WestRock

Applied Portfolio Management

WestRock – EXECUTIVE SUMMARY

Paper and packaging are attractive businesses where scale and differentiation do matter. WestRock Company (ticker: WRK) is the leading manufacturer and provider of paper and packaging solutions for the consumer and corrugated markets. It operates through around 300 locations across North America, South America, Europe, Australia, and Asia. Markets include food, beverage, tobacco, and merchandise display. WestRock is building a paper and packaging partner with the strategy and capabilities to generate attractive returns over the long term.

WestRock	FY 2017
Market Cap	$16.56B
Enterprise Value	$22.9B
EBITDA	$2.42B
Trailing P/E	9.70
Forward P/E	14.40
PEG Ratio (5y)	0.66
EV/EBITDA	9.44
ROA	2.8%
ROE	6.8%
Payout Ratio	23.9%

Financial Performance	Q1 FY2018	Q1 FY 2017
Net Sales	$3.9B	$3.4B
Adj. Segment Income	$356m	$231m
Adj. Segment EBITDA	$654m	$490m
% Margin	16.80%	14.20%
Adj. EPS	$0.87	$0.47

We've got you covered!

Valuation

WestRock currently trades in the $66 area, with a historic low P/E (ttm) ratio of 9.70, a forward P/E of 14.4 and EV/EBITDA of 9.44 (Yahoo! Finance); it is clearly undervalued. Why is it not a value trap? It has healthy financial statements, its operational efficiency based on vertical and horizontal integration strategies highlights its competitive advantage over their direct competitors, its wise management of acquisitions is allowing them to achieve $1 billion synergy and performance improvements in the last two years, its careful capital allocation makes them be able to manage well debt, generate free cash flow, and on top of that, increase dividends and continue to repurchase stock.

Maybe the market sees the industry as too mature to offer any excitement, but WestRock has exciting prospects on their way: synergies from the RockTenn & MWV are in progress, FY2017 acquisitions will expand their market in the U.S. and abroad, intense differentiation in the digital packaging solutions arena start to show results, and, most important, the already-approved acquisition of KapStone for FY2018 is projected to increase revenue in about 20% and generate an additional $200 million in synergies.

Margin of Safety

Not only their strong financials and sound business strategy offer a margin of safety for the investor, but its business proposition is quite sustainable, it provides a broad portfolio of differentiated solutions, its philosophy is to see the client as a long-term partner with common objectives, its disciplined capital allocation allows them to manage debt wisely exceeding its free cash flow generation goals, and on top of that, they offer a dividend payout yielding 2.6% and growing 7.5% per year and a share repurchase program for up to 40 million shares in execution.

Recommendation and price target

The valuation analysis projects that WestRock will strongly outperform the market over the next 1 to 3 years. Based on a model of Unlevered Free Cash Flow Valuation I arrive at a 1-year price target of $79.63 with an implied EV/EBITDA of 12.2x and a forward P/E of 22.3x.

WestRock – INDUSTRY ANALYSIS

The Packaging & Container Industry is comprised of companies that manufacture and distribute paper, plastic, metal, and glass packaging products, cardboard containers, corrugated boxes, cans, bottles, plastic, and foam food containers.

The industry is capital intensive and mature with global annual growth rates in the 3.0% - 3.5%. The shift from glass and metals to various plastics and the introduction of innovative polypropylene resealable containers may alter the industry landscape in the coming years. The industry has recently witnessed overcapacity, which intensified restructuring and consolidation.

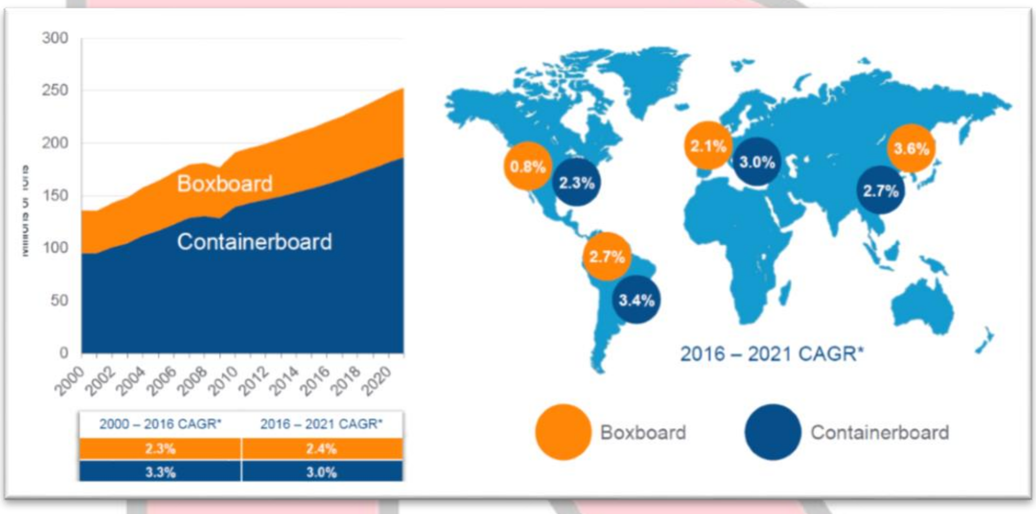

Figure 1: Growth in Global Paperboard, source: RISI

Key growth drivers for the industry are various; the most important are:

- An increasing actual and forecasted demand from emerging markets, which offsets more mature demand in developed countries.
- Trends in consumer preference towards characteristics as portability, suitability, environmentally friendly and safe containers.
- Demographic trends towards increasing Millennials' consumption.
- Market strong forces requiring the offering of value-added packaging solutions, customization of products for convenience or upscale appearance, and increase digital innovation for smart-packaging solutions.
- Finally, but most important, the notable expansion of e-commerce will continue to impact the packaging business.

Industry outlook remains stable. Challenges faced by the industry come from various fronts: increases in environmental regulation and awareness, intense competition from flexible packaging categories, threats from competitors in the Middle East and Asia, etc. From a macroeconomic point of view, the slow resurgence of the economy after last decade's financial crisis is bolstering package-related consumption, even when it can be foreseen a slowdown in end-market segments such as food, beverage, healthcare, industrial packaging, and other consumer markets. High and rising energy and raw material costs, especially plastic resins and aluminum, are causes for concern. Foreign exchange rates will continue to be a point to be monitored for the global players.

Despite these cost-related pressures, packaging companies benefit from improved pricing, increased productivity, and realized operational efficiencies. Most companies are expanding their global footprint through deal making and investment in emerging opportunities, and realigning product mix in order to reduce costs, remain competitive, and strengthen their financial position.

KEY TAKEAWAY

"… this sector features some names that are attractive for the coming six to twelve months"
ValueLine

Operating strategies towards higher sales and earnings:

- Intense Research & Development efforts to keep pace with new products
- Improved operational efficiency to lower costs
- Pricing strategies to improve margins
- The Tax Cuts and Jobs Act is proving to be a positive for the industry, even when it's yet to be seen how much of the potential positive impact will end up in shareholders hands; although some companies, like WestRock, have already announced an increase in their share buyback programs.

M&A activity: a preferred strategy for growth in this sector. The industry's strong fundamentals look well for continued consolidation and it will allow increased market share in the foreseeable future.

Conclusion: The group of companies in the Packaging & Container Industry is made up of long-standing names; many of their stocks are defensive in nature, offering attractive dividend yields, and, being in the non-cyclical business area, these companies are less impacted with the larger economic cycle. ValueLine concludes: *"The Packaging & Container Industry sits near the top of our Timeliness Ranking System. Consequently, this sector features some names that are attractive for the coming six to 12 months."*

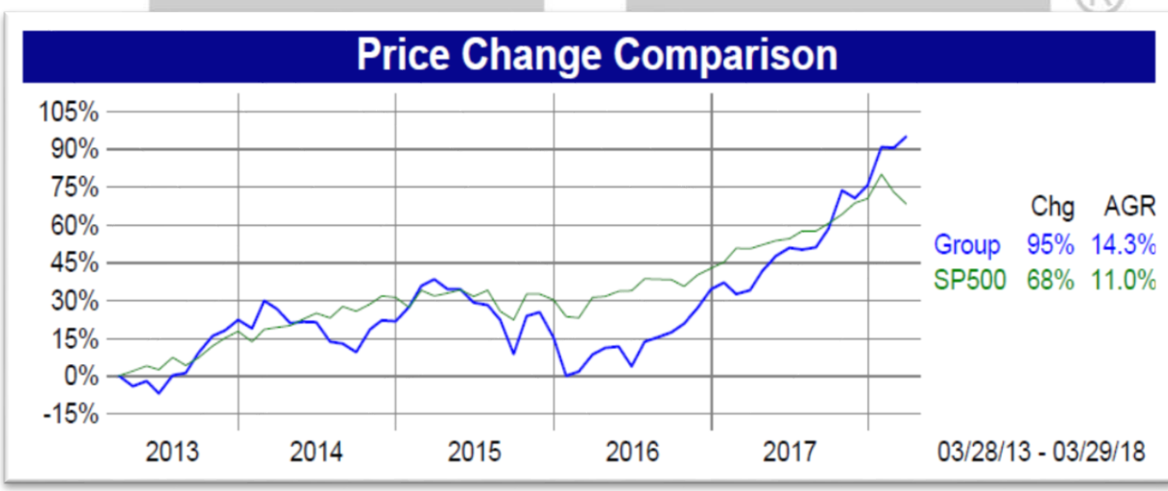

Figure 2: Industry vs. S&P. Source: Ford Industry Report

Porter's 5 Forces analysis of the Packaging & Container Industry

Moderate — Bargaining power of suppliers

- Large degree of differentiation, hence, lots of substitute suppliers.
- Some segments (aseptic packaging) with few concentrated suppliers.
- Some participants have backward vertical integration to produce their inputs.

Moderate + — Bargaining power of buyers

- Financial strength and size of main buyers gives them power.
- Switching costs can be high as buyers adapt to industry standards.
- Packaging market is fragmented, this gives power to buyers.

Moderate - — Threat of new entrants

- Capital intensive industry - significant barriers to exit.
- Economies of scale are significant. Consolidation makes entry harder.
- Qualitative suppliers of raw material are few and form a barrier of entry.

Low — Threat of Substitutes

- Limited but real, especially in the plastics subsegment.
- Paper packaging is replacing plastic packaging.
- Trend to favor more recyclable and biodegradable materials.

High — Intensity of Rivalry

- Industry is highly fragmented.
- Segment fragmentation increases price competition.
- Quality of products is a differentiating factor.

