,94%**	**10,25%**	**10,05%**	**9,75%**	**9,47%**	**9,21%**	**9,14%**	**9,14%**	Ku(levered) = Rf + (βlevered * MRP) + CRP
Cost of equity (u)	**8,10%**	**8,10%**	**8,10%**	**8,10%**	**8,10%**	**8,10%**	**8,10%**	**8,10%**	Ku(unlevered) = Rf + (βunlevered * MRP) + CRP
Cost of Debt	3,23%	3,68%	3,77%	3,83%	3,91%	3,54%	3,54%	3,54%	Using Synthetic Ratings of Damodaran and normalized with average
Effective Tax Rate	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%	Based on historical data
After tax cost of debt	**2,58%**	**2,94%**	**3,01%**	**3,07%**	**3,13%**	**2,83%**	**2,83%**	**2,83%**	
E	4.295	4.482	4.824	5.171	5.529	5.892	6.242	6.242	Based on the forecasted balance sheet
D	2.612	2.468	2.249	2.001	1.731	1.731	1.731	1.731	Based on the forecasted balance sheet
E/V	62%	64%	68%	72%	76%	77%	78%	78%	
D/V	38%	36%	32%	28%	24%	23%	22%	22%	
WACC	**7,15%**	**7,65%**	**7,81%**	**7,88%**	**7,96%**	**7,76%**	**7,77%**	**7,77%**	

Unlevered Beta	Beta
Average of peers	0,68
Monthly Beta unlevered 5y	0,74
Damodaran	0,87

Peers	Mondi	Stora Enso Oyj	DS Smith	Ence	Sappi	UPM	Suzano	Smurfit Kappa
Beta	0,89	0,86	0,78	0,61	0,554	0,81	0,27	0,69

Cost of Debt	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F
Interest to debt	3,88%	5,18%	4,18%	5,08%	5,27%	5,40%	5,55%	4,80%	4,80%
Synthetic rating	2,27%	2,27%	2,27%	2,27%	2,27%	2,27%	2,27%	2,27%	2,27%
Average	3,07%	3,73%	3,23%	3,68%	3,77%	3,83%	3,91%	3,54%	3,54%

Country	Germany	Poland	Italy	Austria	Czech Republic	Hungary	Slovakia	Turkey	Russia	USA	SA	Mexico	Average
CRP	0,00%	1,55%	4,03%	0,73%	1,11%	4,03%	1,55%	8,24%	4,03%	0,00%	4,57%	2,20%	2,67%

The average of the CRP is taken as the weighted average on terms of sales.

Appendix 11: The Terminal Growth Rate

Reinvestment Rate	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F	Total
CAPEX	709	757	434	477	525	566	606	679	774	4.060
Non cash charges	527	476	519	513	512	516	524	535	552	3.670
Change NWC	88	-49	163	32	24	-18	-27	-26	-25	123
EBIT	1.192	1.221	271	692	962	1.082	1.137	1.192	1.242	6.578
Tax rate	21,6%	23,3%	20,0%	20,0%	20,0%	20,0%	20,0%	20,0%	20,0%	20,0%
Reinvestment Rate	28,9%	24,8%	36,2%	-0,7%	4,8%	3,8%	6,0%	12,3%	19,8%	9,8%
ROE	16,6%	23,6%	3,0%	10,3%	14,5%	15,6%	15,6%	15,5%	15,3%	12,8%
g	4,8%	5,8%	1,1%	-0,1%	0,7%	0,6%	0,9%	1,9%	3,0%	**1,3%**

Stable Growth model

Dividend SGR	2018	2019	2020E	2021F	2022F	2023F	2024F	2025F	2026F	TV
Net income	866	846	129	453	675	779	833	887	927	927
Dividends	811	399	200	259	337	438	482	530	583	583
(NI-D)/NI	6,4%	52,8%	-54,6%	42,8%	50,0%	43,8%	42,1%	40,2%	37,1%	37,1%
ROE	16,6%	23,6%	3,0%	10,3%	14,5%	15,6%	15,6%	15,5%	15,3%	15,3%
g	1,1%	12,4%	-1,6%	4,4%	7,3%	6,8%	6,6%	6,2%	5,7%	**5,7%**

In this valuation the terminal growth rate of 1,3% is used. The 5,7% is an unreliable value to valuate the company with.

