A Work Project, presented as part of the requirements for the Award of a Master Degree in Economics / Finance / Management from the NOVA – School of Business and Economics.

HOLDing ON TO STABILITY
WHIRLPOOL CORPORATION

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A Project carried out on the Master in Finance Program, under the supervision of:

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Abstract

HODing ON TO STABILITY is a paper presenting the reader a full valuation on Whirlpool Corporation which will culminate in a target estimated price for December 2020 and a consequent investment recommendation. We stand by a HOLD recommendation since we expect limited positive return, as we anticipate the company to remain stable in future years, not outperforming nor underperforming the market.

Keywords (up to four)

Hold
Household Appliances
Innovation
Sustainability

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NOVA SCHOOL OF BUSINESS & ECONOMICS

WHIRLPOOL CORPORATION

COMPANY REPORT

HOUSEHOLD APPLIANCES

03 JANUARY 2020

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HOLDing ON TO STABILITY

- Whirlpool Corporation derives half of its revenues from North America, where it is sector leader and it is expected to continue consolidating its position. It also counts with strong presence in emerging markets, mainly in Asia and Latin America, where it should be able to continue profiting from consistent penetration rates allied with solid growth in these areas.
- External factors such as the current political tension between the US and China may pose a threat to the company's performance, since steel and aluminium are among the core raw material used by Whirlpool in manufacturing processes.
- Whirlpool's coverage is initiated with a HOLD recommendation, as it is expected limited positive return. With FCF's equalling 3 to 4% of revenues going forward, discounted at a 5.15% WACC, and backed up with a multiples analysis, an investor should expect a 1.46% capital gain over a 1-year period. Dividend yield is expected to be 0.44%, which yields a total 1-year return of 1.90%.

Company description

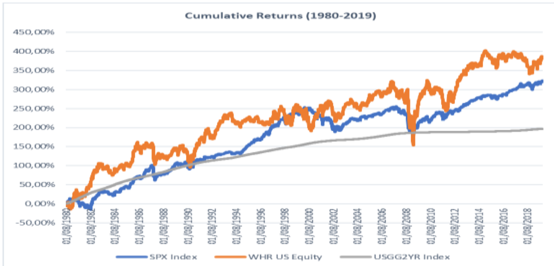
Whirlpool Corporation is a leading manufacturer and distributer of major home appliances. Based in Benton Harbor, Michigan, the company has strong presence worldwide. The core products include laundry appliances, cooking equipment, refrigerators and freezers, and other small household equipment.

Recommendation:	**HOLD**
Price Target FY20:	**$147.30**
Price (as of 26-Jan-2019)	**$145.18**

Bloomberg

52-week range (S)	99.40-163.64
Market Cap (€m)	$9.316B
Outstanding Shares (m)	63.5

Source: Bloomberg



Source:Bloomberg

(Values in $ millions)	2018	2019E	2020F
Revenues	21 037	20 789	21 085
EBIT	526	1422	1444
Net Profit	-504	142.54	399.61
EPS	0x	2.24x	6.60x
P/E	0x	8.72x	22.32x
D/E	1.26	0.86	0.84
Debt/ EBITDA	5.15x	2.45x	2.61x
ROIC	3.11%	8.97%	9.33%
Shares Outstanding (thousands)	63.528	63.528	60.546

Source: Annual Reports and Data Analysis

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Executive summary

Whirlpool Corporation is a world's leading manufacturer of home appliances, with strong presence worldwide, through several brands under its portfolio, with over $21 billion in annual sales.

The company operates mainly on the major home appliances market, comprising, among others, washing machines, refrigerators and cooking machines.
Leader in North America, which account to more than half of its sales, the US multinational have been registering significant growth in the Asian and Latin American markets as well.
We expect Whirlpool to keep consolidating its leading position around the globe, driven by increasing market penetration in developing regions, efficient cost structure, and leadership in innovation and sustainability.

Home appliance is a highly competitive industry with well-established companies such as Arcelik, Bosch Siemens, Electrolux, Haier Group, Kenmore, LG Corp, Mabe, Midea, Panasonic and Samsung. are

Increased competition from technological firms that have strong consumer brand equity, such as Samsung or LG Electronics, as well as the new regulations/ tariffs, pose the biggest threats for the company's growth.

Trading in the New York Stock Exchange since 1980, WHR (ticker) has registered strong performance over the past decades, averaging 9.74% return per year against 8.22% from the S&P500.

We anticipate the company to maintain its capital structure going forward at 70% Debt to Equity. With a 3.46% cost of debt and 6.33% cost of equity, Whirlpool Corporation is expected to discount its future cash flows at a 5.15% WACC.

Our projections aim at generating Free Cash Flows of 3 to 4% of Net Sales in the long run. While a DCF analysis suggests that Whirlpool is currently undervalued, the multiples analysis indicates the company is trading at premium on the stock market. Overall, the estimated target price for December 2020 is $147.30, which leads us to believe Whirlpool is fairly priced.

The company has a good record in past years when it comes to paying back to its shareholders, whether it is through dividends payments or share repurchases. We anticipate the company to pay a $0.65 dividend per share throughout 2020, and to keep buying back shares opportunistically in future years.

Allied with an estimated capital gain of 1.46%, the dividend yield of 0.44% indicates an investor should anticipate a 1.90% total return over a 1-year period, hence our recommendation is to HOLD.

Company overview

Company description

Whirlpool Corporation is one of the world's leading manufacturer of home appliances, with over $21 billion in annual sales. Based in Michigan, US, the multinational operates worldwide, counting with 92 thousand employees working in 65 manufacturing and technology research centres. Currently the company markets several brands under its portfolio, 6 of them with over $1 billion in sales, such as KitchenAid or Indesit.

Whirlpool's beginnings go back to the 1910's when Lou Upton and his uncle, Emory Upton, opened in St. Joseph, Michigan, a machine shop under the family name. The company soon secured its first customer, the Federal Electric division of Chicago-based Commonwealth Edison and started to grow from there.

Although in some of its early years the company survived by manufacturing weapon parts and related products for the World War II, it was only on the mid-1950's, through some strategic mergers and deals, that it started to establish itself as a top appliances manufacturer.

Being a pioneer company in Social and Environmental responsibility, Whirlpool Corporation would then go to achieve an endless number of awards, not only for its operational excellence, but also for its leadership in reputation, citizenship, innovation and sustainability.

The company's success over the past years is based on 4 fundamental pillars: strong global competitive position, outstanding brand portfolio, consumer-focused innovation and efficient cost structure. For the upcoming years, we expect the company to further strengthen the industry-leading position through delivering product leadership, by redefining what product is and by building in-house digital capability to take full advantage of the new Internet of Things (IoT).

Being a mature and well-established company, we expect the company to remain on the same path of continuous innovation and that no significant strategic deviations will occur. The bet on smart all-around integrated systems, which the user can operate and configurate from distance using its smartphone, has been strong on these past years, and we expect it to continue driving the company forward.

In an era of climate change, where we are close to a tipping point that may endanger the future sustainability of our planet, Whirlpool Corporation is playing its part to avoid environmental rupture. The company has long been committed to reducing water and energy intensity of its operations, and it is already one of the largest on-site users of wind energy in the U.S. The goal is to continue investing in wind and solar energy programs, driving towards zero waste-to-landfill, and using continuously more recycled products in manufacturing processes.

Shareholder structure

Whirlpool Corporation currently has a Market Capitalization of approximately $9.3 billion, with 63.5 million shares outstanding, of which roughly 95% belong to institutional owners, 1% to insiders and the remainder to individual stakeholders.

Among the institutional owners, the top stakeholders are The Vanguard Group, Primecap Management Company and Blackrock Inc, who jointly own almost 1/3 of the company, with 12.85%, 12.29% and 4.96%, respectively[1]. The remainder is owned by smaller funds, who own minor stakes on the company, contributing to a relatively highly diluted ownership structure.

Figure 1 - Top 7 Institutional Shareholds

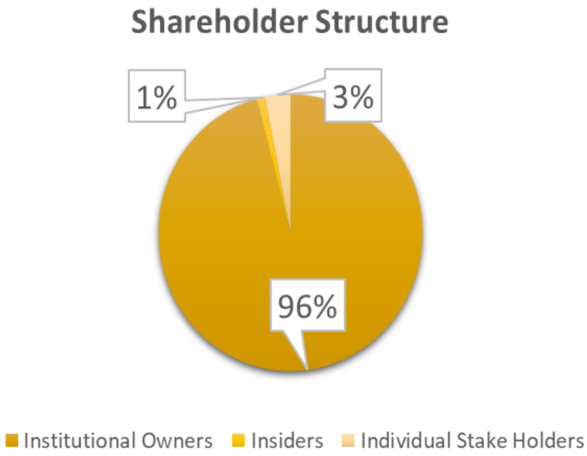

Figure 2 - Shareholder Structure

Shareholder Return

Whirlpool Corporation is committed to delivering strong returns to shareholders, whether it is through dividends payments or through share repurchases programs. On the last 5 years, the company bought back more than 10M shares, having currently 63.5M outstanding. Following the trend in recent years, we expect the company to keep buying back shares when opportunistic. Our projection aims at 60.5M shares outstanding by December 2020.

[1] Source: Nasdaq and CNN

Allied with shares buybacks programs, Whirlpool has also consistently been providing returns to its stakeholders through dividends payments, returning an all-time record of $1.5 billion in 2018. Going forward, we expect the company to maintain a payout ratio of 25 to 30% of trailing 12-months ongoing earnings, which is aligned with management's projections, meaning that throughout the fiscal year 2020, an investor who holds Whirlpool stock, should be expecting to receive dividends of $66 cents per share.

Corporate Governance

Whirlpool Corporation Board of Directors is comprised by 12 independent directors and one employee director, who is Marc Bitzer, the CEO. Each Board committee is comprised exclusively of independent directors who meet the independence standards under the NYSE listing standards.