Conclusion

- Porter's forces are mild in the Packaging & Container Industry; supplier and buyer powers are limited but clearly do exist and affect specially companies that are either small or very new. Threat of new entrants is low, but, given the level of consolidation, new ventures will shock the existing armony among participants. Even when the product is widely available, substitution is hard given the high costs related to it. All this in a very fragmented industry . A company that is well positioned in the industry can have significant advantages to sustain a moat.

WestRock – COMPANY DESCRIPTION

History

WestRock was formed on 2015 pursuant to the Combination of RockTenn and MWV (Mead-Westvaco Corporation), from now on, the Combination. Rock-Tenn's history began in 1936 as Southern Box Company, a folding carton manufacturing plant in Baltimore, Maryland. With the MWV acquisition, WestRock became one of the largest producers of corrugated medium, liner-board, paperboard and merchandising displays in North America. It belongs to the GICS Sector of Materials, Sub-Industry of Paper, Packaging & Container. It has operations located in the United States, Europe, Canada, Mexico, Chile, Argentina, Australia, Puerto Rico and China.

Timeline of Significant Events

- March 2016: formal constitution of WestRock Co.
- July 2016: strategic combination of RockTenn & MWV completed, they become wholly owned subsidiaries of WestRock.
- May 2016: completed the separation of the Specialty Chemicals segment, product of the spin-off is Ingevity Corp. and its financial position and operations became part of discontinued operations for WestRock.
- April 2017: completed the sale of HH&B (Home, Health & Beauty, former division of the Consumer Packaging Segment)
- June 2017: completed the acquisition of Multi Packaging Solutions International Ltd. With part of the proceeds of the HH&B sale.
- January 2018: the definitive agreement to acquire KapStone is signed.

Most of the significant events in the life of the company are result of M&A activity; since its formation in 2015, they have already invested $3.4B in eight acquisitions, and have realized two spin-offs (Ingevity and Health, Home & Beauty segment) with around $2.0B of combined value creation.

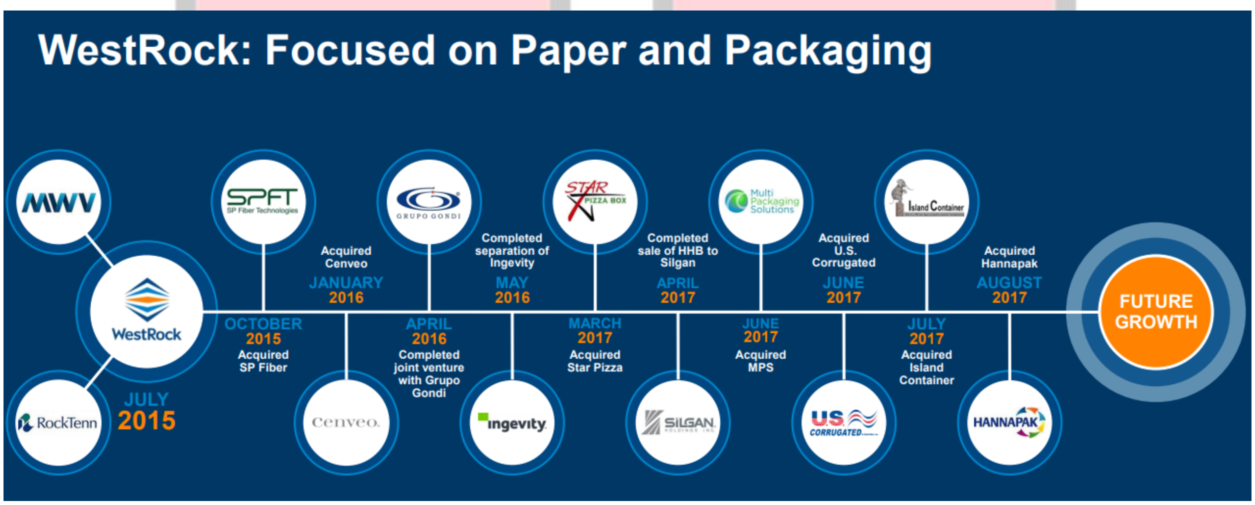

Figure 3: Source WRK Investor's Day 2017

Business Segments

WestRock reports financial results of operations in three reportable segments:

- Corrugated Packaging, consistent of their containerboard mill and corrugated packaging operations, as well as their recycling operations. WestRock is one of the largest integrated producers of containerboard by tons produced, and one of the largest producers of high-graphics preprinted linerboard by net sales in North America. They are also one of the largest paper recyclers in North America and their recycling operations provide substantially all of the recycled fiber to their mills, as well as to third parties.
    - Integrated Corrugated Packaging System producing goods ranging from one-color protective cartons to graphically brilliant point-of-purchase packaging. Additionally, they provide customers with innovative packaging solutions, structural and graphic design, engineering services and custom and proprietary automated packaging machines as part of their line integration and packaging solutions.
    - Their recycling operations procure recycled fiber from their own operations and from third parties; once collected, sorted, graded and baled, they use it in their own mills for processing, or sell it to other manufacturers of paperboard or containerboard, operating a nationwide fiber marketing and brokerage system that serves large regional and national accounts.
    - Sales of corrugated packaging products accounted for 55.5% of revenue for 2017.

KEY TAKEAWAY

cost-saving vertical integration between their recycling operations and their integrated corrugated packaging system

- Consumer Packaging, which consists of consumer mills, folding carton, beverage, merchandising displays, home, health and beauty dispensing (prior to the Sale), and partition operations. WestRock is one of the largest manufacturers of folding and beverage cartons in North America. They are believed to be the largest manufacturer of temporary promotional point-of-purchase displays in North America measured by net sales and the largest manufacturer of solid fiber partitions in North America measured by net sales.
    - Folding and beverage cartoons for the food and drink industry.
    - Express mail packages for the overnight courier industry.
    - For the healthcare industry, secondary packages to promote adherence, and paperboard packaging for over-the-counter and prescription drugs.
    - Offer support to their customers with new package development, innovation and design services and package testing services
    - Design, manufacture and packing of temporary displays for sale to consumer products companies and retailers. Also, pre-assemble permanent displays for the same categories of customers.
    - Sales of Consumer Packaging products accounted for 42.8% of revenue for 2017.

KEY TAKEAWAY

efficient horizontal integration between their corrugated packaging and consumer packaging segments

- Land and Development, which sells real estate primarily in the Charleston, SC region. WestRock is in the process of accelerating the monetization of these holdings. Sales in our Land and Development segment to external customers accounted for 1.7% of revenue for 2017.

Geographic Reach

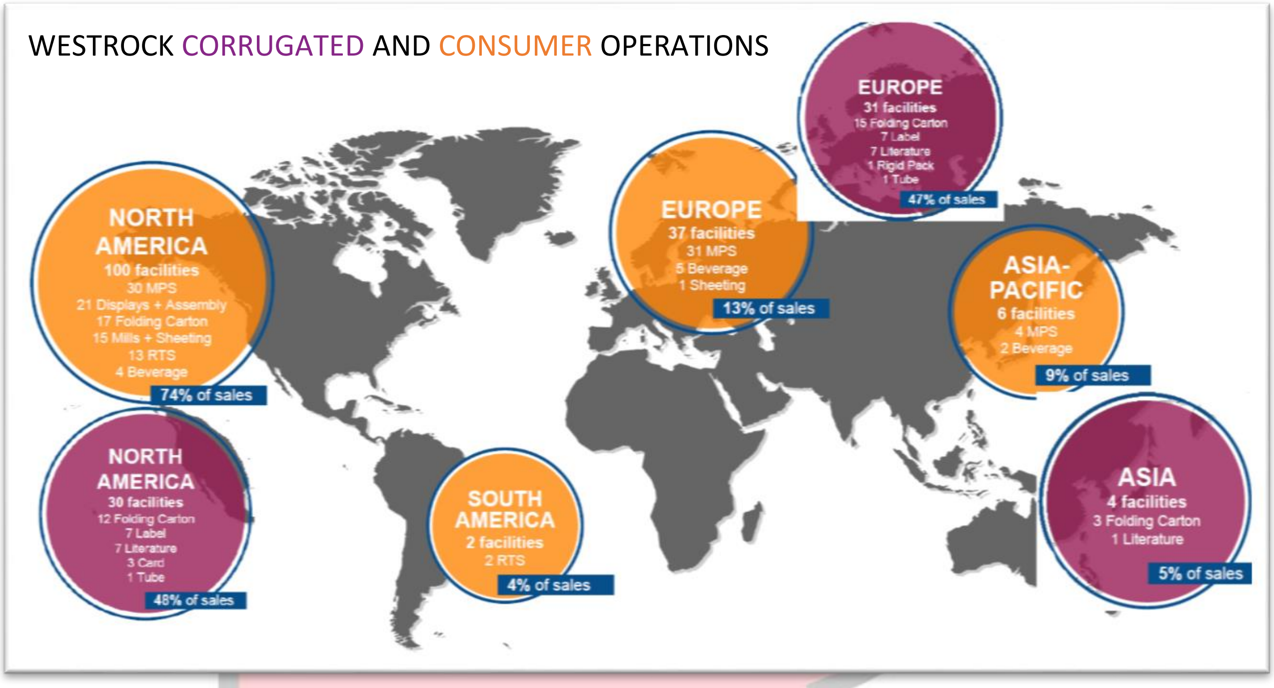

Figure 4: Corrugated and Consumer Operations. Source WRK Investor Day 2017

The acquisition of Multi Packaging Solutions International, which is a recognized leading global provider of print-based specialty packaging solutions have extended WestRock's geographic reach, specially to western Europe where they have an important presence through their affiliated AJS Labels (UK).

Of special note is their focus in Latin America; having recognized the attractiveness of the emerging subcontinent, WestRock has made important investments in Mexico and Brazil in the belief that these deep relationships across broad global customer base will provide strong enterprise growth opportunity. In Mexico, and through the joint venture with Grupo Gondi, WestRock will access not only a demographically appealing population of more than 130 million and a large and growing agricultural market requiring virgin containerboard, but also low-cost manufacturing (and a source for low cost raw material for US operations). Brazil shares some of the opportunity aspects, a very large population of more than 200 million represents a 5 million metric ton of corrugated market, they have improving economic conditions, a robust protein and agriculture markets, and of special interest, a low e-commerce penetration that is showing rapid growth. WestRock Brazil is implementing an $125 million state-of-the-art plant that will increase capacity, reduce costs, and enhance product capabilities that should be completed in Q3-FY19.

WestRock projects a Latin American market that will benefit the company with at least one million metric tons of lightweight corrugated and consumer mill, will position the company second in market share in the region and will provide a 22% of adjusted EBITDA margin.