Appendix 12: Net Working Capital and Forestry Assets

Net Working Capital	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Inventories	867	968	984	1220	1166	1110	1077	1044	1012	982
Trade and other receivables	961	1017	925	871	903	940	961	982	1004	1026
Current Assets	**1.828**	**1.985**	**1.909**	**2091**	**2069**	**2050**	**2037**	**2026**	**2016**	**2008**
Trade and other payables	532	601	574	593	539	495	500	516	533	550
Current Liabilities	**532**	**601**	**574**	**593**	**539**	**495**	**500**	**516**	**533**	**550**
NWC	1.296	1.384	1.335	1498	1531	1555	1537	1510	1483	1458
Change in NWC		88	-49	163	32	24	-18	-27	-26	-25

NWC Non-operating activities	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Trade and other receivables	145	173	186	190	194	197	201	205	209	214
Current Assets	**145**	**173**	**186**	**190**	**194**	**197**	**201**	**205**	**209**	**214**
Trade and other payables	449	472	450	395	411	428	440	453	466	480
Current Liabilities	**449**	**472**	**450**	**395**	**411**	**428**	**440**	**453**	**466**	**480**
NWC	-304	-299	-264	-205	-217	-231	-239	-248	-257	-266
Change in non operating activities		5	35	59	-12	-13	-8	-9	-9	-9

Input NWC	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Inventories										
Inventories	794	908	920	1157	1103	1047	1014	981	949	919
Felling costs	73	60	64	63	63	63	63	63	63	63
Total inventories	**867**	**968**	**984**	**1220**	**1166**	**1110**	**1077**	**1044**	**1012**	**982**
Trade and other receivables										
Trade receivables	993	1052	953	898	931	969	990	1012	1035	1058
Allowance for doubtful debts	-32	-35	-28	-27	-28	-29	-30	-30	-31	-32
Operating trade receivables	**961**	**1017**	**925**	**871**	**903**	**940**	**961**	**982**	**1004**	**1026**
Other receivables	32	30	34	35	35	36	37	38	38	39
Tax and social security	90	114	122	124	127	129	132	135	137	140
Prepayments and accrued income	23	29	30	31	31	32	32	33	34	34
Non operating trade receivables	**145**	**173**	**186**	**190**	**194**	**197**	**201**	**205**	**209**	**214**
Total Trade and other receivables	**1106**	**1190**	**1111**	**1061**	**1097**	**1137**	**1162**	**1187**	**1213**	**1240**
Trade and other payables										
Operating Trade payables	**532**	**601**	**574**	**593**	**539**	**495**	**500**	**516**	**533**	**550**
CAPEX payables	93	113	119	65	72	79	85	91	102	116
Tax and social security	56	57	52	53	54	55	56	57	59	60
Other payables	48	52	53	54	55	56	57	59	60	61
Accruals and deferred income	345	363	345	288	302	317	327	337	348	359
Non operating trade payables	**542**	**585**	**569**	**460**	**482**	**507**	**525**	**544**	**568**	**596**
Total Trade and other payables	**1074**	**1186**	**1143**	**1053**	**1021**	**1002**	**1026**	**1060**	**1101**	**1146**

In order to reach a solid calculation for the cashflow statement, NWC is split into two different segments. The NWC and the NWC for Non-Operating Activities. The inventories are calculated by adding the felling costs to the inventories. The felling costs are subtracted of the forestry assets. In the table below the forestry assets is the sum of Capitalized Expenditure, Acquisitions of Assets/Business Combinations, Negative Felling Costs (these three are known as the forestry assets without gains) and the Fair Value Gains.