Other corporate governance features include annual director elections, majority voting in director elections, proxy access, shareholder engagement, a global code of business conduct and ethics that applies to all employees, officers and directors, and annual evaluations by the Board of the effectiveness of the Board and its committees.

The Board is characterized by its diversity and experience of independent directors, counting with 17% of female presence, 1/3 of racial/ ethnic minorities, more than half of the directors already worked outside the US and 75% of them is a current or former CEO.

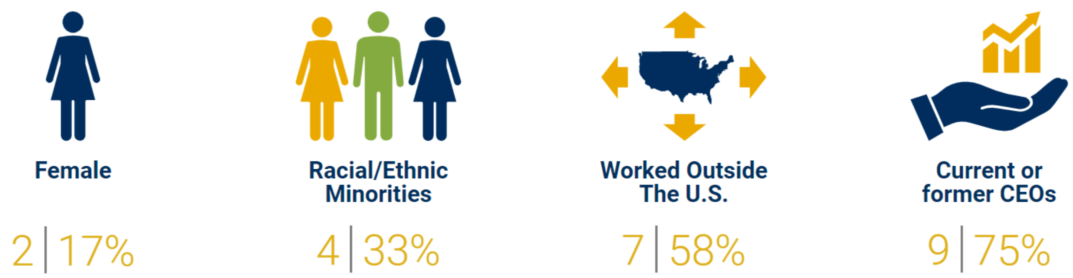

Figure 3 - Whirlpool's Board Diversity

In our view, these practices by the Board of Directors provide the company an effective mix of business expertise, company knowledge and diverse perspectives, which contribute to increasing the transparency and fairness of the decision-making process in Whirlpool.

Company Analysis

Market Description

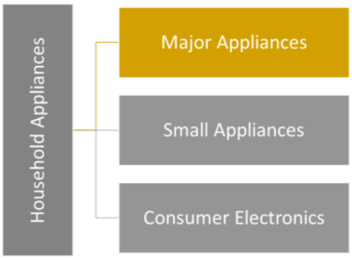

Figure 4 – Household Appliances industry's segments

The Household Appliances industry can be divided into three segments: major appliances, small appliances, and consumer electronics. Major home appliances, also known as white goods, consists in products used in housekeeping tasks that are generally equipped with electrical, gas, plumbing and ventilation systems. These can be cooking or laundry appliances, refrigeration, and others. Small appliances can be classified as products, which, contrary to major appliances, mobility around the house should not be a limitation. These are usually found on top of countertops and tables, as coffee machines, irons and blenders are examples of. The third segment is the consumer electronics. These consist of entertainment devices and home-office activities such as televisions, music systems and printers. Technological innovations and market trends are making these devices a fast-growing industry. Whirlpool focuses its business in the major home appliances segment, of which it is the world's leading company.

Whirlpool's Average Market Share by Region

North America	44%
	#1 Major Home Appliances
EMEA	15%
	Significant Position
Latin America	17%
	Significant Position
Asia	5%
	Present in several countries

Figure 5 – Whirlpool's Average Market Share by Region

Whirlpool holds the number-one share position, mainly in North America, with a market share above 44% in home laundry appliances category, but also a strong position in the major part of Latin America and Europe, Middle East and Africa (EMEA) countries, reaching an average of 14,88% and 16,54% share in the same market category. Asia is the region where Whirlpool possesses its lowest share in every category. In this last region, the market is led in many countries by Haier Group with market shares above 20% and, in some cases, 40%. The American company registers a strong presence in a few Asian countries, but when considering the combined average Asian share, its highest value is related to home laundry appliances category, where it achieved 8,60% share in 2018.

Although its robust presence in the market sound like it is easy to reach, the competition in the industry is intense with heavy players. Home appliance is a highly competitive industry. Companies such as Arcelik, Bosch Siemens, Electrolux, Haier Group, Kenmore, LG Corp, Mabe, Midea, Panasonic and Samsung are well-established firms that have strong consumer brand equity. Whirlpool is facing these competitors who are able to adapt to changing consumer preferences, and to several factors that consumer preferences are based in, including selling price, product features and design, performance, innovation, reputation, energy efficiency, quality, cost, distribution, and financial incentives, such as promotional funds, sales incentives, volume rebates and terms. The inability to produce positive and quick answers to changes in costumers' preferences can represent a loss of market share.

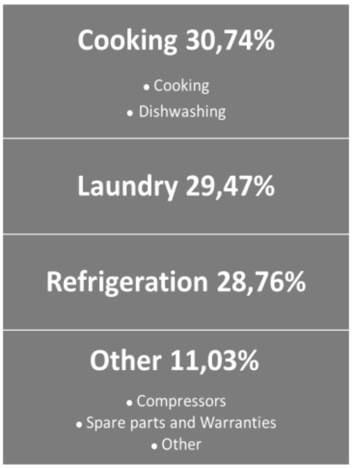

Figure 6 – Whirlpool’s Net Sales by product category

Within the major home appliances, Whirlpool Corporation splits its Net Sales into four categories regarding product type. The Cooking Appliances category represents more than 30% of Net Sales, considering its cooking, dishwashing appliances and related accessories. The Home Laundry Appliances account for 29,47% of Net Sales. The Refrigeration category consists of refrigerators and freezers and its sales are 28,76% of Total Net Sales. There is still the “Other” category with 11,03% share. This category includes compressors for refrigeration systems, spare parts and warranties and subscription arrangements and licenses. All these percentages refer to 2018 year, noting that in past years there were no significant changes. All markets of these major three categories have been showing similar behaviour and it is not expected to exist significant changes in the future, hence we anticipate these shares of Net Sales to remain constant for Whirlpool Corporation in the next years.

The Major Home Appliance industry is highly globalized. Therefore, Whirlpool conducts its business through four regions: North America; Europe, Middle East and Africa; Latin America; Asia. Each geographical region is in a different stage and presents different growth characteristics.

Figure 7 – North America % of Total Net Sales and future expected tendency

North America is the most important market regarding Whirlpool’s Net Sales, representing more than 54%. The American company is the player with higher market share in this matured-staged region, more than double of the second largest player, Haier Group. Annual growth rates slowly increase with limited potential for volume growth. In an American region, where the sector’s penetration rates are close to 100% in a vast variety of major home appliances[2], demand is characterized by product replacement. Innovation concerning eco-friendly & energy-efficient trends and technological smart applications may continue to further boost the market growth. In sum, the tendency of the market size is to register a diminishing increase in the next years, while Whirlpool Corporation is able to maintain its market share growth rate. Overall, the North American Region is expected to remain the main contributor for Whirlpool’s net sales with a share between 52% and 54% in the following years.

EMEA, mainly represented by European developed countries, also presents volume growth limitations with market annual growth rates under 1%, essentially justified by the increase in the number of households. The decrease in the average household size, together with market demand trends for efficiency and convenience, reduces opportunities for additional large appliances. Some examples of how these factors negatively affect home appliances volume sales

[2] Electrolux Group – Market Overview 2018: https://www.electroluxgroup.com/annualreports/2018/files/elux-2018/Market_overview_2018.pdf

are the limited available space in houses and multi-function machines[3]. EMEA is currently the second larger Net Sales' contributor with more than 20% share. Its performance has been declining, dropping from 26,81% to 21,56% of Net Sales in 3 years, mostly caused by losses in units sold and market share. Whirlpool's board announced strategic actions in order to recapture volume and strength relations with trade costumers. The expected future for Whirlpool in EMEA is not promissory. With the small market size growth being captured by the competitors, the American Company will continue to lose market share and decrease revenues. Its three main European competitors BSH Hausgeräte GmbH, Electrolux AB, and Haier Group, after the acquisition of Candy SpA in 2018, are being able to maintain their strong market shares, while LG Corp and Samsung Corp are increasing their presence in several countries. Our forecast indicates EMEA region will reduce another 5% of its contribution share of total net sales in the next 10 years. In 2030, EMEA is expected to represent around 15% of Whirlpool's Revenues.

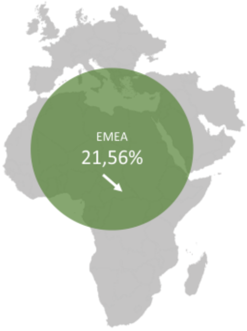

Figure 8 – EMEA % of Total Net Sales and future expected tendency

In a contrary circumstance, the markets in Latin America are responding positively to new products launched by Whirlpool, resulting in increasing market share in several countries. Competing against national companies such as "Alladio E Hijos SA, Jose M" and "Controladora Mabe SA de CV" as well as Samsung and LG Corp, the American company is presenting good results regarding its market presence. The increasing living conditions and larger urbanization are driving sales, while the economic and political uncertainties play their role in the way. Adding the factors up, since 2015, when it registered 16,03%, Latin America increased their share of Net Sales to 17,20% in 2018. The growing trend is expected to continue in the next years, as a result of the market share gain and market size growth. In 2023, we believe Latin America region will overtake EMEA and become the second major net sales' contributor.

Figure 9 – Latin America % of Total Net Sales and future expected tendency

The Asiatic region market is being positively driven by the substantial rise in the middle-class population and population lifestyle. The easy access to retail channels anticipates a durable strong growth that have been previously boosting Whirlpool's sales in this region by more than 3% annually since 2015. In an extremely competitive region, Whirlpool has in these countries its weaker presence in the market of around 5%. The competition here differs across every country, with the biggest player varying from Haier Group to Panasonic Group or Midea Group Co Ltd. Asia is the lowest contributor for Whirlpool's revenues. In 2018 Asia represented 7,54% of total Net Sales, but this share has been

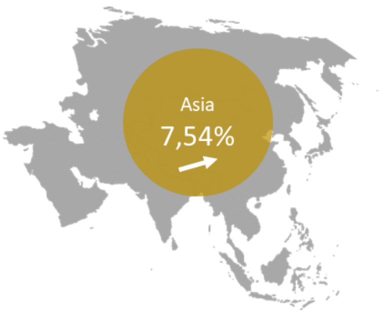

Figure 10 - Asia % of Total Net Sales and future expected tendency

[3] Passport - Home Laundry Appliances in Germany: https://fesrvsd.fe.unl.pt:2129/portal/analysis/tab

gradually rising. It is expected to keep its path in the following years, reaching close to 10% share in 2030.