Pipeline of Catalysts

The following is a list of events and consequences that Management assumes will have a direct impact in WestRock future performance; the analyst considers that the following ones have a high level of certainty and will be executed or achieved. The financial assumptions that are linked to these events are offered by Management and have not been contrasted with the valuation conclusions of the present report:

- Synergies from the RockTenn & MWV combination (resulting in WestRock) should achieve the goal of $1 billion at the middle of 2018; as of December 2017, the run-rate of synergies and performance improvements reached the $910 million level.
- Complete the monetization of the Land & Development asset portfolio at the end of 2018, without further impairment and with an expected cumulative after-tax free cash flow to WestRock of $275 to $300 by the end of 2018.
- The Island Container Acquisition should enable the company to integrate more than 80,000 tons of containerboard annually into the Corrugated Packaging segment.
- The Hannapak Acquisition should expand the packaging business in Australia.
- The U.S. Corrugated Acquisition should increase the vertical integration of the corrugated packaging segment by 105,000 tons of containerboard annually, and an additional 50,000 tons under a long-term supply contract with a company owned by the seller.
- The Multi Packaging Solutions Acquisition should increase annual paperboard consumption by 225,000 tons of which 50% will be provided by WestRock.
- The Star Pizza Acquisition should provide a leadership position in the fast growing small-run pizza box market.
- The Joint Venture with Grupo Gondi in Mexico should grow presence in the attractive local market.

The most important catalyst for the immediate and mediate future is the acquisition of KapStone for which an agreement has been signed on January of 2018; follows an analysis of the operation and its consequences according to Zacks Investment Research.

"WestRock announced that it will acquire rival KapStone at $35 per share. After follow-through, the deal is anticipated to be accretive immediately to WestRock's adjusted earnings as well as cash flow and lead to around $200 million of annual cost synergies and performance improvements … KapStone's corrugated packaging operations will enhance WestRock's North American corrugated packaging business and provide complementary products in geographical locations that will enable WestRock to better serve customers across the system. The deal will help the company strengthen presence in western United States … WestRock will also be able to broaden portfolio of paper grades, allowing it to capitalize on the kraft bag market with the inclusion of KapStone's complementary specialty kraft

Figure 5: Source: WRK Q1 FY18 Results

paper offerings. Further, the deal will augment WestRock's portfolio of virgin fiber-based paper from 65% to 67%, [and] the combined company will be able to bring automated packaging solutions through Box-On-Demand to the same expanded markets. This will benefit customers through lower cost, increased sales and reduced risk".

For a purchase price of $35 per share, the total investment will be around $4.9b; management declares a 10x EV/EBITDA multiple based on KapStone's actual performance, and a 7x EV/EBITDA multiple including synergy and performance improvements. It will require to raise WestRock indebtedness to a leverage ratio of 3x return, but the strong assumed generation of cash flow will allow rapid debt repayment to reach the target leverage ratio to return to the 2.25x to 2.5x at the end of the second-year post-acquisition.

STEVE VORHEES, WRK CEO

"KapStone is a great fit with WestRock. Their complementary corrugated packaging and distribution operations will enhance WestRock ability to serve customers across our system, particularly in the western United States, and the addition of their specialty kraft paper products that we do not make enhances our differentiated portfolio of paper and packaging solutions"

To note, the transaction is subject still to KapStone's stockholder approval, and even when KapStone management has expressed complacency with the deal and is promoting it, there is a pending investigation from a group of seller's shareholders.

To note, a parallel transaction pursued by direct competitor International Paper Co. (IP) to buy Ireland based Smurfit Kappa Group Plc (SK3.IR) for around $10.7b or €36.50 per share, has been rejected in early March. "*…this would have been an extremely large deal as it would have resulted in the top producer of containerboard in Europe, North America and South America ... This is not likely to be the end of the game, speculation will build from here,*" said Gerard Moore, an analyst at Investec in the Irish capital. "*If the deal had happened, or does happen, it would be transformational for the industry.*"" (Source: J. Bowker, Bloomberg March 6, 2018).

Clearly, the fall-through of IP's deal is positive for WestRock as it leaves the field more levered for horizontal competition, but, as the report states, this is still an ongoing matter that should be considered in terms of risk.

SWOT analysis

Strengths

- Strong market position provides significant competitive advantage.
- Vertical integration reduces manufacturing costs. Ability to pass through raw material costs.
- Horizontal integration improves operational efficiency.
- Diversified end markets for products and services reduces market risk.

Weaknesses

- Moderate to high level of debt could harm financial position.
- Requires higher penetration in the growing Asian markets, more specifically, China.

Opportunities

- Consumers change brands or try something new because of new packaging
- Increasing demand for packaging solutions for ecommerce shopping.
- Strong presence in Latin America and Europe.

Threats

- Market fragmentation and availability of alternative packaging solutions.
- Environmental regulations could harm via lower margins or litigation.
- Interest risk, higher interest rates will increase cost of debt.

Conclusion

WestRock has the leading position in the sustainable consumer packaging and recycling business and is second in the corrugated packaging segment; thanks to intense R&D offers advanced strategies to provide differentiated solutions to customers and is expanding its offerings in attractive end markets. Thanks to its horizontal and vertical integration efforts, is capable of lowering production costs significantly.

Its strategy of growth through acquisitions has put WestRock in the need of moderate to high levels of debt; even when it is aligned with the industry averages, this will require a wise management of assets in order to be able to reduce debt levels, happily it seems management is clear about the issue as one of their main priorities is to advance in debt repayment. Another issue the company should take into account is the need to grow presence in the Asian market, which represents a $100B market for 2017 and has a CAGR of almost 5%.

The packaging industry in the US is highly competitive. WestRock's competitors include vertically integrated packaging companies as well as small non-integrated companies. In addition to this, many new players are entering the packaging industry. WestRock primarily operates in the US and still is developing the scale to serve large customers with operations spread in other countries. The company also competes with plastic and corrugated packaging and packaging made from other materials.

Therefore, shift of customers demand from paperboard packaging to packaging from other materials can also adversely affect the company's revenue.

WestRock – FINANCIAL STATEMENT ANALYSIS

We present a summary of financial results for five years to date:

Summary of Financial Results		**WestRock Co.**			
	2,013	**2,014**	**2,015**	**2,016**	**2,017**
Revenue	$ 9,545	$ 9,895	$ 11,125	$ 14,172	$ 14,860
growth	*N/A*	*3.7%*	*12.4%*	*27.4%*	*4.9%*
Operating Profit	814	854	853	430	835
growth	*N/A*	*4.9%*	*-0.2%*	*-49.5%*	*94.1%*
Net Income	727	480	507	(396)	708
growth	*N/A*	*-34.0%*	*5.6%*	*-178.2%*	*N/A*
Total Assets	10733	11040	25,357	23,038	25,089
growth	*N/A*	*2.9%*	*129.7%*	*-9.1%*	*8.9%*
EBITDA	1444	1542	1,702	2,228	2,197
margin		15.6%	15.3%	15.7%	14.8%
growth	*N/A*		*N/A*	*30.9%*	*-1.4%*
CAPEX	440	534	586	797	779
After Tax Interest Expense	110	60	90	162	226
EPS, adjusted	$ 5.05	$ 3.34	$ 3.76	$ 2.52	$ 2.62
Net Debt	2,799	2,943	5,397	5,423	6,251
Total Debt	2,845	2,985	5,632	5,789	6,555
Return on Assets	8.3%	8.7%	4.0%	5.1%	4.4%
Return on Equity	16.9%	11.1%	4.3%	-4.0%	6.8%

Revenue has been growing steadely since the Combination (RockTenn & MWV) in 2015; even though growth on revenue for the last year has been less than optimal, the growth in operating profit and net income reveals that WestRock management has been applying solutions to optimize operational efficiency. Total assets have grown significantly, especially the second year after the Combination. EBITDA is close to $2.2B and projected (by management) to reach $4B by 2022; EBITDA margin is around a healthy 15% (EBITDA margin for the industry sits around 14% according to Damodaran data).

Total debt reflects the amount of acquisitions that have been performed in the last years, especially in 2017, which is reflected in the lower ROA for this year; on the other hand, not only because of leverage but mainly because of operational efficiency, ROE has increased significantly in the last three years, getting closer to levels previous to the Combination.

To note is that in 2016, WestRock applied restructuring cost in the amount of $366 million to its operating profit and additionally, income from continuing operations was impacted by the HH&B Sale, restructuring and other costs, net, Land and Development impairment, pension lump sum settlements and pension risk transfer. Loss from discontinued operations, net of tax in fiscal 2016 included a $478.3 million pre-tax goodwill impairment charge and $101.1 million pre-tax customer list impairment charge associated with their former Specialty Chemicals operations.

DuPont decomposition of Return on Equity

ROE Value Drivers	2,013	2,014	2,015	2,016	2,017
Net Profit Margin	7.6%	4.8%	4.6%	-2.8%	4.8%
x Asset Turnover	0.89	0.90	0.44	0.62	0.59
Return on Assets	6.8%	4.3%	2.0%	-1.7%	2.8%
x Balance Sheet Leverage	2.49	2.56	2.15	2.34	2.42
Return on Equity	16.9%	11.1%	4.3%	-4.0%	6.8%

For 2017, WestRock's 6.8% Return on Equity results from a sharp recovery in net margin versus 2016, a slight rise in financial leverage and a slight decline in asset turnover; let's analyze these figures:

Net Profit Margin:

As we can see in the common size consolidated statement of income, COGS for 2017 was 110 basis points higher than in 2016, primarily due to cost inflation of recyclable fiber and also by the negative impact of various hurricanes. 2017 SG&A maintained itself in almost the same level as in the previous year, improving slightly but not to the levels in the years previous to the Combination. In 2016 there was a significant amount considered in other expenses and related, as we stated before, to restructuring costs which affected negatively operating profit, and in 2017 there were $200 million that were recognized as the final part of such restructuring caused by the closing facility (discontinued operations in 2016); these concepts affected directly operating profit, and are assumed to be non-recurrent in nature, which allows us to assume that operating profit for the following years will reach the previous average of around 7.5% to 8.0%. With these considerations we arrive to a Net Profit Margin of 4.8% (Damodaran data establishes an industry average of 5.25% for Net Profit Margin). In the valuation model that has been developed we assume that in the future this margin should be at around 7%, given the favorable effect of the Tax Cuts and Jobs Act.