Forestry Assets	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Capitalized expenditure	46	46	46	46	46	46	46	46	46
Acquisitions of assets / business combinations	21	2	2	2	2	2	2	2	2
Felling costs	-60	-64	-63	-63	-63	-63	-63	-63	-63
Forestry assets without gains	**297**	**340**	**396**	**429**	**465**	**506**	**551**	**603**	**660**
Fair value gains	43	71	48	51	56	61	66	72	79
Forestry assets	**340**	**411**	**444**	**480**	**521**	**566**	**618**	**675**	**739**

Appendix 13: Depreciation and Amortization

Non Current Assets	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
PP&E	4.128	4.340	4.800	4.740	4.728	4.766	4.842	4.950	5.120	5.368
Depreciation PP&E		412	407	453	447	446	450	457	468	485
Impairments PP&E (special item)		81	41	41	41	41	41	41	41	41
Investments in PP&E		**624**	**867**	**434**	**477**	**525**	**566**	**606**	**679**	**774**
Goodwill	698	942	948	948	948	948	948	948	948	948
Investments in Goodwill		**244**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Intangible assets		91	81	82	83	83	84	85	86	87
Amortisation		34	28	25	25	25	25	26	26	26
Investments in Intangibles Assets		**10**	**12**	**25**	**26**	**26**	**26**	**26**	**27**	**27**
Total D&A		**527**	**476**	**519**	**513**	**512**	**516**	**524**	**535**	**552**

The Property, Plant & Equipment is calculated by adding the investments in PP&E of the current year to the PP&E of the previous year and subtracting the Depreciation and Impairments. The goodwill is kept stable, this goodwill cannot be forecasted since it highly depends on acquiring or disposals of businesses. Forecast on these occasions will not be done. Total D&A is a sum of Amortization, Depreciation and Impairments.

Appendix 14: Treasury Shares, Other Reserves and Taxes

Other Reserves & Treasury Shares	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Other reserves & treasury shares										
Translation adjustment reserve	-606	-820	-680	-518	-543	-570	-588	-607	-627	-647
Post retirement benefit reserve	-71	-75	-52	-66	-66	-66	-66	-66	-66	-66
Merger reserve	259	259	667	259	259	259	259	259	259	259
Other (non material) reserve	16	16	45	15	26	26	26	26	26	26
Treasury shares	-27	-26	-6	6	18	29	40	50	59	68
Total	**-429**	**-646**	**-26**	**-304**	**-306**	**-322**	**-330**	**-339**	**-349**	**-360**

In 2019 on the balance sheet a higher Merger Reserve occurred due to the corporate restructuring.

Taxes

Taxes	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F
Assets									
Current tax assets	22	15	15	15	15	15	15	15	15
Credit current tax assets			0	0	0	0	0	0	0
Deferred tax assets	49	49	49	49	49	49	49	49	49
transformation to current tax			0	0	0	0	0	0	0
added to deferred tax assets			0	0	0	0	0	0	0
Liabilities									
Current tax liabilities	140	101	101	101	101	101	101	101	101
Credit current tax liability			0	0	0	0	0	0	0
Deferred tax liabilities	253	301	301	301	301	301	301	301	301
Transformation to current tax			0	0	0	0	0	0	0
Added to deferred tax liabilities			0	0	0	0	0	0	0

Appendix 15: Borrowings

2017	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	0	0	499	496	995	
Bank loans and overdrafts	255	24	46	24	349	
Lease liabilities					0	
Other loans	12	4	0	5	21	
Total	**267**				**1.365**	

2018	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	0	499	0	1.093	1.592	
Bank loans and overdrafts	239	31	200	14	484	
Lease liabilities	22	18	30	114	184	
Other loans	5	2	3	0	10	
Total	**266**				**2.270**	