Strategic Analysis

Strengths	**Weaknesses**
- Strong Brand Image/ Reputation; - Strong Presence in every region (#1 market share in North America and Latin America; significant presence in Asia and EMEA regions); - Established Global Distribution Network; - Low dependence on specific suppliers; - Expertise and knowledge of the market;	- Importance of US Market on the Total Revenues; - Dependence on the Home Appliances Market/ Low variety of portfolio categories; - Dependence on Lowe's Trade Costumer; - Current Inability in avoiding market share loss in EMEA;
Opportunities	**Treats**
- Global Market and Penetration Rate Growth; - Fast Market Growth in Latin America and Asia markets; - Trade War/ Tariffs applied to foreign competitors in the US market;	- Increasing competition; - Consumers trust on competitors' Brands (mainly LG Electronics and Samsung); - Change of Consumers' preferences towards Smart Home Appliances (Software and Apps); - Trade War/ Tariffs on raw-materials importation in the US market;

One important strength is Whirlpool's strong bargaining power. The company generally uses several suppliers in each region, avoiding being dependent on a single supplier when purchasing their wide range of raw materials or other essential components to its business. Even so, there are some existing risks regarding suppliers that could adversely affect the operational results. Not all of the company's arrangements provide for guaranteed supply, but alternative sources are generally available. An eventual supply disruption may incur unanticipated costs if it requires transitioning to a new supplier or if the usage of alternative material at premium costs is required. In every case, suppliers bargain power remains relatively low when facing Whirlpool's large scale, which makes us believe there will be no increases on the cost of goods sold per unit. Regarding a possible decrease, the management team is focused on improving the product mix efficiency, but there were no visible results so far. With the new technological functionalities and add-ons in the home appliances, we do not expect Whirlpool to be able to improve its COGS in the nearly future.

The dependence on Lowe's Trade Costumer represents a major weakness for the company. Whirlpool Corp has more than 10% of its net sales from a large trade costumer. Lowe's, a North American retailer, is the main Whirlpool Corp costumer of all product categories. It represented approximately 12%, 10% and 9% of its consolidated Net Sales in 2018, 2017 and 2016, respectively. Whirlpool sells the most part of its products through short-term contracts, forcing the company to meet costumers' demand requirements in order to keep its key trade costumers. In the home appliance's customer base, the large sophisticated trade customers have significant leverage as buyers over their suppliers. Through the years, costumers have been demanding competitive products, services and prices due to the vast brand options available in the market. It may imply selling at lower prices and increasing promotional programs, while the inflation tends to boost the prices up. The overall result is ambiguous. In the recent years, Whirlpool's average selling price has been constant across all regions, therefore we assume it to remain the same value.

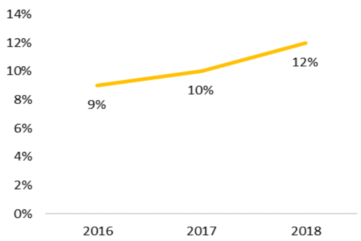

Figure 11 – Lowe's % of Whirlpool's Total Net Sales

The main existing threat concerns the evolution of the market towards the technological world. Companies already involved in tech products markets with global distribution may take advantage of possible synergies and expand their business to the areas of Whirlpool's business. The know-how and infrastructures used in the production and development of products and services reduces the high initial investment needed to penetrate the market. The increase in demand in regions such as Asia and Latin America may attract companies to expand their business or study possible mergers and acquisitions. Whirlpool have built in-house digital capabilities to face the changes in consumer behaviour. We believe its continued investment in consumer-relevant innovation will be enough to keep up with the market evolution.

Whirlpool launched approximately 100 new products in 2018.

Examples:
Smart All-In-One Washer & Dryer; voice enabled devices; controlling apps…

If in the one hand, we expect Whirlpool to being able to develop and improve its products to handle the new consumers digital demands, on the other hand, the American company is not being able to deal with the increasing trust and preference on competitors' brands in the EMEA region, mainly Europe. As already referred, we believe Whirlpool will continue to lose market share in this region. A revenue loss offset by the expected increase in the rest of the regions.

New Regulations

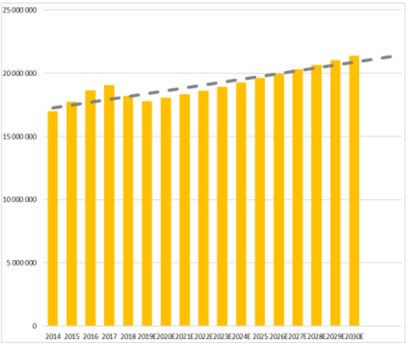

Figure 12 – Annual Number of Units Sold in Home Laundry Appliances Market in USA

With the market heading towards technology smart innovations, LG Electronics and Samsung have great prospects about their role and presence in the industry. Facing an intense competition from these two South Korean-based large electronics companies, Whirlpool Corp filed a petition to avoid the evolution of two of its main competitors[4]. On January 23, 2018, the Office of the US Trade Representative announced tariffs on washing machines produced outside the country, in order to boost domestic appliance producers. The foreign companies started to plan an increase in their production inside United States to avoid the tariffs. However, on March 1, 2018 the US Government announced that steel and aluminium imports would be taxed with 25% and 10% tariffs, respectively. As a result, and given the intensive competition in the laundry appliance industry, companies were forced to rise prices sharply, leading to a generalized decrease in the units sold. The effects of this law change will affect the industry's units sold during 2019 and it is only in 2024 that it is expected the volume of units sold in the USA to reach the levels registered in 2017, before the law change.

Capital Structure

Whirlpool is a relatively highly levered company, currently with a D/E ratio higher than 1, as it just entered into a $1 billion term loan agreement in the second quarter of 2018, which was used to fund accelerated shares repurchases of $1 billion through a modified Dutch auction tender offer.

Upon completion of the Embraco compressor business unit sale, we expect the term loan will be paid in full and its capital structure will return to recent historical levels. Thus, it was assumed that the company's target Debt to Equity ratio is around 70%, in order to be consistent with previous years, and similar to industry average.

[4] Washington Post: https://www.washingtonpost.com/us-policy/2019/04/23/trumps-washing-machine-tariffs-cost-us-consumers-every-job-created/;
American Enterprise Institute: https://www.aei.org/carpe-diem/washing-machine-tariffs-started-trumps-trade-war-result-historic-3-month-increase-in-washing-machine-prices/

Going Forward

Sales Forecast

Figure 13 – Annual Growth Comparison between Whirlpool’s sales and the average market size

Despite the several different circumstances across the different geographical regions and their product categories markets, Whirlpool has been able to slightly increase Total Net Sales and it is expected to continue that path. The forecast predicts sales to increase with an annual growth rate between 1,30% and 1,80% in the next years. Driven by the market evolution, Whirlpool Corporation is influenced by the market it is involved and its sales fluctuate with market variations.

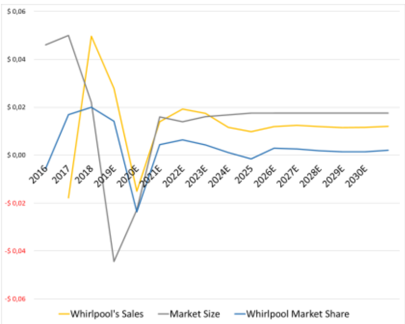

Figure 14 – Annual Growth Comparison between Whirlpool’s sales and the average market size in North America

In the North American region, the Trade War between USA and China may have an important influence in the future developments of the industry. The impact of these tariffs upon Whirlpool are ambiguous, as it is extremely hard to predict competitors’ response to the tariffs applied on outside-US produced washing machines, as well as Whirlpool future adjustment to steel and aluminium importations tariffs. Last year was the first period since the announced tariffs, and Whirlpool registered an increase in the market share in every product category, similar to previous years. Therefore, this forecast assumes the impacts of both tariffs offsets each other and Whirlpool market share will continue to behave as before. Driven by the increase of median disposable income per household together with the increasing number of households, the market size is expected to recover from the imposed tariffs and register an annual growth moving towards 1,75%. As a result, Whirlpool’s North America revenues are expected to verify annual growth rates around 1,30%, slightly below the forecasted average of Total Whirlpool’s Sales annual growth of 1,52% for the next 10 years. Maintaining its contribution share around 52% and 54% in these years.

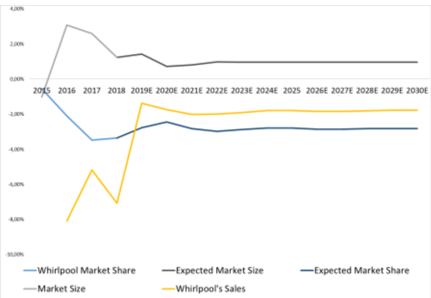

Figure 15 – Annual Growth Comparison between Whirlpool’s Sales, Market Size and Market Share in EMEA

Regionally analysing, EMEA is the only region with a negative impact on the forecasted Whirlpool’s growth. The increase in the number of real estate constructions, as well as the rise of the disposable income, which is making the European market size grow, is not being captured by Whirlpool, but by its competitors. The loss of market share in European countries has been the main challenge for the giant American and it is likely to continue. The predictions assume that the announced strategic actions facing this problem will not avoid the loss. With the market tending to its “digital era”, it is expected the costumers to continue to choose competitors, essentially Samsung and LG Corp, over Whirlpool, due to their strong and trustful increasing brand image. As a result, projections indicate EMEA will be overtaken by Latin America within 5 years, regarding Total Net Sales share, registering contributions of approximately 18,78% and 19,25%, respectively.