Common Size Statements of Income	2013	%	2014	%2	2015	%3	2016	%4	2017	%5
Net sales	$ 9,545	100.0%	$ 9,895	100.0%	$ 11,125	100.0%	$ 14,172	100.0%	$ 14,860	100.0%
COGS Total	(7,699)	-80.7%	(7,962)	-80.5%	(8,987)	-80.8%	(11,413)	-80.5%	(12,120)	-81.6%
Gross profit	$ 1,847	19.3%	$ 1,934	19.5%	$ 2,138	19.2%	$ 2,759	19.5%	$ 2,740	18.4%
SG&A Total	(954)	-10.0%	(976)	-9.9%	(1,134)	-10.2%	(1,591)	-11.2%	(1,629)	-11.0%
Other Expenses and non-recurring	(78)	-0.8%	(104)	-1.0%	(152)	-1.4%	(737)	-5.2%	(229)	-1.5%
Operating profit	$ 814	8.5%	$ 854	8.6%	$ 853	7.7%	$ 430	3.0%	$ 835	5.6%
Interest expense	(107)	-1.1%	(95)	-1.0%	(133)	-1.2%	(257)	-1.8%	(278)	-1.9%
Other Income / (expense)	7	0.1%	22	0.2%	28	0.3%	142	1.0%	601	4.0%
Income before income taxes	$ 711	7.4%	$ 770	7.8%	$ 734	6.6%	$ 245	1.7%	$ 858	5.8%
Income tax (expense) benefit	22	0.2%	(287)	-2.9%	(233)	-2.1%	(90)	-0.6%	(159)	-1.1%
Discontinued operations	-	0.0%	-	0.0%	11	0.1%	(545)	-3.8%	-	0.0%
Net income	727	7.6%	480	4.8%	507	4.6%	(396)	-2.8%	708	4.8%

* Some items have been hidden, the summations might not be accurate.

Asset Turnover & Utilization:

To better appreciate Asset Turnover and Utilization, we present a common size consolidated balance sheets for WestRock for the last five years:

Common Size Balance Sheets	2013	%	2014	%2	2015	%3	2016	%4	2017	%5
Current Assets:										
Cash and cash equivalents	$ 46	0.4%	$ 41	0.4%	$ 236	0.9%	$ 366	1.6%	$ 304	1.2%
Accounts receivable	1,135	10.6%	1,119	10.1%	1,690	6.7%	1,592	6.9%	1,887	7.5%
Inventories	938	8.7%	1,029	9.3%	1,963	7.7%	1,638	7.1%	1,797	7.2%
Other current assets	298	2.8%	243	2.2%	271	1.1%	264	1.1%	329	1.3%
Total current assets	2,416	22.5%	2,433	22.0%	4,160	16.4%	3,913	17.0%	4,491	17.9%
PP&E	5,555	51.8%	5,833	52.8%	9,597	37.8%	9,294	40.3%	9,118	36.3%
Goodwill and Intangibles, net	2,562	23.9%	2,618	23.7%	9,247	36.5%	7,377	32.0%	8,858	35.3%
Other assets	201	1.9%	157	1.4%	2,353	9.3%	2,454	10.7%	2,622	10.5%
Total Assets	$ 10,733	100.0%	$ 11,040	100.0%	$ 25,357	100.0%	$ 23,038	100.0%	$ 25,089	100.0%
Current liabilities:										
Current portion of debt	$ 3	0.0%	$ 133	1.2%	$ 74	0.3%	$ 293	1.3%	$ 609	2.4%
Accounts payable	802	7.5%	813	7.4%	1,304	5.1%	1,054	4.6%	1,492	5.9%
Other current liabilities	438	4.1%	415	3.8%	785	3.1%	836	3.6%	909	3.6%
Total current liabilities	1,243	11.6%	1,361	12.3%	2,163	8.5%	2,183	9.5%	3,010	12.0%
Long-term debt	2,842	26.5%	2,852	25.8%	5,558	21.9%	5,496	23.9%	5,946	23.7%
Deferred income taxes	1,063	9.9%	1,133	10.3%	3,541	14.0%	3,131	13.6%	3,410	13.6%
Other long-term liabilities	1,272	11.9%	1,387	12.6%	2,311	9.1%	2,398	10.4%	2,337	9.3%
Total Liabilities	$ 6,421	59.8%	$ 6,732	61.0%	$ 13,573	53.5%	$ 13,208	57.3%	$ 14,703	58.6%
Equity:										
Total equity	4,313	40.2%	4,307	39.0%	11,784	46.5%	9,830	42.7%	10,386	41.4%
Total Liabilities and Equity	$ 10,733	100.0%	$ 11,040	100.0%	$ 25,357	100.0%	$ 23,038	100.0%	$ 25,089	100.0%

Through an improved working capital management, WestRock has been able to achieve an Asset Turnover Ratio of 0.59; there has been a reduction in the sales-based receivables turnover, mainly due to an increase in receivables, but in neither of the last three years there has been any significant bad debt expense. Despite the aforementioned increase in receivables, there has been an improvement in the cost-based turnover ratios, inventory turnover is in 54 days despite the increase in COGS, which shows good inventory management; and payables turnover has improved significantly extending the utilization of cash to 45 days from 34 days in 2016.

That way WestRock has been able to achieve a Cash Conversion Cycle of 56 days, better than the 60 days in 2016 or 82 days in 2015, and closer to the average 50 days previous to the Combination.

Asset Turnover & Utilization	2013	2014	2015	2016	2017
Sales based turnover:					
Receivables Turnover	8.4	8.8	6.6	8.9	7.9
Days in Receivable	43 days	41 days	55 days	41 days	46 days
Cost Based Turnover:					
Inventory Turnover	8.2	7.7	4.6	7.0	6.7
Days in Inventory	44 days	47 days	80 days	52 days	54 days
Payables Turnover	9.6	9.8	6.9	10.8	8.1
Days in Payables	38 days	37 days	53 days	34 days	45 days
Cash Conversion Cycle:	50 days	51 days	82 days	60 days	56 days

How do we conciliate a reduction in the Cash Conversion Cycle to 56 days in 2017 from 60 days in 2016, while at the same time WestRock has seen a slowing in its Asset Turnover Ratio to 0.59 in 2017 from 0.62 in 2016? The solution is in the Cash Flow Statement (see Appendix), working capital management produced an outstanding cash inflow from operating activities of $77 million in 2017, compared with an outflow of $35 million in 2016 and $143 million in 2015; this lead net cash from operating activities to improve to $1.9 billion in 2017 versus $1.68 billion in 2016 (an increase of 12.6%) and $1.2 billion in 2015. Having cash flow from investing activities relatively in line with year 2016, this generation of cash allowed the firm to devote more than $2.2 billion to debt repayment while reducing its Cash Conversion Cycle.

Leverage:

Damodaran reports a D/E ratio of 50.22% for the industry; WestRock for 2017 has a D/E ratio of 63.11%. Most of the company's debt is in the form of commercial paper with varying maturities; it also has a revolving line of credit per se and an additional one linked to an Accounts Receivable Sales Agreement. A small proportion of the total debt (24.7%) is issued by bank loans. Weighted average cost of debt for WestRock is 3.56%, very close to Damodaran's average cost of debt for the industry in 3.61%.

For 2017 long-term debt has increased in approximately $1.0 billion, most of it in the form of public bond issuances due in 2023 to 2027; half of the commitment went to pre-pay long-term bank loans and to finance acquisitions.

Interest coverage ratio has decreased from 4.5 to 4.0 times, but cash flow coverage expressed in terms of CFO/Total Debt has increased to 32% from 30.7% in 2016 due to the effective generation of cash from operations.

In conclusion, as we have seen in the analysis, Return on Equity is mainly sustained on improving profit margins and not in increasing leverage; it is important to note that operational efficiency via improved asset turnover is expected to keep occurring as synergies from recent acquisitions will accrue.

Fiscal year 2016 was the first full year following the RKT and MWV Combination. Ending 2017 WRK was on track to achieve $1 billion synergy and business performance improvement through fiscal year 2018. An annual run-rate of $910 million had been achieved by Q1 FY 2018, up from $500 million as of fiscal year-end 2016 and $840 million as of fiscal year-end 2017. WestRock reported adjusted free cash flow of $1.2 billion in fiscal year 2017, up from $892 million in fiscal year 2016.

Update – WestRock Q1 FY18 Consolidated Results

Some highlights of the first quarter of 2018 follow:

- Adjusted EPS of $0.87, up 85% year-on-year
- Adjusted Segment EBITDA margin of 16.8%, 260 bps higher than in same quarter 2017.
- Benefits mainly accruing from full implementation of domestic corrugated price increases and increased export pricing (price has increased much more than volume).
- Adjusted operating cash flow of $374 million
- Net sales increased from $3,447 million in Q1 FY 2017 to $3,894 million in Q1 FY 2018, a 13% increase in sales year-on-year.
- Leverage ratio is maintained at 2.45x.

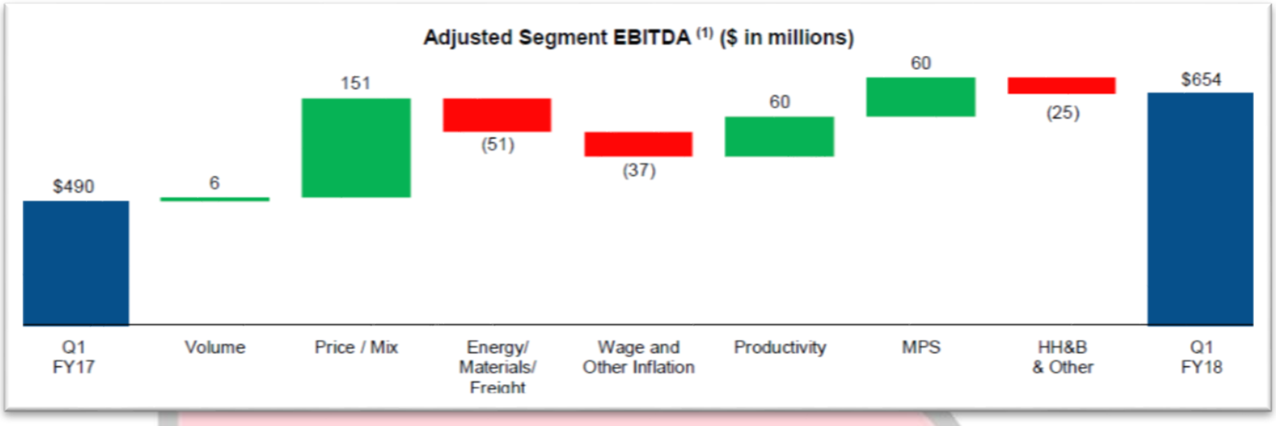

Figure 6: Source WRK Q1 FY 2018 Results

Zacks Investment Research commentary: "*WestRock's first-quarter fiscal 2018 adjusted earnings per share surged 85% on a year-over-year basis and also beat the Zacks Consensus Estimate. Despite commodity cost inflation, the company expects adjusted earnings per share in the second quarter to be higher than year-ago quarter's adjusted EPS of 54 cents. Backed by overall industry conditions and positive volume and pricing dynamics, the company anticipates strong growth in fiscal 2018 … This includes approximately $275 million-$300 million in productivity and acquisition-related synergies.*"

WestRock – ANALYSIS OF COMPETITION

Key players are Crown Holdings (CCK), Owens-Illinois (OI), Sealed Air (SEE), Bemis (BMS), Greif (GEF), Graphic Packaging Holding (GPK), and Ball (BLL). The closest competitors (by means of similar business strategy) are International Paper (IP), Avery Dennison (AVY) and Graphic Packaging Holding (GPK).