2019	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	500	0	497	597	1.594	
Bank loans and overdrafts	250	170	30	4	454	
Lease liabilities	25	16	38	139	218	
Other loans	5	2	3	0	10	
Total	**780**				**2.276**	

2020F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	0	250	497	1.097	1.844	Added 500 in long term bonds. And an additional 500 because of the corona impact
Bank loans and overdrafts	500	30	34	0	564	Less 30 in current assets and plus 30 in non current assets, add extra 100 short term bank loan
Lease liabilities	16	0	38	140	194	Most of the lease liabilities are on average more than 20 years. > 5 years lease liabilities grow slowly with 2%
Other loans	5	2	3	0	10	Non material
Total	**521**	**282**	**572**	**1.237**	**2.612**	

2021F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	250	0	497	1.097	1.844	
Bank loans and overdrafts	400	30	4	0	434	less 130 in current assets
Lease liabilities	0	30	8	142	180	
Other loans	5	2	3	0	10	Non material
Total	**655**	**62**	**512**	**1.239**	**2.468**	

2022F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	250	297	0	1.097	1.644	
Bank loans and overdrafts	50	350	4	10	414	Added 60 in non current assets and less 80 in current assets
Lease liabilities	30	0	8	143	181	
Other loans	5	2	3	0	10	Non material
Total	**335**	**649**	**15**	**1.250**	**2.249**	

2023F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	297	0	597	500	1.394	
Bank loans and overdrafts	400	4	0	10	414	less 50 in current assets.
Lease liabilities	0	8	30	145	183	Added 30 extra long term liabilities
Other loans	5	2	3	0	10	Non material
Total	**702**	**14**	**630**	**655**	**2.001**	

2024F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	200	0	597	500	1.297	
Bank loans and overdrafts	150	50	30	10	240	Less 50 in current loans and added 70 in non current loans
Lease liabilities	8	30	0	146	184	
Other loans	5	2	3	0	10	Non material
Total	**363**	**82**	**630**	**656**	**1.731**	

2025F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	200	0	597	500	1.297	
Bank loans and overdrafts	150	50	30	10	240	
Lease liabilities	8	30	0	146	184	
Other loans	5	2	3	0	10	Non material
Total	**363**	**82**	**630**	**656**	**1.731**	

2026F	<1 year	1-2 years	2-5 years	> 5 years	Total	Notes
Bonds	200	0	597	500	1.297	Additional debt in order to grow
Bank loans and overdrafts	150	50	30	10	240	Less 50 in current loans and added 70 in non current loans
Lease liabilities	8	30	0	146	184	
Other loans	5	2	3	0	10	Non material
Total	**363**	**82**	**630**	**656**	**1.731**	

This table was made to make a distinguish in short-term borrowings (less than 1 year) and long-term borrowings (longer than 1 year.

Appendix 16: Free Cashflow to the Firm (DCF)

Base-Case Cash Flows FCFF	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F	TV
EBIT	1.192	1.221	271	692	962	1.082	1.137	1.192	1.242	
(-) Taxes	239	257	32	113	169	195	208	222	232	
(=) EBIT (1-t) or NOPAT	953	964	238	579	793	887	929	970	1.010	
(+) Non Cash Charges	527	476	519	513	512	516	524	535	552	
(=) Operating Cash Flow	1.480	1.440	757	1.092	1.305	1.403	1.453	1.505	1.562	
(-) Changes in Net Working Capital	88	(49)	163	32	24	(18)	(27)	(26)	(25)	
(-) Capital Expenditures	709	757	434	477	525	566	606	679	774	
Free Cash Flow to the Firm				583	756	854	874	852	814	**824**
PV FCFF (DCF)				3.903	3.579	3.046	2.366	1.607	814	
PV terminal value (DCF)				8.670	9.347	10.084	10.886	11.731	12.642	
PV FCFF (APV)				3.881	3.565	3.036	2.359	1.605	814	
PV terminal value (APV)				8.150	8.810	9.524	10.295	11.129	12.030	