Figure 16 – Annual Growth Comparison between Whirlpool's Sales, Market Size and Real GDP in Latin America

Latin America is the region with the most positive growing prospects, as it is also the most unpredictable one. The lack of available information about some countries where Whirlpool operates, such as Bolivia, Ecuador, and Peru, create limitations to the projections. The economic and political uncertainties that currently characterize Latin American countries are also a challenge difficult to overcome and predict. Acknowledging these limitations, the forecast was conducted avoiding atypical growth years in the input data, regarding Whirlpool's market share and assuming for the future the same behaviour that were driving its share in the past. Besides the drivers of the EMEA and North American markets, in this less developed region, the market size in which country are sensible to their national economic performance. The changes in real GDP growth are reflected in the number of units sold. Thereby, based on the market size and market share growth, Latin America is expected to register sales with annual growth rates between roughly 3,7% and 4,7% in the next years

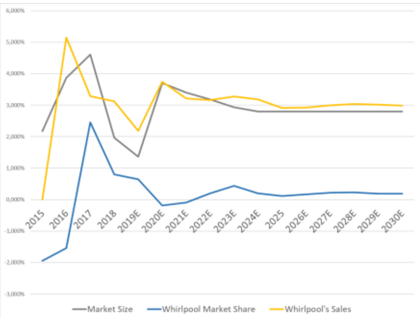

Figure 17 – Annual Growth Comparison between Whirlpool's Sales, Market Size and Market Share in Asia

Although Whirlpool does not have a leading position regarding market share in the Asian region, the American company has been verifying positive results and the forward-looking perspective is optimistic. The expansion of the middle class and urbanization together with the increasing disposable income and number of households drive the market to strong annual growth rates that are expected to continue. In both Refrigerating Appliances and Large Cooking Appliances categories, Whirlpool will continue to increase its market share. Moreover, the projected market performances indicate annual growth rates above 2% for each category. Regarding the Laundry Appliances category, the rapid market growth around 4% is anticipated to offset the increasing competition that has been able to gain approximately 1% market share annually from Whirlpool. Summing up, the forecast point to moderately constant annual growth rates between approximately 2,90% and 3,8% in the following years after 2019. The minor contributor region to Total Net Sales is expected to increase its participation from 7,54% to 9,42% until 2030.

Valuation

Stock Performance

Whirlpool Corporation is listed in the New York Stock Exchange (NYSE) since August 1980, when it started trading at $3.33 per share. 30 years later, it is trading at almost $150, generating a total appreciation of 380%. When plotted against the S&P500, the stock performed better, on average, throughout this 30-years period (9.74% vs 8.22%).

Figure 18 - Cumulative Returns Whirlpool x SPX Index x Risk-free

Peer Selection

In order to evaluate the company's fair price, it was conducted both a DCF and a Multiples Valuation. To perform them as fair as possible, Whirlpool's comparables were considered. Although there are some huge players in this market, that are considered competitors, such as Robert Bosch GmbH, Samsung Group or LG Electronics, Household Appliances is not their core business. Hence, these companies were not considered in the peer analysis, since they would bias the estimates.

In the US there is no company that could be considered a comparable, meaning that there is no company which core activity is manufacturing and selling household appliances, and with a structure similar to Whirlpool's. Thus, in the comparables group, only overseas companies were considered, leading to a final list with: Electrolux Group (Sweden), Groupe SEB (France), Haier Electronics Group (Hong Kong), Arçelik AS (Turkey), Hangzhou Robam Appliances (China).

Company	Market Ca	D/E	EV/EBITD	EV/EBIT	P/E	P/S	Status
WHIRLPOOL CORP	$9,32	70%	7,35x	10,31x	9,08x	0,46x	Comparable
HAIER ELECTRONICS GROUP CO	$68,17	8%	7,77x	9,00x	13,04x	0,71x	Not Comparable
ELECTROLUX AB-SER B	$72,12	70%	6,17x	10,35x	12,60x	0,52x	Comparable
SEB SA	$6,79	80%	9,46x	12,12x	14,14x	0,93x	Comparable
HANGZHOU ROBAM APPLIANCES-A	$31,26	7%	14,00x	15,39x	16,89x	3,99x	Not Comparable
ARCELIK AS	$13,56	100%	5,33x	6,80x	10,59x	0,44x	Comparable

Table 1 - Comparables Table

As illustrated on the table above, where the companies with core business similar to Whirlpool were considered, you can see a couple of key metrics used to evaluate if these competitors were indeed comparables.

It becomes clear when analysing the table that the two Asian companies should not be considered comparables of Whirlpool. Both Haier Electronics Group and Hangzhou Robam Appliances are way less leveraged than the rest of the group, which creates huge differences in capital structure. Besides, the latter can also be a considered an outlier when it comes to valuation multiples.

Free Cash Flows

To assess the true value of Whirlpool's stock, we conducted a DCF analysis, in which the future cash flows and the WACC are the most important inputs.

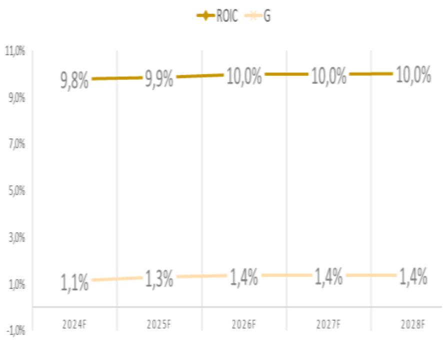

Figure 11 - ROIC and G at Steady State

We expect Whirlpool to generate FCFs of 3 to 4% going forward, mostly driven by the projected increase in NOPLAT. Investment Cash Flows are also expected to increase, primarily due to the expansion of Property, Plant and Equipment. Offsetting this effect, it is expected Net Working Capital needs to decrease, as the company will improve its Cash Conversion Cycle. On overall, Investment Cash Flow is expected to increase by less than the Operational Cash Flow, which results on a positive going-forward Return on New Invested Capital (RONIC) of 1.5%, on average.

Free Cash Flows were considered until 2028, where Growth Rate and ROIC reach a steady state at 1.43% and 10%, respectively.

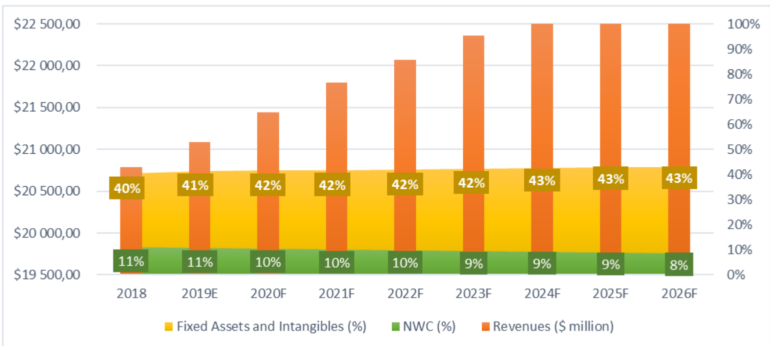

Figure 20 - NWC and CAPEX as % of Revenues

When it comes to value creation, it is important to analyse ROIC, and particularly its relationship with WACC. Whirlpool has been showing an increasing ROIC until 2017. In 2017 ROIC decreased 43,90%, from 11,02% to 6,18%, due to an one-time charge of approximately $420 million as result of the enactment of the Tax Cuts and Jobs Act. Removing the injurious effect of this act, ROIC would have amounted 10,02%. In 2018, another variable affected the ROIC value, this time an Impairment of Goodwill and Other Intangibles of $747 million reduced the Core Operational Margin, decreasing ROIC from approximately 11% to 3,11%.

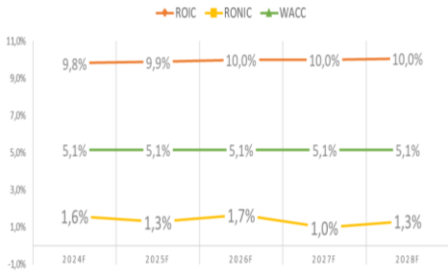

Figure 21 - ROIC x WACC x RONIC

Going forward, we expect ROIC to return to recent levels, gradually increasing until reaching 10% in the steady state. As for the WACC, as it is described in the section below, we believe it is fixed at 5.15%. Whenever ROIC is higher than WACC, the company is creating value, since the cost of capital is lower than the return generated by the invested capital on the core operations of the company. With this in mind, it becomes clear that Whirlpool is adding value to its shareholders, with a gap of almost 5% between ROIC and WACC.

Cost of Capital

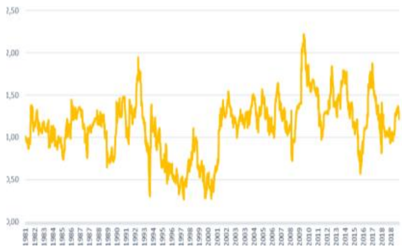

Figure 22 - Whirlpool's 1-year Rolling Beta

To arrive to Whirlpool's Cost of Capital to discount the FCFs, we used the CAPM to find the Cost of Equity and the YTM of a recently issued bond with 10 years maturity, to find the Cost of Debt.

The computations for the beta were done using Whirlpool's comparables identified above as benchmark, according to each peer respective capital structure. Regarding Whirlpool, the 1-year rolling beta has been quite volatile over the 40-years period analysed, as it can be seen on the graph on the left, averaging 1.13.