PEER GROUP: Containers & Packaging

Ticker	Company Name	Recent Price ($)	Market Cap ($M)	Price/ Earnings	Net Sales TTM ($M)	Net Income TTM ($M)
WRK	**WESTROCK CO**	**63.16**	**16,114**	**9.25**	**15,306.50**	**1,762.40**
AVY	AVERY DENNISON CORP	104.05	9,167	33.24	6,613.80	281.80
SEE	SEALED AIR CORP	42.22	7,067	120.63	4,461.60	814.90
ATR	APTARGROUP INC	88.36	5,509	25.84	2,469.28	220.03
SON	SONOCO PRODUCTS CO	47.39	4,718	27.24	5,036.65	175.35
GPK	GRAPHIC PACKAGING HOLDING C	15.23	4,717	15.70	4,403.70	300.20
BMS	BEMIS CO INC	42.77	3,891	41.93	4,046.20	94.00
IP	INTL PAPER CO	52.38	21,630	10.37	21,743.00	2,144.00
UFPT	UFP TECHNOLOGIES INC	29.05	213	23.06	147.84	9.21
BLL	BALL CORP	39.19	13,738	37.32	10,983.00	374.00
PKG	PACKAGING CORP OF AMERICA	111.18	10,490	15.73	6,444.90	668.60

International Paper Co (IP) is the biggest player in the field, with a Return on Equity close to 30%, which is sustained in a Net Profit Margin close to 10%, with the same Asset Turnover & Utilization Ratio of WestRock (Ratio is 0.6), what is pumping up ROE is its very high Leverage (with a Leverage Ratio improved to 5.2 in 2017 from 7.5 in 2016, which in opinion of the analyst is just unsustainable. Besides, the attempted acquisition of Smurfit Kappa in Ireland has been rejected and that will directly affect its revenue growth hopes.

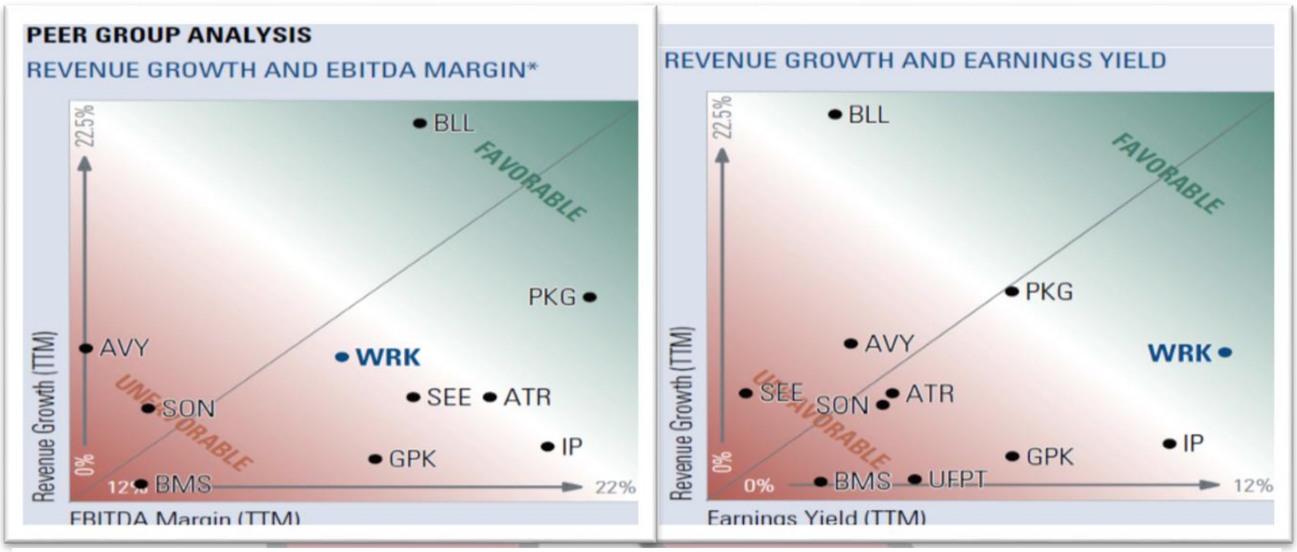

Figure 7: Source: The Street Ratings

Packaging Corp. of America (PKG) is also a big player in the industry, and as IP, has been growing through acquisitions, it shows an impressive ROE of 30% with Net Margin Profit of 10% but also relying on high leverage (Leverage Ratio is 2.84), its stock is considered to be overpriced at $111 per share. Its operational efficiency is affected by a very long Cash Conversion Cycle of 73 days (versus WestRock of 56 days, IP of 52 days, AVY of 40 days).

Finally, Avery Dennison Corp (AVY), similar in size to PKG, achieves ROE at 25%, but with the lowest Net Margin Profit of the group at 4%; it has high operational efficiency with an Asset Turnover Ratio of 1.29 (the highest in the group) but with unsustainable levels of leverage (Leverage Ratio of 4.9).

WestRock – MOAT

WestRock is in a healthy growth path based on its attractive valuation metrics: an EBITDA margin superior to 15% which, in view of the proposed timeline of events, especially the KapStone acquisition, should be maintained in the next two years and after, stabilize in the upper single digit area; unadjusted EPS show strong earnings momentum. The upward curvature of the plotted points in the graph shown indicates that while WestRock's earnings have increased from $2.55 to an estimated $3.49 over the past 5 quarters, they

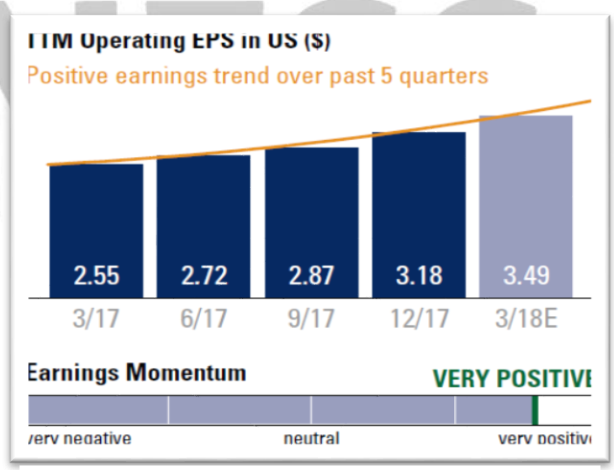

Figure 8: Source: Ford Equity Research

have shown strong acceleration in quarterly growth rates when adjusted for the volatility of earnings. This indicates an improvement in future earnings growth may occur and the goals of $4.40 EPS for FY2019 and adjusted EBITDA to more than $4 billion in 2022, announced by management, seem very plausible to occur.

The Free Cash Flow profile is very robust, unlevered Free Cash Flow by our own calculation exceeds $1.7 billion in years 2016 and 2017, and management reports adjusted Free Cash Flow totaling $2.2 billion for the same period.

Another area in which WestRock excels is in delivering returns to investors, in reporting the first quarter of 2018, management has given a full year guidance of 10% growth in revenue up to $16.3 billion in sales, growth in operating cash flow to $2.4 billion and an adjusted EBITDA growth of 20% to $2.8 billion; besides, have announced an increase of 7.5% in dividends and the goal to get to $1 billion in their approved stock repurchase program, which already has reached $756 million as of the end of 2017.

Bottom-line

My recommendation to Buy relies on attractive valuation metrics, attractive free cash flow (FCF) profile and the opportunity to drive EPS growth from significant synergies and productivity efforts (over $700 million savings forecasted by year-end FY 2018). The company has a proven history of positive growth through acquisitions and has been consistently profitable. The announced acquisition of KapStone Paper & Packaging for $4.9 billion, expected to close before the end of fiscal year is a great strategic fit and would be immediately accretive to EPS and FCF. My valuation finds an EV/EBITDA of 12.2x, which is a significant premium over the historical forward EV/EBITDA of 9.7x of the last three years, the free cash flow profile plenty justifies such premium. The market strong tendency to improve based on supply and demand fundamentals for the corrugated packaging industry are to be important catalysts for WestRock growth.

WestRock – GRAHAM/BUFFETT POINT OF VIEW ANALYSIS

We have reviewed in detail the financial situation, business strategy and moat of WestRock, having arrived at the conclusion that the company is healthy, and the business strategy is sound, and its prospects of growth are not only plausible but very real. It is the leader in the corrugated packaging market and second in the consumer packaging market, its operational efficiency based on vertical and horizontal integration gives them a competitive advantage over its direct competition, its R&D efforts have allowed them to offer a broad product portfolio with differentiated on-site packaging machinery solutions (they have deployed 2,000 corrugated automated packaging systems and 1,000 beverage packaging systems with their costumers), thereby developing a network of captive and satisfied institutional customers delivering them solutions with lower cost, improved sustainability and minimal risk that promote their sales growth.

With such impressive profile, it is clear the market has failed to appreciate the real value of the company, maybe putting too much emphasis on its leveraged position as a risk factor that would prevent growth. We think it is undervalued and ready to deliver.

Stock Selection Criteria, comparison with peers and industry:

	Mkt Cap (US Bill)	Stock price	Fwd P/E	P/B	Div	EPS 5 year	Current Ratio
WestRock Co	16.38	$62.48	14.55	1.40	2.67%	10.0%	1.5
International Paper Co	24.27	$57.73	11.31	3.8	3.21%	25.4%	1.6
Packaging Corp of A	11.09	$115.00	13.82	5.5	2.15%	33.9%	2.4
Ball Corp	14.09	$38.44	16.84	3.91	1.02%	-9.30%	1.0
Industry	--	--	14.46	4.06	--	10.0%	1.53

Stock Positioning according to Graham principles:

- Price in relation to earnings: right under 15 and a little over industry average, this is the main criteria for selection.
- Financial condition:
    - Current Ratio: right at 1.5 and also with industry average; it is expected to raise close to 2 with the cash generation.
    - Debt to Net Current Assets: debt is 2 times NCA, but interest expense is less than a 20% of its operating profit.
- Earnings stability: if we adjust for non-recurring expenses in year 2016, earnings and revenue have been growing steadily in the last five years
- Dividend record: Dividend growth rate, 3 years: 31.7%, above industry average; in the last two years after the Combination, dividends have grown 7.5% per year.
- Earnings growth: EPS 2016 = $2.87, EPS 2017 = $3.18; growth rate 10.8%
- Price to book: above criteria: 1.40 → slightly overvalued.

