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Whirlpool Corporation Business Risk Factors -  
Sensitivity Analysis

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## Abstract

In this section it is performed a sensitivity analysis on three Whirlpool business risks identified in the main report. The current loss of market share and consequential negative results in EMEA influence Whirlpool's price, but only a very pessimistic scenario would change the investor  *Holding*  recommendation. Concerning the large North American trade customer, Lowe's, its demand requirements may imply Whirlpool's selling price reduction, which can have a large impact in its final valuation. Lastly, the main Latin America market drivers forecast a positive tendency growth for this instable region. Nevertheless, the prolongation of the political and economic instability in Latin America could result in a change in investor recommendation from Hold to Sell.

## Keywords

Sensitivity Analysis

EMEA

Lowe's

Latin America

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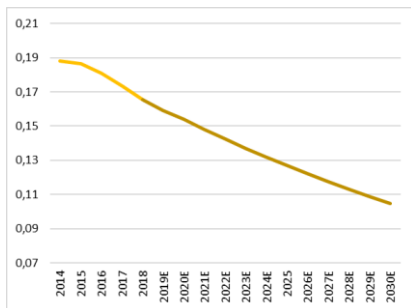
The Whirlpool Corporation Equity Research report consists on the study of both historical facts and forward-looking analysis based on assumptions upon value drivers and their expected behaviour. Although the analysis intention is to replicate the most plausible future path, there are many points where actual results may differ from the predicted values. This statement aims to identify the major risks related to Whirlpool's business and measure their potential impact in the company's price and performance.

Since the report analysis is based on market size and market share driven approach, these two inputs have a major influence on the results. The market size parameter delivered predictions until 2024. After that period, and observing the values tending to a certain limit, it was assumed to remain constant. Regarding market size, the available data refers to values until 2019, handing a large weight on the following years' predictions. Moreover, Whirlpool Corporation is subject to uncertain risk factors that are a treat to its performance. Hence, this statement is structured upon a sensitivity analysis of several different risks that may lead the report to fail in its forecasts.

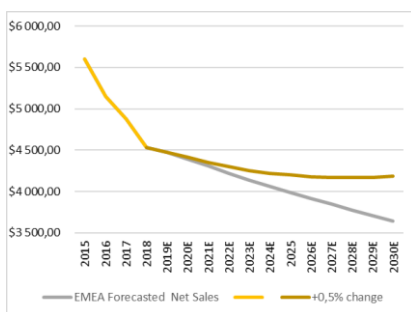
Market share circumstances are present very often across the annual report, where the board states it is a current challenge in EMEA region and it is being handled with strategic actions. The successful or unsuccessful accomplishment of the implemented strategies in EMEA are an important factor analysed in this statement. Regarding a more strategic risk, the eventual inability to meet a key trade customer's demand requirement represent a strategic risk that could negatively affect company's volume sales and results. Besides strategic risks, Whirlpool faces operational risks associated with its international operations that represented more than 47% of Total Net Sales in 2018. The political and economic instabilities, mainly in Latin America, could influence Whirlpool's performance.

### EMEA Market Share

Whirlpool Corporation recognizes the existence of operational and external challenges in EMEA region, which are causing negative performances and monetary losses to the company. The American company has been trying to face these challenges and announced new strategic actions to return to profitability<sup>1</sup>. In our valuation it is considered that Whirlpool strategies will not be able to avoid the market share loss problems, but it is important to understand the impact that the success of these strategies can have in the company valuation. It is considered a set of percentual changes to the annual market share in the EMEA region, from -1% to 1% during the following 10 years, with the positive percentage representing a positive effect of the strategic actions taken by the company.



**Figure 1 – Whirlpool’s Market Share in EMEA**



**Figure 2 – Comparison of forecasted EMEA’s Net Sales and +0,5% annual growth change in market share** (Values in \$M)

When analysing the positive outcome, the improvement of 0,5% annual market share is sufficient to end the market share loss in the Refrigerating Appliances category. Although the two other categories remain with negative expected market share values, this improvement would be enough to lead the EMEA region to a positive annual growth rate by 2029. The capability of retaining additional 0,5% annual market share would allow Whirlpool to register a 0,12% and 0,30% net sales annual growth rate by 2029 and 2030, respectively, contrary to the original tendency towards -1,78% in 2030. In the valuation perspective, this increase would not change the recommended Holding position. The total investor’s return would be 2,62%.

In a very optimistic scenario, if Whirlpool’s strategic actions could avoid the market share loss in every category markets by 2030, EMEA net sales annual growth rates would tend to 2,38% in the following 10 years, representing a price of \$149,78 and an investor’s return of 3,60%. In the opposite direction, it would be necessary an additional drop of 2,36% annual market share to the EMEA region to change investor’s

<sup>1</sup> Whirlpool Annual Report 2018 page 7

recommended position from HOLD to SELL. In this scenario, this region would register a net sales annual growth rate of -11,59% by 2030.

These results reflect that the future success of the measures taken by Whirlpool to face the market share loss’ challenge in EMEA do not have a very significant impact in the investor’s position. It would be necessary a very pessimistic scenario to affect investor’s recommendation as well as a very optimistic scenario to deliver additional significant return.