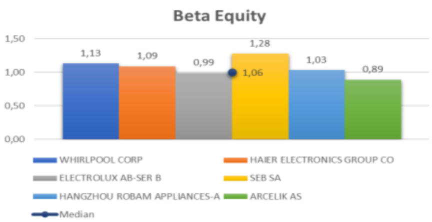

Figure 23 - Equity Betas of Whirlpool and Comparables

Unlevering at each comparable capital structure, the median beta is 0.71, which was then relevered at Whirlpool's target capital structure to find a final 0.85 equity beta. Risk-free rate was considered to be 1.55%, the interest rate of the US Generic 2-years Government Bond. As for the Market Risk Premium, we considered 5.6%, as it was the average risk premia in the US in 2019[5].

[5] From Statista

Risk Free	1,55%
MRP	5,60%
Beta	0,85
Cost of Equity	6,33%

Table 2 - Cost of Equity

Using these as inputs, we arrive to a company's cost of equity of 6.33%[6].

Company	Beta Equity	Beta Debt	Equity	Debt	Debt + Equity	Beta Unlevered
WHIRLPOOL CORP	1,13	0,50	$5 570 494 864,88	$3 899 346 405,42	$9 469 841 270,30	0,87
HAIER ELECTRONICS GROUP CO	1,09	0,00	$3 860 132 637,45	$308 810 611,00	$4 168 943 248,45	1,01
ELECTROLUX AB-SER B	0,99	0,08	$2 174 709 021,11	$1 522 296 314,78	$3 697 005 335,89	0,62
SEB SA	1,28	0,21	$2 639 150 035,16	$2 111 320 028,13	$4 750 470 063,29	0,80
HANGZHOU ROBAM APPLIANCES-A	1,03	0,10	$905 824 814,80	$63 407 737,04	$969 232 551,84	0,97
ARCELIK AS	0,89	0,26	$1 618 742 191,52	$1 618 742 191,52	$3 237 484 383,04	0,57
Median	**1,06**	**0,15**	**$2 406 929 528,14**	**$1 570 519 253,15**	**$3 932 974 292,17**	**0,71**
Beta Relevered	**0,85**					

Table 3 - Beta Computations Table

Coupon	4,75%
Semi-annual Coupon	2,38%
Price	$98,81
Issue Date	26/02/2019
First Coupon	26/08/2019
Maturity	26/02/2029
YTM	4,96%
5-Year Default Prob.	1,00%
Recovery Rate	42,15%
LGD	57,85%
Cost of Debt	4,38%

Table 4 - Cost of Debt

D/E	70%
Re	6,33%
After Tax Rd	3,46%
Tax	21,00%
WACC	**5,15%**

Table 6 - WACC Computations

Regarding cost of debt, we considered a bond issued on February 2019[7], maturing in 10 years, with semi-annual coupon payments of 4.75%. The YTM of 4.96% was adjusted to the 5-years probability of default of 1%[8] and to the 57.85% loss given default[9], arriving to a pre-tax cost of debt of 4.38%. At a 21% US Statutory Tax Rate, the after-tax cost of debt is 3.46%.

Taking the inputs described above, and considering a 70% target capital structure, we arrive to Whirlpool's weighted average cost of capital of 5.15%, which was used to discount the aforementioned FCFs.

The sum of the PV of expected future cash flows leads to an Enterprise Value of $18.882 billion. Deducting Net Debt of $6.308 billion, we arrive to the company's Equity Value of $12.574 billion.

With 60.5 million shares outstanding by December 2020, the implied share price by the DCF analysis is $207.69, which suggests the company is currently trading at discount on the stock market, taken the current $145.18 stock price[10].

Core Business Value	$20 132,89
Total Non Core Assets/ Liabilities	-$1 250,69
Enterprise Value	$18 882,20
Net Debt	-$6 307,53
Equity	$12 574,66
Shares Outstanding	60,546
Price 2020	$207,69

Table 5 - DCF Analysis Price

[6] Using CAPM fundamental equation: Re=Rf+Beta*MRP
[7] https://markets.businessinsider.com/bonds/whirlpool_corpdl-notes_201919-29-bond-2029-us963320aw61
[8] From Bloomberg
[9] Estimated as the average recovery rate for US Corporates by Renault and Scaillet: https://www.scaillet.ch/pdfs/recov.pdf
[10] Whirlpool's stock price at 26/12/2019

Multiples Analysis

	EV/EBIT	EV/EBITDA	P/E	P/S
WHIRLPOOL CORP	10,31x	7,35x	9,08x	0,46x
ELECTROLUX AB-SER B	10,35x	6,17x	12,60x	0,52x
SEB SA	12,12x	9,46x	14,14x	0,93x
ARCELIK AS	6,80x	5,33x	10,59x	0,44x
Min	6,80x	5,33x	9,08x	0,44x
Med	10,33x	6,76x	11,60x	0,49x
Max	12,12x	9,46x	14,14x	0,93x

Table 7 - Multiples Analysis

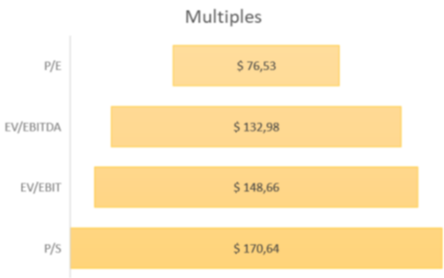

Figure 24 - Multiples Analysis Estimated Price

Bearing the aforementioned list in mind, we also valued Whirlpool stock based on its comparables' multiples, in order to have a more robust price estimate. We decided to start by analysing the EV/EBITDA multiple, a widely used valuation tool, since it compares a company's value, including debt and liabilities, to true cash earnings. We acknowledge that one of the drawbacks of this metric is that it is exclusive of non-cash expenses such as depreciation and amortization. Hence, we decided to analyse also the EV/EBIT multiple.

Moreover, also the P/E metric was considered, since it allows us to understand what the market is willing to pay for the company's earnings. To complement the analysis, we looked also at the P/S ratio. Although we are aware of the limitations of these two metrics, especially when it comes to leverage, we believe that by considering only companies in the same industry and with similar capital structures, we are able to avoid these constraints, ensuring robustness to the multiples valuation.

The estimated price found under this approach is $132.20, which suggests that currently Whirlpool is overvalued on the stock market.

Investment Recommendation

Adding both analysis together, we arrive to an estimated price of $147.30 for December 2020, quite similar to the company's current price, which leads us to believe that currently Whirlpool Corporation is fairly priced.

Trading currently at $145.18[11], an investor with, say a $10 thousand notional, should be able to buy 68.88 shares of Whirlpool. On December 2020, at an estimated price of $147.30, the investor would have $10 145.94 on his wallet, corresponding to a stock appreciation of 1.46% over this 1-year period.

Price per Share	Lower Bound	Median	Upper Bound	Differential (Median-Lower)	Differential (Higher-Median)
EV/EBIT	$64,47	$148,66	$191,35	$84,19	$42,69
EV/EBITDA	$84,18	$132,98	$225,11	$48,80	$92,13
P/E	$59,93	$76,53	$93,32	$16,60	$16,80
P/S	$153,23	$170,64	$323,88	$17,41	$153,23
DCF	$67,91	$207,69	$349,19	$139,77	$141,50
Average	**$85,95**	**$147,30**	**$236,57**	**$61,35**	**$89,27**

Table 8 - Price Analysis Table

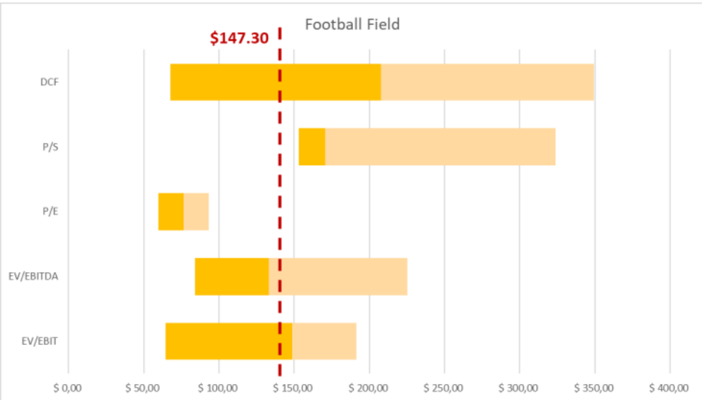

Figure 25 - Football Field

Price Dec 2020	**$147,30**
Notional	$10 000,00
Current Price per Share	$145,18
# Shares Bought	68,88
Dec 2020	
Investor's wallet	$10 145,94
Capital Gain	1,46%
Dividends per Share 2020	$0,65
Dividends Received 2020	$45,34
Dividend Yield	0,44%
Total Investor's Return	1,90%
Position	HOLD

Table 9 - Overall Price and Investment Recommendation

As stated above, we anticipate the company to pay dividends of $0.65 per share throughout 2020, which means this hypothetical investor, who holds 68.88 shares, should be expecting to receive $45.34 in 2020, corresponding to a 0.44% dividend yield.

All-in-all, our investment recommendation is to HOLD, since we anticipate a total expected return of 1.90%, including capital gain plus dividend yield. This means we expect the company to perform with the market and at similar pace as comparable companies.

[11] 26/12/2019

Sensible Variables

Although we are confident in our projections, we acknowledge our valuation model is highly dependent on some key variables, which may change considerably the total expected return and thus the investment recommendation.

Among these, we highlight the terminal growth rate and the WACC, as we consider them to be the variables with higher risk of being mis projected, and to which the model is more sensitive.

		WACC				
	$147,45	4%	5%	6%	7%	8%
Terminal Growth	0,00%	$156,54	$141,17	$130,93	$123,63	$118,15
	0,50%	$161,68	$143,72	$132,28	$124,35	$118,54
	1,00%	$168,50	$146,87	$133,87	$125,19	$118,97
	1,50%	$178,01	$150,90	$135,80	$126,16	$119,46
	2,00%	$192,21	$156,24	$138,19	$127,31	$120,01
	2,50%	$215,80	$163,68	$141,23	$128,69	$120,65
	3,00%	$262,87	$174,78	$145,26	$130,39	$121,39

Table 10 - Sensitivity Analysis on WACC and Terminal Growth

As illustrated on the table above, where WACC ranges from 4 to 8%, and Terminal Growth ranges from 0 to 3%, it becomes clear that the estimated price is highly volatile, fluctuating between $118.15 and $262.87, which translates into a -18.18% and 81.50% total shareholder return, respectively.