We conclude WestRock would be an appealing stock Graham would consider investing in. But, does it have a margin of safety?

WestRock – MARGIN OF SAFETY

I believe the margin of safety of WestRock lies not only on its strong financials and sound business strategy, but mainly in the quality inherent to its business proposition; WestRock provides a broad portfolio of differentiated solutions partnering with their clients to be at par with emerging consumer trends, being e-commerce, digital advanced packaging or simple convenience; has expanded its presence to country-wide and foreign markets; has a proven record of disciplined capital allocation with sound investments not only on strategic alliances and acquisitions but also on capital investments in their mill and converting properties. It has exceeded its goals of free cash flow generation in the last two years. From an investor perspective, not only offers a generous and growing dividend payout providing a yield of 2.58%, but also has a share repurchase program authorized on 2015 for up to 40 million shares (15% of common shares outstanding) from which around 15 million shares have been repurchased in the last three years with an aggregate value returned to shareholders of around $670 million.

As the graph shows, there are multiple levels to success in the goals to be achieved.

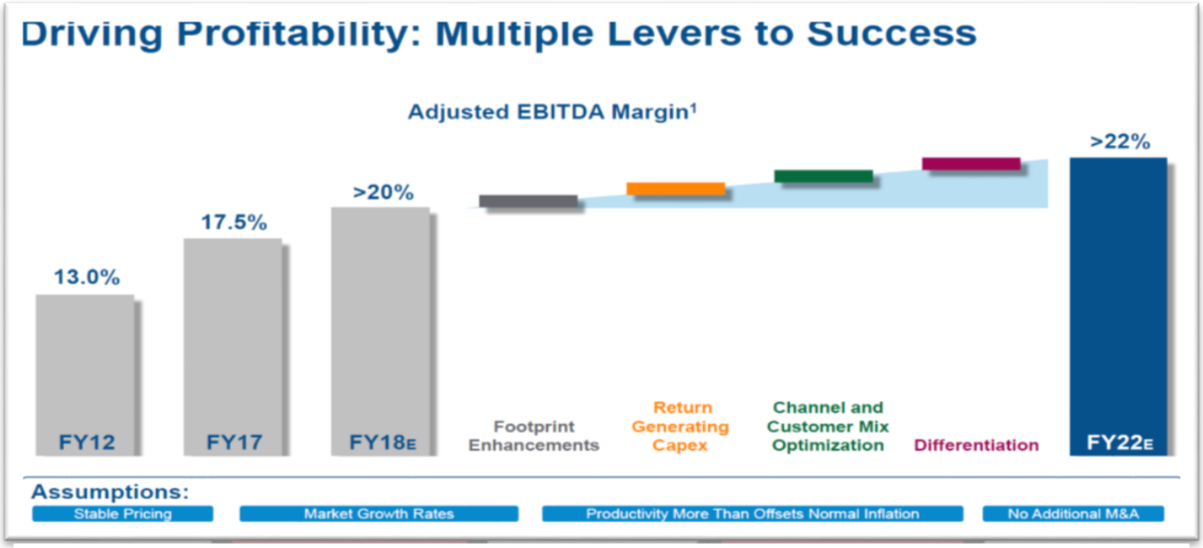

Figure 9: Source: WRK Investor Day 2017

More important, its business is clear, its strategy is straightforward, it has set ground rules for growth generation through diversification of products, operational efficiency, and a philosophy of considering the customer more a partner than a client; its management is clearly involved in the generation of value and "puts their wallet where their mouth is" as it's shown in the graph in the side, insider purchases in the last twelve months are superior to any sales by management. This also points to the fact that management also thinks the company is undervalued at the present moment.

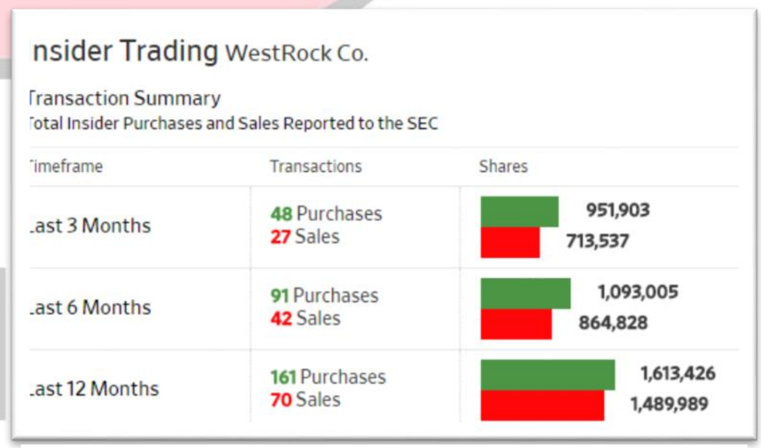

Figure 10: Source: Wall Street Journal

WestRock – UFCF VALUATION MODEL

At the time of this report writing (4/18/2018), WestRock trades at an historic low P/E ratio (TTM) of 9.70 (forward P/E ratio of 14.4) and EV/EBITDA of 9.44 (Yahoo! Finance); given these valuation metrics, the company is clearly undervalued compared to the industry and its peers.

The Unlevered Free Cash Flow (UFCF) Model results in a target price of $79.36, which implies is trading at a discount of 19% with its current market price of $66.61. The implied EV/EBITDA the model reaches is at 12.2x multiple, suggesting a premium of 29% above the actual EV/EBITDA of 9.44. The model implies a forward P/E multiple of 22.3x taking into consideration the effect of dividends in retained earnings and hence, in shareholders common equity.

Summary Financial Results – Base Case

	Historical				Projected			
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Revenue	$11,125	$14,172	$14,860	$16,041	$17,317	$18,532	$19,639	$20,813
Growth		*27.4%*	*4.9%*	*8.0%*	*8.0%*	*7.0%*	*6.0%*	*6.0%*
EBITDA	1,702	2,228	2,197	2,567	2,857	3,336	3,535	3,746
Margin	*15.3%*	*15.7%*	*14.8%*	*16.0%*	*16.5%*	*18.0%*	*18.0%*	*18.0%*
Growth		*30.9%*	*(1.4%)*	*16.9%*	*11.3%*	*16.7%*	*6.0%*	*6.0%*
Capex			779	1,000	825	825	825	825
Interest Expense			278	228	212	188	174	174
EPS			$3.18	$3.56	$4.48	$5.99	$6.69	$7.45
Net Debt			$6,555	$6,096	$5,285	$4,106	$2,777	$1,306
Total Debt			$6,555	$6,096	$5,285	$4,106	$4,008	$4,008

I find a Discounted Cash Flow Value per Share of $79.36 for a DCF Enterprise Value of $26.75 billion assuming the following conditions:

- Corporate Income Tax Rate for year 2018 and forward: 23.5% → based on the adjusted tax rate for year 2017, after the new corporate tax rate code was applied.
- Terminal Value Growth Rate: 2.75% → average based on management assumption of the perpetual growth rates ranging from 1.5% to 4% for their different reporting units.
- Weighted Average Cost of Capital (WACC): 9.499% → based on target capital structure, weighted average cost of debt and CAPM calculated cost of equity. These calculations can be found in the Appendix.

The sensitivity analysis assuming up or down variations of 100 bps in the WACC Discount Rate and 75 bps in the Terminal Growth Rate gives us a range of prices from $58.77 (for a discount of 13% over the actual $66.61 price) to $114.20 (for a premium of 71% over the actual price).

Scenario Analysis:

I have run three scenarios for the valuation, with the following variation:

- Management Case: adhering to management assumption of:
  - Revenue Growth, 10% for FY2018, 9% and 8% thereafter,
  - COGS reduced to 73% - 72%
  - SG&A reduced to 9% - 8%
- This scenario gives us a share price of $107.46 with 15.4x implied EV/EBITDA and 22.8x Forward P/E
- Base Case: this is the scenario we have already presented.
  - Revenue Growth, 8% for FY2018, 7% and 6% thereafter,
  - COGS maintained in 74% - 73%
  - SG&A maintained in 10% - 9%
- This scenario gives us a share price of $79.36 with 12.2x implied EV/EBITDA and 22.3x Forward P/E

- Downside Case: assuming deterioration of financial position and market conditions:
  - Revenue Growth, 6% for FY2018, and 5% thereafter,
  - COGS increased to 75% - 74%
  - SG&A increased to 11% - 10%
- This scenario gives us a share price of $54.74 with 9.3x implied EV/EBITDA and 22.2x Forward P/E

VALUATION ANALYSIS – Base Case

				Projected		
	2017	**2018**	**2019**	**2020**	**2021**	**2022**
Free Cash Flow Calculation						
EBIT		$1,437	$1,727	$2,206	$2,405	$2,616
Plus: Depreciation		$880	$880	$880	$880	$880
Plus: Amortization		$250	$250	$250	$250	$250
EBITDA		**2,567**	**2,857**	**3,336**	**3,535**	**3,746**
Less: Capex		(1,000)	(825)	(825)	(825)	(825)
EBITDA Less Capex		**1,567**	**2,032**	**2,511**	**2,710**	**2,921**
Less: Taxes on EBIT	23.5%	(338)	(406)	(518)	(565)	(615)
Less: Changes in Working Capital		(177)	(203)	(185)	(175)	(186)
Unlevered Free Cash Flow		**1,052**	**1,424**	**1,807**	**1,969**	**2,121**
DCF Enterprise Value Calculation						
Terminal Value Calculation						
Terminal Value Growth Rate						2.75%
Projected Free Cash Flow						2,179
Discount Rate (WACC)						9.50%
Terminal Enterprise Value						32,285
Implied Term. Value EBITDA Multiple						8.6x
Discounted Cash Flows at WACC						
Unlevered Free Cash Flow		961	1,187	1,377	1,370	1,347
Terminal Value						20,509
Total Discounted Cash Flows	**26,751**	961	1,187	1,377	1,370	21,856

Summary DCF Valuation

DCF Enterprise Value	$26,751	*12.2x*	*Implied EV/EBITDA*
Less: Net Debt	($6,555)		
Equity Value	$20,196		
Shares (millions)	255		
DCF Value per Share	$79.36	*22.3x*	*Forward P/E*

DCF Equity Sensitivity Analysis

	WACC		
Growth	8.50%	9.50%	10.50%
3.50%	$114.20	90.09	72.86
2.75%	98.51	79.36	65.13
2.00%	86.45	70.77	58.77

The scenario analysis and the sensitivity analysis demonstrate us how variable the price spectrum could be, but, I am confident on the conservative assumptions made in the base case and they support my recommendation.