DCF	
WACC composition	
Cost of equity levered	9,14%
Km(u)	8,10%
Cost of debt	3,54%
Tax rate	20,00%
Cos of debt net of taxes	2,83%
WACC	**7,77%**
PV of cash flow from the business of explicit period	3.579
PV terminal value	9.347
TV + PV cash flow	12.926
Value of non-operating assets	365
Intrinsic enterprise value	13.292
+ Cash	36
- Debt	3.251
Equity value	**10.076**
Share price	**20,79**

Appendix 17: Free Cashflow to the Firm (APV)

APV	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F	TV
PV FCFF (APV)				3.881	3.565	3.036	2.359	1.605	814	
PV terminal value (APV)				8.150	8.810	9.524	10.295	11.129	12.030	
PV of explicit period of business cash flow		3.565								
PV of terminal value		8.810								
Unlevered intrinsic value of business		12.375								
Unlevered intrinsic value of cash		495								
Unlevered intrinsec enterprise value		12.870								
Evaluate Financing Effects										
Debt at terminal value										1.731
Cost of debt										3,54%
Interest expenses			109	125	118	108	96	83	83	894
Interest tax shield			22	25	24	22	19	17	17	179
PV tax shield			134	115	93	71	51	33	17	201
PV of TV tax shield		201								
PV of explicit period		93								
PV of tax shield		294								
Add Pieces Together										
Unlevered intrinsic company value		12.870								
PV of tax shield		294								
Intrinsic enterprise value		13.165								
+ Cash		1								
- Debt		3.489								
Equity value		**9.677**								
Share price		**19,97**								

Appendix 18: Free Cashflow to Equity (DCF)

Base-Case Cash Flows FCFE	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F	TV
Net Income	866	846	129	453	675	779	833	887	927	
(+) Non Cash Charges	527	476	519	513	512	516	524	535	552	
(-)Capital Expenditures	709	757	434	477	525	566	606	679	774	
(-)Changes in NWC	88	(49)	163	32	24	(18)	(27)	(26)	(25)	
(+)Net borrowings	749	(94)	336	(145)	(219)	(249)	(270)			
Free Cash Flow to Equity				313	419	498	509	769	731	**740**
PV FCFE				2.587	2.459	2.205	1.845	1.445	731	
PV terminal value				7.318	7.910	8.551	9.244	9.992	10.802	

DCF	
PV of cash flow from the business of explicit period	2.459
PV terminal value	7.910
TV + PV cash flow	10.369
Equity value	**10.369**
Share price	**21,40**

Appendix 19: Dividend Discount Model

Dividend Discount Model	2021F	2022F	2023F	2024F	2025F	2026F	TV
Dividends paid	259	337	438	482	530	583	482
PV of dividends	1.293	1.138	879	482	530	583	
PV of terminal value	13.272	14.605	16.029	17.546	19.162	20.913	
Equity value	14.565						
Equity value per share	**30,06**						

This model is excluded from the valuation since the outcome is not reliable due to the unstable payout of dividends.

Appendix 20: Relative valuation

Market data	Share price	Shares outstanding (M)	Market Cap (M)	Net Debt (M)	EV (M)
Stora Enso Oyj	13	789	10.228	3.261	13.489
DS Smith	4	1.372	5.492	2.802	8.294
Ence Energía & Celulosa	3	246	722	402	1.123
Sappi	3	543	1.414	1.501	2.915
UPM	31	554	17.116	453	17.569
Suzano	9	1.361	12.277	12.141	24.418
Altri	6	205	1.177	513	1.690
Smurfit Kappa	31	239	7.338	3.350	10.688