Appendix

INCOME STATEMENT (figures in millions)					FORECAST					
Captions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CORE										
Net Sales	$20 891,00	$20 718,00	$21 253,00	$21 037,00	$20 789,41	$21 085,48	$21 443,05	$21 796,64	$22 071,77	$22 357,82
Cost of Products Sold	-$17 201,00	-$17 026,00	-$17 651,00	-$17 500,00	-$17 190,51	-$17 435,33	-$17 731,01	-$18 023,38	-$18 250,88	-$18 487,41
Selling, General and Administrative	-$2 130,00	-$2 080,00	-$2 112,00	-$2 189,00	-$2 102,85	-$2 131,05	-$2 163,55	-$2 196,24	-$2 222,81	-$2 251,20
Intangible Amortization	-$74,00	-$71,00	-$79,00	-$75,00	-$74,07	-$75,12	-$76,40	-$77,66	-$78,64	-$79,66
Impairment of Goodwill and Other Intangibles	$0,00	$0,00	$0,00	-$747,00	$0,00	$0,00	$0,00	$0,00	$0,00	$0,00
Profit before Taxes	$1 486,00	$1 541,00	$1 411,00	$526,00	$1 421,98	$1 443,98	$1 472,11	$1 499,36	$1 519,44	$1 539,55
Operating taxes	-$368,25	-$335,45	-$733,40	-$252,87	-$562,87	-$526,88	-$532,10	-$504,42	-$538,37	-$536,27
Core result	**$1 117,75**	**$1 205,55**	**$677,60**	**$273,13**	**$859,11**	**$917,09**	**$940,00**	**$994,95**	**$981,07**	**$1 003,28**
NON-CORE										
Embraco Compressor Business Units Sale	$0,00	$0,00	$0,00	$0,00	$1 000,00	$0,00	$0,00	$0,00	$0,00	$0,00
Restructuring Costs	-$201,00	-$173,00	-$275,00	-$247,00	-$249,85	-$257,54	-$272,40	-$280,37	-$288,99	-$298,69
Interest and sundry (income) expense	-$89,00	-$93,00	-$87,00	-$108,00	-$105,12	-$105,58	-$107,41	-$110,94	-$113,20	-$115,43
Result before Taxes	-$290,00	-$266,00	-$362,00	-$355,00	$645,04	-$363,12	-$379,81	-$391,31	-$402,19	-$414,12
Tax	$101,50	$93,10	$126,70	$74,55	-$206,46	$7,51	-$9,93	-$20,43	$1,45	$0,95
Non-Core Result	**-$188,50**	**-$172,90**	**-$235,30**	**-$280,45**	**$438,58**	**-$355,62**	**-$389,74**	**-$411,74**	**-$400,74**	**-$413,17**
FINANCING										
Term Loan Repayment with Embraco Sale	$0,00	$0,00	$0,00	$0,00	-$1 000,00	$0,00	$0,00	$0,00	$0,00	$0,00
Interest expense	-$165,00	-$161,00	-$162,00	-$192,00	-$196,40	-$204,89	-$210,41	-$216,70	-$215,43	-$209,64
Tax Shield	$57,75	$56,35	$56,70	$40,32	$41,24	$43,03	$44,19	$45,51	$45,24	$44,02
FINANCING	**-$107,25**	**-$104,65**	**-$105,30**	**-$151,68**	**-$1 155,15**	**-$161,87**	**-$166,22**	**-$171,19**	**-$170,19**	**-$165,62**
TOTAL RESULT	**$822,00**	**$928,00**	**$337,00**	**-$159,00**	**$142,54**	**$399,61**	**$384,04**	**$412,01**	**$410,14**	**$424,50**
OTHER COMPREHENSIVE INCOME	**-$528,00**	**-$68,00**	**-$48,00**	**-$345,00**	**$0,00**	**$0,00**	**$0,00**	**$0,00**	**$0,00**	**$0,00**
TOTAL COMPREHENSIVE INCOME	**$294,00**	**$860,00**	**$289,00**	**-$504,00**	**$142,54**	**$399,61**	**$384,04**	**$412,01**	**$410,14**	**$424,50**

Table 11 - Income Statement

STATEMENT OF CHANGES IN EQUITY (figures in millions)					FORECAST					
Captions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Beginning Balance	**$5 796,00**	**$5 674,00**	**$5 728,00**	**$5 128,00**	**$3 205,00**	**$3 347,54**	**$3 186,03**	**$3 068,75**	**$3 100,24**	**$3 228,90**
Net Income	$822,00	$928,00	$337,00	-$159,00	$142,54	$399,61	$384,04	$412,01	$410,14	$424,50
Other Comprehensive Income	-$501,00	-$68,00	$69,00	-$345,00	$0,00	$0,00	$0,00	$0,00	$0,00	$0,00
TotalComprehensive Income	$321,00	$860,00	$406,00	-$504,00	$142,54	$399,61	$384,04	$412,01	$410,14	$424,50
Adjustments	$0,00	$0,00	$0,00	$55,00	$0,00	$0,00	$0,00	$0,00	$0,00	$0,00
Dividends Paid	-$280,00	-$300,00	-$324,00	-$314,00	$0,00	-$39,20	-$109,89	-$105,61	-$113,30	-$112,79
Shares Issued (Repurchased)	-$163,00	-$506,00	-$682,00	-$1 160,00	$0,00	-$521,92	-$391,44	-$274,91	-$168,18	-$67,69
Non Controlling Interests	$931,00	$955,00	$930,00	$914,00	$920,57	$917,67	$913,08	$909,31	$905,96	$902,88
Total Equity	**$5 674,00**	**$5 728,00**	**$5 128,00**	**$3 205,00**	**$3 347,54**	**$3 186,03**	**$3 068,75**	**$3 100,24**	**$3 228,90**	**$3 472,92**
Ending Balance Shareholders' Equity	**$4 743,00**	**$4 773,00**	**$4 198,00**	**$2 291,00**	**$2 426,97**	**$2 268,36**	**$2 155,67**	**$2 190,93**	**$2 322,94**	**$2 570,04**

Table 12 - Statement of Changes in Equity

BALANCE SHEET (figures in millions)							FORECAST			
Captions	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
CORE										
Operating Cash	$417,82	$414,36	$425,06	$420,74	$415,79	$421,71	$428,86	$435,93	$441,44	$447,16
Accounts receivable	$2 530,00	$2 711,00	$2 665,00	$2 210,00	$2 507,22	$2 514,05	$2 527,31	$2 539,12	$2 540,94	$2 543,24
Inventories	$2 619,00	$2 623,00	$2 988,00	$2 533,00	$2 666,08	$2 692,49	$2 726,40	$2 759,42	$2 782,16	$2 805,96
Prepaid and Other Current Assets	$953,00	$920,00	$1 081,00	$839,00	$939,52	$952,90	$969,06	$985,04	$997,47	$1 010,40
PP&E (net)	$3 774,00	$3 810,00	$4 033,00	$3 414,00	$3 570,02	$3 652,02	$3 709,77	$3 769,39	$3 818,68	$3 866,36
Goodwill	$3 006,00	$2 956,00	$3 118,00	$2 451,00	$2 325,70	$2 510,16	$2 607,15	$2 705,46	$2 795,62	$2 888,59
Other Noncurrent Assets	$377,00	$342,00	$353,00	$299,00	$339,78	$344,62	$350,46	$356,24	$360,74	$365,42
Other Intangibles	$2 678,00	$2 552,00	$2 591,00	$2 296,00	$2 507,31	$2 543,02	$2 586,14	$2 628,79	$2 661,97	$2 696,47
Deferred Income Taxes	$2 301,00	$2 154,00	$2 013,00	$1 989,00	$2 096,48	$2 126,34	$2 162,40	$2 198,05	$2 225,80	$2 254,64
Accounts payable	$4 403,00	$4 416,00	$4 797,00	$4 487,00	$4 484,62	$4 572,37	$4 674,20	$4 775,97	$4 861,25	$4 949,58
Accrued Expenses	$675,00	$649,00	$674,00	$690,00	$666,59	$679,63	$694,76	$709,89	$722,57	$735,70
Accrued Advertising and Promotions	$706,00	$742,00	$853,00	$827,00	$774,70	$785,73	$799,05	$812,23	$822,48	$833,14
Employee Compensation	$452,00	$390,00	$414,00	$393,00	$408,62	$414,44	$421,47	$428,42	$433,83	$439,45
Other Current Liabilities	$980,00	$871,00	$941,00	$811,00	$892,79	$905,51	$920,86	$936,05	$947,86	$960,15
Other Noncurrent Liabilities	$707,00	$479,00	$632,00	$463,00	$564,99	$573,04	$582,76	$592,37	$599,85	$607,62
CORE INVESTED CAPITAL	**$10 732,82**	**$10 935,36**	**$10 956,06**	**$8 780,74**	**$9 575,59**	**$9 826,59**	**$9 974,44**	**$10 122,52**	**$10 236,97**	**$10 352,61**
NON-CORE										
Assets held for sale	$0,00	$0,00	$0,00	$818,00	$0,00	$0,00	$0,00	$0,00	$0,00	$0,00
Liabilities held for sale	$0,00	$0,00	$0,00	$489,00	$0,00	$0,00	$0,00	$0,00	$0,00	$0,00
Pension and Postretirement benefits	$1 415,00	$1 408,00	$1 381,00	$955,00	$1 233,13	$1 250,69	$1 271,90	$1 292,88	$1 309,20	$1 326,16
NON-CORE INVESTED CAPITAL	**-$1 415,00**	**-$1 408,00**	**-$1 381,00**	**-$626,00**	**-$1 233,13**	**-$1 250,69**	**-$1 271,90**	**-$1 292,88**	**-$1 309,20**	**-$1 326,16**
FINANCING										
Excess of Cash	$354,18	$670,64	$770,94	$1 077,26	$0,00	$0,00	$0,00	$0,00	$0,00	$0,00
Short Term Borrowings	$528,00	$594,00	$826,00	$1 981,00	$2 127,84	$2 702,65	$3 085,52	$3 195,40	$3 101,82	$2 805,49
Long Term Debt	$3 470,00	$3 876,00	$4 392,00	$4 046,00	$2 867,08	$2 687,21	$2 548,27	$2 534,00	$2 597,06	$2 748,04
Non-controlling interests	$931,00	$955,00	$930,00	$914,00	$920,57	$917,67	$913,08	$909,31	$905,96	$902,88
NET FINANCIAL ASSETS	**-$4 574,82**	**-$4 754,36**	**-$5 377,06**	**-$5 863,74**	**-$5 915,49**	**-$6 307,53**	**-$6 546,87**	**-$6 638,71**	**-$6 604,83**	**-$6 456,41**
SHAREHOLDERS EQUITY	**$4 743,00**	**$4 773,00**	**$4 198,00**	**$2 291,00**	**$2 426,97**	**$2 268,36**	**$2 155,67**	**$2 190,93**	**$2 322,94**	**$2 570,04**
TOTAL EQUITY	**$5 674,00**	**$5 728,00**	**$5 128,00**	**$3 205,00**	**$3 347,54**	**$3 186,03**	**$3 068,75**	**$3 100,24**	**$3 228,90**	**$3 472,92**
Fixed Assets and Intangibles	$9 458,00	$9 318,00	$9 742,00	$8 161,00	$8 403,03	$8 705,20	$8 903,06	$9 103,63	$9 276,26	$9 451,42
NWC	$2 584,82	$2 625,36	$2 434,06	$1 594,74	$2 290,57	$2 255,31	$2 224,54	$2 191,06	$2 147,67	$2 103,53
Other	-$1 310,00	-$1 008,00	-$1 220,00	-$975,00	-$1 118,00	-$1 133,93	-$1 153,16	-$1 172,17	-$1 186,97	-$1 202,35