WestRock – Recommendation

WestRock is an important player in the Packaging & Container Industry; even when the industry is considered mature, there are important market developments that suggest growth will keep happening, like the increasing importance in e-commerce or the strong consumption habits of the Millennial generation, and specially the outstanding economic (and market) growth in emerging countries and continents.

In this context, WestRock is bringing to the table important elements like its strong financial position, its healthy cash flow profile, and most of all, a competitive advantage that comes from wise acquisitions and a well exploited vertical and horizontal integration; add to this the prospect of the KapStone acquisition and we have an undervalued company that deserves much attention.

In this sense, my recommendation for WestRock as a strong buy with the expectation of getting closer to the valuation price of $79.36 for a premium of 19% with one-year time horizon.

WestRock – Risk Evaluation

There are various general and market-wide risks like weather related events affecting raw materials availability or price, economic downturn, or a significant increase in the interest rates and variation in the foreign exchange rates, which might be partially or totally manageable through operational efficiency and astute capital allocation. There are two specific risks that I want to address:

Credit Statistics

	Historical			Projected		
	2017	2018	2019	2020	2021	2022
LEVERAGE RATIOS						
Total Debt / EBITDA	3.0x	2.4x	1.8x	1.2x	1.1x	1.1x
Total Debt/Total Capital	38.7%	36.0%	31.4%	24.6%	22.6%	21.0%
Total Debt/Total Assets	26.1%	24.2%	21.0%	16.3%	15.2%	14.4%
Total Debt/ Equity	0.63x	0.56x	0.46x	0.33x	0.29x	0.27x
Short term Debt/Total Debt	8.3%	7.1%	8.8%	2.4%	0.0%	0.0%
COVERAGE RATIOS						
EBIT/Interest	4.0x	6.3x	8.1x	11.7x	13.8x	15.1x
EBITDA / Interest	7.9x	11.2x	13.5x	17.7x	20.3x	21.6x
EBITDA less Capex / Interest	5.1x	6.9x	9.6x	13.4x	15.6x	16.8x
LIQUIDITY RATIOS						
Current Ratio	1.9x	1.9x	1.9x	2.0x	2.4x	2.9x
Quick Ratio	1.1x	1.2x	1.2x	1.2x	1.6x	2.1x

- The possibility of falling through of the KapStone deal, even when the deal has the approval of both managements, it's still pending the approval of KapStone's shareholders. To note, the Valuation Analysis that I have presented does not take into consideration synergies due to the acquisition, hence, it shouldn't affect the valuation price I have reached, but, clearly, it would affect future performance of the firm.

- A deterioration in the credit status of WestRock or an increase in the interest rates attached to its debt would hurt significantly the company as it would not be able to sustain with operating cash its debt obligations. In this sense, in the chart above, I present the assumed Credit Statistics for the years in projection.

In general, and under the assumptions of the Model, we can see an improvement in the credit metrics that would buffer the impact of a credit crisis, but it's clear this is risk investors must keep in mind.

WestRock – TECHNICAL ANALYSIS OF PRICE ACTION

Complementary to the Financial Valuation that has been presented, the present Technical Analysis of Price Action will allow us to better understand and interpret the significance of the valuation metrics and financial ratios offered by Fundamental Analysis. It is also of great use to time trading decision once the stock is to be in our portfolio.

First, I present the three-year monthly chart for WRK:

Figure 11: WRK 3-year monthly Price Action chart, Source: author.

The range of prices goes from a low of $29.73 in early February of 2016 to a high of $71.55 at the end of January 2018. Price action shows an uninterrupted uptrend in the last 24 months previous to January 2018 which implies strong momentum coincident with the market main stock index (S&P500). Since January 2018, with strong volume and also in coincidence with the market, there has been a consolidation in the form of a triangle or bull flag, with two pullbacks that have pierced and broke the 20 period moving average and have gotten close to the 60 period moving average; this consolidation shows strength from the bear side, with predominance of bear bodies and small bullish ones, but still performs as a bull flag without clear signs of a major trend reversal. The consolidation probably will continue for a number of additional periods and should test the previous all-time high before continuing or reversing the main trend. Price action is still bullish for WRK in this time-frame.

Then, I present the 1-year daily chart for WRK:

Figure 12: WRK 1-year daily Price Action chart. Source: Author.

We can see the uninterrupted uptrend with higher lows and higher highs that happened up until the end of January 2018; in the last three months we have a two-legged pullback which started with volume and pierced both the 20 and 60 period moving average; the second leg of the pullback has had less volume than the first, on its low point tested support of the first leg, and now price is testing a resistance level in the area of $68 with a very narrow channel of small bodies and doji action. It suggests it will enter into a trading range that could last a few more periods before resuming or reversing the trend. At this moment, there is no clear buy signal for bulls, who should wait for either a third leg down or a breakout above the resistance level (as long as it has strength, which is not seen now). Price action is neutral for WRK at this moment in this time-frame.

Appendix Index

- WestRock 2017 Financial Statements:
    - WestRock 2017 Consolidated Statement of Operations
    - WestRock 2017 Consolidated Statement of Comprehensive Income
    - WestRock 2017 Consolidated Balance Sheets
    - WestRock 2017 Consolidated Statement of Cash Flows
- Assumptions for the UFCF Valuation Model
- Determination of Cost of Debt
- Assumptions and Determination of Weighted Average Cost of Capital
- Sources

Westrock Financial Statements

WESTROCK COMPANY
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended September 30,		
	2017	2016	2015
	(In millions, except per share data)		
Net sales	$ 14,859.7	$ 14,171.8	$ 11,124.8
Cost of goods sold	12,119.5	11,413.2	8,986.5
Gross profit	2,740.2	2,758.6	2,138.3
Selling, general and administrative, excluding intangible amortization	1,399.6	1,379.4	1,014.6
Selling, general and administrative intangible amortization	229.6	211.8	118.9
Pension risk transfer expense	—	370.7	—
Pension lump sum settlement and retiree medical curtailment, net	32.6	—	11.5
Land and Development impairment	46.7	—	—
Restructuring and other costs, net	196.7	366.4	140.8
Operating profit	835.0	430.3	852.5
Interest expense	(277.7)	(256.7)	(132.5)
Gain (loss) on extinguishment of debt	1.8	2.7	(2.6)
Interest income and other income (expense), net	66.7	58.6	9.7
Equity in income of unconsolidated entities	39.0	9.7	7.1
Gain on sale of HH&B	192.8	—	—
Income from continuing operations before income taxes	857.6	244.6	734.2
Income tax expense	(159.0)	(89.8)	(233.0)
Income from continuing operations	698.6	154.8	501.2
(Loss) income from discontinued operations (net of income tax benefit (expense) of $0, $32.3 and $(17.5)	—	(544.7)	10.6
Consolidated net income (loss)	698.6	(389.9)	511.8
Less: Net loss (income) attributable to noncontrolling interests	9.6	(6.4)	(4.7)
Net income (loss) attributable to common stockholders	$ 708.2	$ (396.3)	$ 507.1
Basic earnings per share from continuing operations	$ 2.81	$ 0.60	$ 2.92
Basic (loss) earnings per share from discontinued operations	—	(2.16)	0.05
Basic earnings (loss) per share attributable to common stockholders	$ 2.81	$ (1.56)	$ 2.97
Diluted earnings per share from continuing operations	$ 2.77	$ 0.59	$ 2.87
Diluted (loss) earnings per share from discontinued operations	—	(2.13)	0.06
Diluted earnings (loss) per share attributable to common stockholders	$ 2.77	$ (1.54)	$ 2.93
Cash dividends paid per share	$ 1.60	$ 1.50	$ 1.20

WESTROCK COMPANY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended September 30,		
	2017	2016	2015
		(In millions)	
Consolidated net income (loss)	$ 698.6	$ (389.9)	$ 511.8
Other comprehensive income (loss), net of tax:			
Foreign currency:			
Foreign currency translation gain (loss)	80.7	109.8	(242.0)
Reclassification adjustment of net loss on foreign currency translation included in earnings	—	20.2	—
Sale of HH&B	26.8	—	—
Derivatives:			
Deferred loss on cash flow hedges	—	(0.4)	(1.6)
Reclassification adjustment of net (gain) loss on cash flow hedges included in earnings	(0.5)	1.2	0.4
Unrealized gain on available for sale security	0.7	—	—
Defined benefit pension and other postretirement benefit plans:			
Net actuarial gain (loss) arising during period	22.2	(224.6)	(52.6)
Amortization and settlement recognition of net actuarial loss, included in pension and postretirement cost [1]	36.0	236.5	30.3
Prior service credit (cost) arising during period	0.7	1.4	(15.4)
Amortization and curtailment recognition of prior service (credit) cost, included in pension and postretirement cost	(0.2)	1.1	(4.6)
Sale of HH&B	2.9	—	—
Other comprehensive income (loss)	169.3	145.2	(285.5)
Comprehensive income (loss)	867.9	(244.7)	226.3
Less: Comprehensive loss (income) attributable to noncontrolling interests	9.4	(5.7)	(3.9)
Comprehensive income (loss) attributable to common stockholders	$ 877.3	$ (250.4)	$ 222.4