Multiples	EV/Sales			EV/EBITDA			EV/EBIT			P/S	P/E	P/B
	2018	2019	2020F	2018	2019	2020F	2018	2019	2020F	2019	2019	2019
Stora Enso Oyj	1,29	1,34	1,56	7,22	8,75	10,11	9,70	14,15	18,89	1,02	11,58	1,38
DS Smith	1,30	1,14	1,44	10,71	8,56	10,48	14,11	11,13	30,57	0,75	17,11	1,60
Ence Energía & Celulosa	1,35	1,53	1,93	3,86	8,85	14,07	5,36	34,55	41,04	0,98	5,63	1,07
Sappi	0,58	0,57	0,74	3,82	4,24	9,05	6,07	7,25	15,73	0,28	7,49	0,73
UPM	1,68	1,72	2,01	9,41	9,49	12,22	11,61	12,51	18,23	1,67	15,53	1,68
Suzano	3,43	4,23	3,67	6,83	10,26	13,17	9,28	41,86	14,24	2,13	-19,47	3,06
Altri	2,15	2,24	2,83	5,78	7,25	20,67	7,27	10,71	60,29	1,56	11,71	2,53
Smurfit Kappa	1,19	1,18	1,49	6,92	6,48	10,88	10,29	12,09	66,54	0,81	12,92	3,13
AVERAGE	1,62	1,74	1,96	6,82	7,99	12,58	9,21	18,03	30,32	1,15	7,81	1,90

Compared to Mondi plc	Sales			EBITDA			EBIT			Sales/s	Earnings/s	Book/s
	2018	2019	2020F	2018	2019	2020F	2018	2019	2020F	2019	2019	2019
Mondi plc	7.481	7.268	5.760	1.719	1.697	789	1.192	1.221	271	15	2	9
Estimated EV Mondi plc based on:												
Stora Enso Oyj	9.624	9.750	8.991	12.407	14.845	7.979	11.568	17.283	5.111	15	20	12
Ence Energía & Celulosa	10.102	11.104	11.104	6.639	15.012	11.104	6.390	42.186	11.104	4	13	7
Sappi	4.312	4.134	4.255	6.575	7.199	7.142	7.238	8.852	4.255	4	13	7
UPM	12.538	12.472	11.595	16.168	16.107	9.641	13.842	15.279	4.931	25	27	15
Smurfit Kappa	8.938	8.585	8.585	11.892	10.992	8.585	12.262	14.763	18.0001	12	23	28
AVERAGE	9.103	9.209	8.906	10.736	12.831	8.890	10.260	19.673	8.680	14	21	14
Max	12.538	12.472	11.595	16.168	16.107	11.104	13.842	42.186	18.001	25	27	28
Min	4.312	4.134	4.255	6.575	7.199	7.142	6.390	8.852	4.255	4	13	7
Median	9.624	9.750	8.991	11.892	14.845	8.585	11.568	15.279	5.111	15	21	12

Estimated Value of Equity based on EV	MIN	MAX
EV of Mondi plc - (Based on EV/sales)	8.906	9.209
EV of Mondi plc - (Based on EV/EBITDA)	8.890	12.831
EV of Mondi plc - (Based on EV/EBIT)	8.680	19.673
Selected Range	8.826	13.904
Debt of Mondi plc	3.419	3.419
Cash	74	74
Net Debt	3.345	3.345
Equity Value	5.481	10.559
Average Equity Value		**8.020**
Share price		**16,55**

Estimated Value of Equity based on price	Average
EV of Mondi plc - (Based on EV/sales)P/S	14
EV of Mondi plc - (Based on P/E)	21
EV of Mondi plc - (Based on P/B)	14
Selected Range	16
Share price	**16,49**

This valuation leads to an average of €16,52. This valuation is significantly lower than the DCF and APV valuations. This due to the short visioned valuation of this model. The year 2020 has a major impact on this value.

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Recommendation System

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	0%≤	>0% & ≤10%	>10% & ≤20%	>20% & ≤45%	>45%
Medium Risk	-5%≤	>-5% & ≤5%	>5% & ≤15%	>15% & ≤30%	>30%
Low Risk	-10%≤	>-10% & ≤0%	>0% & ≤10%	>10% & ≤20%	>20%