Table 13 - Balance Sheet

CASH FLOWS STATEMENT (figures in millions)						FORECAST					
Captions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Core Business											
NOPLAT	$979,95	$1 117,75	$1 205,55	$677,60	$273,13	$859,11	$917,09	$940,00	$994,95	$981,07	$1 003,28
Depreciation & Amortization	$56,00	$688,00	$655,00	$654,00	$645,00	$620,54	$622,11	$630,13	$643,85	$636,89	$671,29
Operational Cash Flow	$1 035,95	$1 805,75	$1 860,55	$1 331,60	$918,13	$1 479,65	$1 539,21	$1 570,14	$1 638,80	$1 617,96	$1 674,57
Invested Capital - Fixed Assets	$9 591,00	$9 458,00	$9 318,00	$9 742,00	$8 161,00	$8 403,03	$8 705,20	$8 903,06	$9 103,63	$9 276,26	$9 451,42
Gross CAPEX Investment		$133,00	$140,00	-$424,00	$1 581,00	-$242,03	-$302,17	-$197,86	-$200,57	-$172,64	-$175,16
Net CAPEX		-$555,00	-$515,00	-$1 078,00	$936,00	-$862,57	-$924,28	-$827,99	-$844,42	-$809,53	-$846,45
Invested Capital - NWC and Others	$1 492,44	$1 274,82	$1 617,36	$1 214,06	$619,74	$1 172,56	$1 121,39	$1 071,38	$1 018,89	$960,70	$901,19
Investment in NWC and Others		$217,62	-$342,54	$403,30	$594,32	-$552,82	$51,17	$50,01	$52,49	$58,19	$59,52
Investment Cash Flow		-$337,38	-$857,54	-$674,70	$1 530,32	-$1 415,39	-$873,11	-$777,99	-$791,92	-$751,34	-$786,93
Core Business Free Cash Flow		$1 468,37	$1 003,01	$656,90	$2 448,45	$64,26	$666,10	$792,15	$846,87	$866,62	$887,64
Non Core Business											
Operational cash flow	-$180,70	-$188,50	-$172,90	-$235,30	-$280,45	$438,58	-$355,62	-$389,74	-$411,74	-$400,74	-$413,17
Invested Capital	-$1 569,00	-$1 415,00	-$1 408,00	-$1 381,00	-$626,00	-$1 233,13	-$1 250,69	-$1 271,90	-$1 292,88	-$1 309,20	-$1 326,16
Investment Cash Flow		-$154,00	-$7,00	-$27,00	-$755,00	$607,13	$17,56	$21,21	$20,97	$16,32	$16,97
Non Core Business Free Cash Flow		-$342,50	-$179,90	-$262,30	-$1 035,45	$1 045,71	-$338,06	-$368,53	-$390,77	-$384,42	-$396,20
		$0,00	$0,00	$0,00	$0,00						
FREE CASH FLOW		**$1 125,87**	**$823,11**	**$394,60**	**$1 413,00**	**$1 109,97**	**$328,05**	**$423,62**	**$456,10**	**$482,20**	**$491,44**
Financial Result	-$107,25	-$107,25	-$104,65	-$105,30	-$151,68	-$1 155,15	-$161,87	-$166,22	-$171,19	-$170,19	-$165,62
Net Financial Assets	-$4 629,44	-$4 574,82	-$4 754,36	-$5 377,06	-$5 863,74	-$5 915,49	-$6 307,53	-$6 546,87	-$6 638,71	-$6 604,83	-$6 456,41
Investment in Net Financial Assets		-$54,62	$179,54	$622,70	$486,68	$51,75	$392,04	$239,33	$91,84	-$33,88	-$148,43
Equity	$4 885,00	$4 743,00	$4 773,00	$4 198,00	$2 291,00	$2 426,97	$2 268,36	$2 155,67	$2 190,93	$2 322,94	$2 570,04
Net Cash Transactions with Shareholders		-$964,00	-$898,00	-$912,00	-$1 748,00	-$6,57	-$558,22	-$496,73	-$376,75	-$278,14	-$177,40
FINANCING CASH FLOW		**-$1 125,87**	**-$823,11**	**-$394,60**	**-$1 413,00**	**-$1 109,97**	**-$328,05**	**-$423,62**	**-$456,10**	**-$482,20**	**-$491,44**

Table 14 - Cash Flows Statement

	CORE BUSINESS RATIO ANALYSIS					FORECAST					
Captions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Core Result	$979,950	$1 117,750	$1 205,550	$677,600	$273,130	$859,115	$917,094	$940,003	$994,949	$981,071	$1 003,283
Invested Capital	$11 083,440	$10 732,820	$10 935,360	$10 956,060	$8 780,740	$9 575,594	$9 826,586	$9 974,439	$10 122,515	$10 236,967	$10 352,607
Core ROIC	**8,84%**	**10,41%**	**11,02%**	**6,18%**	**3,11%**	**8,97%**	**9,33%**	**9,42%**	**9,83%**	**9,58%**	**9,69%**
Core Operational Margin	4,93%	5,35%	5,82%	3,19%	1,30%	4,13%	4,35%	4,38%	4,56%	4,44%	4,49%
Core Asset Turnover	1,79	1,95	1,89	1,94	2,40	2,17	2,15	2,15	2,15	2,16	2,16
Core ROIC	**8,84%**	**10,41%**	**11,02%**	**6,18%**	**3,11%**	**8,97%**	**9,33%**	**9,42%**	**9,83%**	**9,58%**	**9,69%**
COGS/Revenue	82,92%	82,34%	82,18%	83,05%	83,19%	82,69%	82,69%	82,69%	82,69%	82,69%	82,69%
SG&A/Revenue	10,26%	10,20%	10,04%	9,94%	10,41%	10,11%	10,11%	10,09%	10,08%	10,07%	10,07%
Other Operating Costs/Revenue	0,17%	0,35%	0,34%	0,37%	0,36%	0,36%	0,36%	0,36%	0,36%	0,36%	0,36%
Taxes/Revenue	1,73%	1,76%	1,62%	3,45%	1,20%	2,71%	2,50%	2,48%	2,31%	2,44%	2,40%
Impairments/Revenue	0,00%	0,00%	0,00%	0,00%	3,55%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Core Operational Margin	**4,93%**	**5,35%**	**5,82%**	**3,19%**	**1,30%**	**4,13%**	**4,35%**	**4,38%**	**4,56%**	**4,44%**	**4,49%**
PP&E/Revenue	20,03%	18,07%	18,39%	18,98%	16,23%	17,17%	17,32%	17,30%	17,29%	17,30%	17,29%
Goodwill/Revenue	14,13%	14,39%	14,27%	14,67%	11,65%	11,19%	11,90%	12,16%	12,41%	12,67%	12,92%
Other Intangibles/Revenue	14,11%	12,82%	12,32%	12,19%	10,91%	12,06%	12,06%	12,06%	12,06%	12,06%	12,06%
NWC/Revenue	13,16%	12,37%	12,67%	11,45%	7,58%	11,02%	10,70%	10,37%	10,05%	9,73%	9,41%
Others/Revenue	-5,65%	-6,27%	-4,87%	-5,74%	-4,63%	-5,38%	-5,38%	-5,38%	-5,38%	-5,38%	-5,38%
Core Asset Turnover	**1,79**	**1,95**	**1,89**	**1,94**	**2,40**	**2,17**	**2,15**	**2,15**	**2,15**	**2,16**	**2,16**
ROE	**14,17%**	**17,33%**	**19,44%**	**8,03%**	**-6,94%**	**5,87%**	**17,62%**	**17,82%**	**18,81%**	**17,66%**	**16,52%**
Net result	$692,000	$822,000	$928,000	$337,000	-$159,000	$142,540	$399,611	$384,043	$412,014	$410,144	$424,499
Equity	$4 885,000	$4 743,000	$4 773,000	$4 198,000	$2 291,000	$2 426,971	$2 268,360	$2 155,670	$2 190,932	$2 322,940	$2 570,039
ROE Decomposition											
Operating Result	$799,250	$929,250	$1 032,650	$442,300	-$7,320	$1 297,694	$561,477	$550,267	$583,206	$580,330	$590,116
Invested Capital	$9 514,440	$9 317,820	$9 527,360	$9 575,060	$8 154,740	$8 342,463	$8 575,893	$8 702,536	$8 829,639	$8 927,772	$9 026,445
Equity	$4 885,000	$4 743,000	$4 773,000	$4 198,000	$2 291,000	$2 426,971	$2 268,360	$2 155,670	$2 190,932	$2 322,940	$2 570,039
Financing Result	-$107,250	-$107,250	-$104,650	-$105,300	-$151,680	-$1 155,154	-$161,866	-$166,224	-$171,192	-$170,186	-$165,617
Net Financial Assets	-$4 629,440	-$4 574,820	-$4 754,360	-$5 377,060	-$5 863,740	-$5 915,491	-$6 307,533	-$6 546,866	-$6 638,707	-$6 604,832	-$6 456,406
ROE	**14,17%**	**17,33%**	**19,44%**	**8,03%**	**-6,94%**	**5,87%**	**17,62%**	**17,82%**	**18,81%**	**17,66%**	**16,52%**
Activity Ratios											
Average Holding Period	50,33	45,76	46,21	51,32	43,95	46,81	46,61	46,41	46,21	46,01	45,81
Average Collection Period	50,84	44,20	47,76	45,77	38,34	44,02	43,52	43,02	42,52	42,02	41,52
Average Payable Period	104,78	93,43	94,67	99,20	93,59	95,22	95,72	96,22	96,72	97,22	97,72
Cash Conversion Cycle	**-4**	**-3**	**-1**	**-2**	**-11**	**-4**	**-6**	**-7**	**-8**	**-9**	**-10**
Liquidity Ratios											
Current Ratio	0,91	0,89	0,96	0,93	0,82	0,90	0,89	0,89	0,88	0,87	0,86
Quick Ratio	0,59	0,55	0,62	0,58	0,55	0,53	0,53	0,52	0,52	0,51	0,51
Cash Ratio	0,12	0,10	0,14	0,14	0,15	0,06	0,06	0,06	0,06	0,06	0,06
D/E		61,16%	67,67%	85,65%	126,24%	85,65%	84,34%	83,04%	81,74%	80,43%	79,13%
Debt/ EBITDA		1,84x	2,04x	2,53x	5,15x	2,45x	2,61x	2,68x	2,67x	2,64x	2,51x
Total Debt / Total Equity		70%	78%	102%	188%	149%	169%	184%	185%	176%	160%