BUSINESS

WESTROCK COMPANY
CONSOLIDATED BALANCE SHEETS

	September 30, 2017	September 30, 2016
	(In millions, except per share data)	
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 298.1	$ 340.9
Restricted cash	5.9	25.5
Accounts receivable (net of allowances of $45.8 and $36.5)	1,886.8	1,592.2
Inventories	1,797.3	1,638.2
Other current assets	329.2	263.5
Assets held for sale	173.6	52.3
Total current assets	4,490.9	3,912.6
Property, plant and equipment, net	9,118.3	9,294.3
Goodwill	5,528.3	4,778.1
Intangibles, net	3,329.3	2,599.3
Restricted assets held by special purpose entities	1,287.4	1,293.8
Prepaid pension asset	368.0	257.8
Other assets	966.8	902.3
Total Assets	$ 25,089.0	$ 23,038.2
LIABILITIES AND EQUITY		
Current liabilities:		
Current portion of debt	$ 608.7	$ 292.9
Accounts payable	1,492.1	1,054.4
Accrued compensation and benefits	416.7	405.9
Other current liabilities	492.3	429.8
Total current liabilities	3,009.8	2,183.0
Long-term debt due after one year	5,946.1	5,496.3
Pension liabilities, net of current portion	279.4	328.1
Postretirement benefit liabilities, net of current portion	153.4	140.0
Non-recourse liabilities held by special purpose entities	1,161.9	1,170.2
Deferred income taxes	3,410.2	3,130.7
Other long-term liabilities	737.4	746.2
Commitments and contingencies (Notes 13 and 19)		
Redeemable noncontrolling interests	4.7	13.7
Equity:		
Preferred stock, $0.01 par value; 30.0 million shares authorized; no shares outstanding	—	—
Common stock, $0.01 par value; 600.0 million shares authorized; 254.5 million and 251.0 million shares outstanding at September 30, 2017 and September 30, 2016, respectively	2.5	2.5
Capital in excess of par value	10,624.9	10,458.6
Retained earnings (deficit)	172.4	(105.9)
Accumulated other comprehensive loss	(457.3)	(626.4)
Total stockholders' equity	10,342.5	9,728.8
Noncontrolling interests	43.6	101.2
Total equity	10,386.1	9,830.0
Total Liabilities and Equity	$ 25,089.0	$ 23,038.2

WESTROCK COMPANY
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended September 30,		
	2017	2016	2015
		(In millions)	
Operating activities:			
Consolidated net income (loss)	$ 698.6	$ (389.9)	$ 511.8
Adjustments to reconcile consolidated net income to net cash provided by operating activities:			
Depreciation, depletion and amortization	1,116.6	1,146.5	740.8
Cost of real estate sold	207.9	87.7	32.1
Deferred income tax (benefit) expense	(20.4)	(160.9)	161.4
Share-based compensation expense	58.0	75.7	49.2
(Gain) loss on extinguishment of debt	(1.8)	(2.7)	2.6
(Gain) loss on disposal of plant, equipment and other, net	(4.9)	(6.5)	1.0
Equity in income of unconsolidated entities	(39.0)	(9.7)	(7.1)
Pension and other postretirement funding (more) than expense (income)	(51.0)	275.6	(137.7)
Gain on sale or deconsolidation of subsidiaries	(5.0)	—	—
Gain on Grupo Gondi investment	—	(12.1)	—
Gain on sale of HH&B	(192.8)	—	—
Cash surrender value increase in excess of premiums paid	(34.0)	(27.6)	—
Impairment adjustments	56.8	200.8	6.9
Distributed earnings from equity investments	26.9	9.0	—
Other non-cash items	(38.9)	(42.1)	(14.5)
Land and Development impairment	46.7	—	—
Impairment of Specialty Chemicals goodwill and intangibles	—	579.4	—
Change in operating assets and liabilities, net of acquisitions and divestitures:			
Accounts receivable	(97.9)	36.6	106.1
Inventories	(48.2)	50.6	(27.2)
Other assets	(33.7)	(92.7)	(10.0)
Accounts payable	302.2	(197.1)	(38.4)
Income taxes	(67.1)	73.2	(23.6)
Accrued liabilities and other	21.5	94.6	(149.8)
Net cash provided by operating activities	1,900.5	1,688.4	1,203.6
Investing activities:			
Capital expenditures	(778.6)	(796.7)	(585.5)
Cash (paid) received for purchase of businesses, net of cash acquired	(1,588.5)	(376.4)	3.7
Debt purchased in connection with an acquisition	—	(36.5)	—
Cash received in merger	—	—	265.7
Corporate-owned life insurance premium paid	(4.4)	(9.0)	—
Investment in unconsolidated entities	(2.5)	(179.9)	—
Cash related to deconsolidation of subsidiary	(3.6)	—	—
Return of capital from unconsolidated entities	18.5	5.7	1.1
Cash received from affiliated entities	—	—	3.5
Proceeds from sale of subsidiary and affiliates	14.8	10.2	—
Proceeds from sale of HH&B	1,005.9	—	—
Proceeds from sale of property, plant and equipment	52.6	31.2	28.8
Net cash used for investing activities	(1,285.8)	(1,351.4)	(282.7)
Cash dividends paid to stockholders	(403.2)	(380.7)	(214.5)
Cash distributions paid to noncontrolling interests	(47.0)	(33.5)	(34.7)
Net cash used for financing activities	(655.4)	(231.0)	(718.0)
Effect of exchange rate changes on cash and cash equivalents	(2.1)	6.6	(7.2)
(Decrease) Increase in cash and cash equivalents	(42.8)	112.6	195.7
Cash and cash equivalents from continuing operations, at beginning of period	340.9	207.8	32.6
Cash and cash equivalents from discontinued operations, at beginning of period	—	20.5	—
Balance of cash and cash equivalents at beginning of period	340.9	228.3	32.6
Cash and cash equivalents from continuing operations, at end of period	298.1	340.9	207.8
Cash and cash equivalents from discontinued operations, at end of period	—	—	20.5
Balance of cash and cash equivalents at end of period	$ 298.1	$ 340.9	$ 228.3

Assumptions for the UFCF Valuation Model

In developing the model, I have made the following assumptions:

- Revenue Growth Rate, management offers guidance of 10% growth in revenue for FY2018; for the base case I have taken a conservative approach and considered a rate of growth of 8% for the first year of the projection and tapering towards 6% of growth at the end of the period.
- I have taken the amount of CAPEX announced by management for FY2018 ($1 billion) and reduced it for the following years to the amounts expressed in guidance.
- I have considered as Financing Costs those expressed in the Financial Statements as “fair value of debt step-up, deferred financing costs and unamortized bond discounts”, as in view of the cost of debt, is what most closely resembles the real amounts of financing costs. I have amortized those financing costs considering the average term of debt of 7 years.
- Debt structuration: will be shown lines below.
- Interest income is calculated assuming an interest rate of 3%, taking into consideration the prevailing interest in the 10-year Treasury (2.78%).
- The effective Income Tax for FY 2017 was 18.5%, but it considers among its variation components one related to “Sale of HH&B” (-5.0%) which I consider a one-time event, so, I’m considering an effective Income Tax Rate of 18.5 + 5.0 = 23.5% for FY2018 and following.
- Dividends: I have done the following adjustments to consider the impact of dividends:
    - Dividends do not affect Net Income.
    - Dividends have been subtracted from Retained Earnings, affecting directly Shareholders Equity.
    - Dividends have been considered as an outflow in the Financing Activities of the Statement of Cash Flows.
    - Dividends have been added to the Debt Schedule under Uses of Funds and included in the Subtotal uses of funds.
- From this management of Dividends, my Debt Schedule makes use of the “bad plug” for the first three years of the projection.
- Debt Schedule: I am applying an amortization period of 7 years for term loan, based on information in the Financial Statements. I have assumed willingness to pre-pay both revolver debt and term loan debt.

Determination of Cost of Debt

The following were individual components of debt (in millions) for FY2017:

	September 30, 2017	
	Carrying Value	Weighted Avg Interest Rate
Public bonds due fiscal 2017 to 2022	$ 1,484.5	4.2%
Public bonds due fiscal 2023 to 2027	1,368.8	3.6%
Public bonds due fiscal 2030 to 2033	975.5	5.2%
Public bonds due fiscal 2037 to 2047	178.8	6.3%
Term loan facilities	1,622.7	2.5%
Revolving credit facilities	436.4	1.1%
Receivables-backed financing facility	110.0	2.1%
Capital lease obligations	177.0	4.3%
Supplier financing and commercial card programs	130.3	N/A
International and other debt	70.8	6.8%
Total debt	6,554.8	3.6%
Less current portion of debt	608.7	
Long-term debt due after one year	$ 5,946.1	

Assumptions and Determination of WACC

- I am assuming a Cost of Debt based on the weighed average of cost of debt for FY2017 as stated before, it's 3.6%
- I am assuming the weight of Equity and weight of Debt according to Target D/E ratio for the industry (Damodaran data); according to his data, the Target D/E for the Packaging & Container industry is 0.5122, which gives us:
  - Target D/EV = 35%
  - Target E/EV = 65%
- I am using the assumed Corporate Income Tax Rate calculated for the years of the projection = 23.5%
- For the Cost of Equity, I'm using CAPM, with the following assumptions:
  - Risk-free rate: 10-year Treasury yield as of 4/19/2018 = 2.92%
  - Beta of WestRock: 1.72 according to Yahoo! Finance.
  - Market premium: 6%

$$Cost\ of\ Equity = 2.92\% + 1.7 * 6\% = 13.12\%$$

- From there, I have applied the formula for Weighted Average Cost of Capital:

$$WACC = \frac{E}{E+D} * r_{Equity} + \frac{D}{E+D} * r_{Debt} * (1 - T_c)$$

$$WACC = 65\% * 13.12\% + 35\% * 3.6\% * (1 - 23.5\%) = 9.49\% \approx 9.5\%$$

I have applied the WACC of 9.5% in the UFCF Valuation Model.

Sources

- WestRock 10-K FY 2015 Report
- WestRock 10-K FY 2016 Report
- WestRock 10-K FY 2017 Report
- WestRock FY 2017 Investor Day Presentation
- WestRock 1Q FY 2018 Presentation
- International Paper Co. 10-K FY 2017 Report
- Avery Dennison Corp. 10-K FY 2017 Report
- Packaging Corp. of America 10-K FY 2017 Report
- WestRock website
- Reuter's website
- Yahoo! Finance website
- Financial Visualizations Website
- Credit Suisse – WestRock Report Equity Research, April 2017
- ValueLine – WestRock Company Report, March 2018
- Ford Equity Research – WestRock Report Equity Research, March 2018
- The Street Ratings – WestRock Report Equity Research, April 2018
- CFRA – WestRock Company Stock Report, March 2018
- MarketLine – Rock-Tenn Company Profile, May 2015
- ValueLine – Packaging & Container Industry Report, March 2018
- S&P Global Ratings – RatingsDirect – Key Credit Factors for the Containers & Packaging Industry, November 2013
- Damodaran Industry data, NYU, Stern School of Business.
- GlobeNewsWire - WestRock Signs Definitive Agreement to Acquire KapStone for $35 per Share, January 2018
- AdvisorNews - KS Investor Notice: Investigation over Acquisition of KapStone Paper and Packaging Corp, February 2018
- Benzinga – WestRock rides on Acquisition, Corrugated Packaging Demand, by Zachs Investment, February 2018
- B. Graham – The Intelligent Investor
- J. English – Applied Equity Analysis