Table 15 - Ratios Analysis

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Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
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Trade War – Possible Implications for Whirlpool

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Abstract

In this section the reader can find a more detailed analysis of the possible implication the Trade War between the United States and China could bring to Whirlpool Corporation. It would mainly affect the Cost of Goods Sold and thus the EBIT margin, as the imposed tariffs lie mostly on steel and aluminium, which are core materials for the company's operations. Failure to reach an agreement by both ends could have massive implication for Whirlpool as described below.

Keywords (up to four)

Trade War
COGS
Tariffs
China

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Trade War – Possible Implications (Individual Part André Pereira)

Context

By now, The Trade War should not be new to anyone. This clash of world economy titans, China and USA, has been dominating the newspapers' headlines in the past months. Specialists trace the roots of this conflict back to June 2016, when Donald Trump, at the time on campaign for the White House, laid out plans to counter unfair trade practices from China.

Not long after taking charge, President Trump started revising US trade deficit and tracing its causes. It followed a failed agreement after the 100 days of talks between the US and China, on July 2017. Tension would start building up between the two giants, with the first blow being taken by the US on January 2018, when President Trump imposed tariffs on all imported washing machines and solar panels, followed by a 25% tariff on imported steel and 10% on aluminium.

China soon replied with tariffs on US goods. The following months were characterized by a combination of breakthroughs and setbacks from both parties. Although this whole situation is still in a stalemate, and there is still a lot of controversy on which economy is taking the higher blow, it becomes clearer every month that no one is winning.

The latest data indicates that China's economy grew only by 6% in the third quarter, the lowest since 1992. On the other hand, US manufacturers were hit harder than China's, according to Bloomberg's Manufacturing Purchasing Managers' Index.

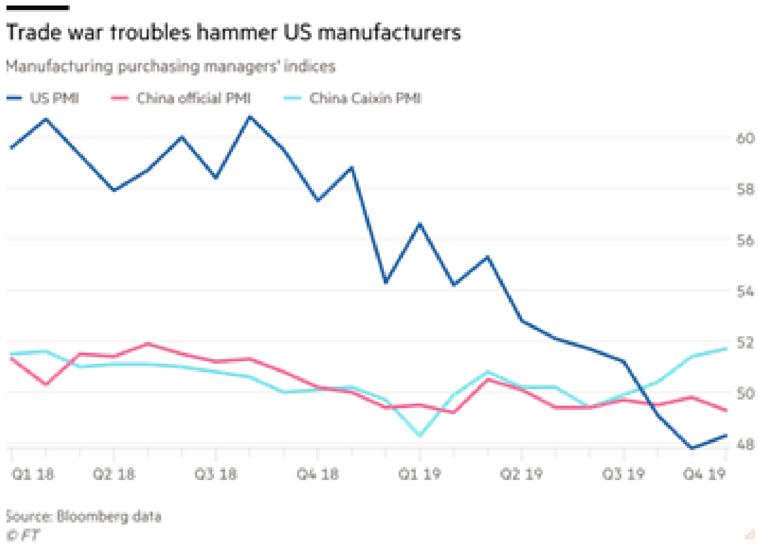

Figure 1 - Blommberg's Manufacturing PMI

Although this seems to be a sign that the Trade War may be coming to an end, no one really knows if this isn't just another breakthrough followed by a setback in this rollercoaster.

Arriving to a deal should be among the short-term priorities of at least of the parties, otherwise no serious bargaining will begin. Beijing has found that, by devaluing its currency, it can partially offset the damage caused by the US tariffs. In the US, the direct effect of tariffs on buyers hasn't yet had a significant impact, while the indirect effects of postponed corporate investment are starting to arise, which is already reflected in recent stock market convulsions.

Impact on Whirlpool

Failure to arrive to a deal may put US corporations in serious trouble. Companies like Whirlpool, to which raw materials as steel and aluminium are core, may be very affected in case both parties fail to reach an agreement.

Whirlpool does not rely on one single supplier in any raw material, which gives the company some degree of flexibility and bargaining power when discussing costs. However, with the ongoing tariff on all imported steel and aluminium, the increase in COGS in unavoidable. This phenomenon has already been visible in the company's Gross Margin for the North America division, in 2018, where despite the increase in 0.1%, primarily due to the favourable impact of product price/mix, this was partially offset by raw material inflation, tariffs and higher freight costs.

On the developed model, we expect the efficient cost structure to be one of the fundamental pillars driving Whirlpool forward. This means we anticipate the company to maintain its COGS stable, which contributes to ensuring a 6 to 7% EBIT margin in future years. Failure to reach an agreement that eliminates, or at least attenuates, the tariffs imposed by both ends since January 2018, may endanger this long-term goal of consolidating the EBIT margin.

With the imposed tariffs by the Chinese government, one should expect an increase in the raw materials for Whirlpool, which rises the COGS and thus will directly impact the EBIT margin, as well as have repercussions in the whole model.

(Values in millions $)	2017	2018	2019F	2020F
Revenues	$21 253,00	$21 037,00	$20 789,41	$21 085,48
EBIT	$1 411,00	$526,00	$1 421,98	$1 422,89
Net Result	$289,00	-$504,00	$142,54	$382,68
EPS	4,09x	-7,93x	2,24x	6,32x
P/E	35,78x	0,00x	8,72x	21,17x
D/E	85,65%	126,24%	85,65%	84,34%
Debt/ EBITDA	2,53x	5,15x	2,45x	2,64x
ROIC	6,18%	3,11%	8,97%	9,17%
ROE	8,03%	-6,94%	5,87%	17,00%
Cash Conversion Cycle	-2	-11	-4	-6

Table 1 - Impact of COGS increase on Whirlpool's Financials

Assuming an increase in the COGS to Net Sales margin of just 0.1% each year would translate into a significant blow to the company. The relatively small impact it would have on each financial caption, would all-together create a major impact on the overall price, which would go down from

$147.30 to $133.83, equivalent to a drop of 9.15%. The investment recommendation would change to SELL, as the total expected return over a 1-year period would be -7.33%.

Price Dec 2020	**$133,83**
Notional	$10 000,00
Current Price per Share	$145,18
# Shares Bought	68,88
Dec 2020	
Investor's wallet	$9 218,14
Capital Gain	-7,82%
Dividends per Share 2020	$0,65
Dividends Received 2020	$45,34
Dividend Yield	0,48%
Total Investor's Return	-7,33%
Position	**SELL**

Table 2 - Overall Price and Investment Recommendation

If an even more harsh scenario occurs, where Trade War intensifies and more tariffs and trade restrictions are added, the situation could get even worse for Whirlpool, and every US manufacturer in general. Besides the increase in COGS, the decrease in sales from the Chinese market would also start to be relevant, which would drive the company's price even lower.

It becomes clear that, although there is some degree of confidence in the projections made, external factors may have a major impact on the expected price and return for the investors.

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