**EMEA's Sensitivity**

Change in Market Share	-1,00%	-0,90%	-0,80%	-0,70%	-0,60%	-0,50%	0%	0,50%	0,60%	0,70%	0,80%	0,90%	1,00%
Price Dec 2020	\$145,83	\$145,95	\$146,07	\$146,21	\$146,34	\$146,48	<b>\$147,30</b>	\$148,35	\$148,60	\$148,87	\$149,15	\$149,45	\$149,78
Total Investor's Return	0,89%	0,97%	1,06%	1,15%	1,24%	1,34%	<b>1,90%</b>	2,62%	2,79%	2,98%	3,17%	3,38%	3,60%
Position	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	<b>HOLD</b>	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD

**Table 1 - Change in Market Share: Impact on Whirlpool's valuation**

**Lowe’s**

The significant leverage of Lowe’s, a large trade customer in North America, over Whirlpool is a strategic risk recognized by the company. As the costumer is becoming larger in the competitive retailing market<sup>2</sup>, it may take advantage of its position and seek to improve efficiency and present lower selling prices through a more profitable relation with suppliers. The Whirlpool’s inability in effectively manage the relationship with this key trade customer and meet its demand requirements could significantly affect the volume of sales, since it represented 12% of Whirlpool’s Total Sales in 2018.

Therefore, there was conducted a sensitivity analysis regarding the main potential demand requirement, selling price.

A drop in selling price increases the quantities sold. The price elasticity value used to predict the impact on units sold, was based on the changes registered in US last year, due to the introduction of tariffs in the north American market. The increase of costs in Home Laundry Appliances

<sup>2</sup> Lowe’s annual report 2018 Page 4

market caused by these tariffs was passed on to consumers, who saw the price rise by 39% YoY change. Thereby, and with a market size change of - 8% in the same period, was possible to reach a value for price elasticity, - 0,205<sup>3</sup>.

Passing on to the conclusions, a change of -1% per year on the selling price would increase the amount related to Lowe’s demand by 0,205% per year in the North American region. The Whirlpool’s price in December 2020 would be negatively affected by \$1,27. If the competition intensifies in the following years in the North American retail market and Lowe’s demands a decrease of 2,2% per year on selling price, it would lead company’s price to \$144,55, which represents a decline in investor’s return to 0. An increase in the selling price could rise investors’ returns if all other factors remain constant. However, the existing vast variety of competitive strong brands available in the market could shift consumers’ decisions towards them, offsetting the price gain.

**LOWE'S Sensitivity**

Price Change	-5%	-3%	-2%	-1%	0%	1%	2%	3%	5%
Price Dec 2020	141,24	143,58	144,79	146,03	<b>\$147,30</b>	\$148,60	\$149,94	151,33	154,24
Total Investor's Return	-2,27%	-0,66%	0,17%	1,02%	<b>1,90%</b>	2,80%	3,72%	4,67%	6,68%
Position	<b>SELL</b>	<b>SELL</b>	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD

**Table 2 – Price Change on Lowe’s share of Total Sales: Impact on Whirlpool's valuation**

**Latin America**

Latin America is a region with a great potential for economic growth but, currently, it is one of the world’s regions under instable and tense political environments, which are bringing it to weak economic performances. In the past year, armed troops clash with protesters in Chile, thousands of Argentinian civilians protested in Buenos Aires demanding the government take action to face the economic crisis, new populist elected

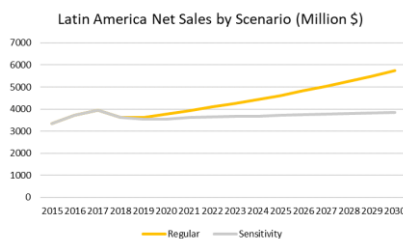
<sup>3</sup> Passport Platform, “Home Laundry Appliances in the US” (FEB 2019)

leaders started their terms in Mexico and Brazil, there was suspicion of government misconduct in the Bolivian elections and Paraguay and Peru live a political turmoil<sup>4</sup>. The list is long, and the prospects are not favourable to an “ending soon” scenario.

As consequence of this political and economic instability, households are constantly shifting behaviours and needs, becoming difficult to find drivers to forecast future demand. The valuation report considers projections based on main household appliances market driving factors that have optimistic and stable predictions which do not reflect the potential instability of people’s consuming behaviour that have been occurring in the recent years in Latin America.

In order to try to understand how a possible continuation of the current instability in Latin America could affect Whirlpool’s value, it was considered a market size forecast based on the persistence of the past values tendency. The resulted difference to the report’s analysis regards the expected Whirlpool’s net sales annual growth rates. The annual growth rates in this region are expected to remain below 2% and tend to 0,70%, while in the main report forecast, the expected growth rates tend to 3%. As a result, Latin America is anticipated to keep on representing 17% of total net sales, still enough to overtake EMEA during 2028. Regarding the valuation, the persistence of the current instable tendency in Latin America leads Whirlpool’s price to \$142,19. The total Investor’s Return would be -1,62%, guiding the recommended position to a SELL.

Although the projections and indicators suggest a probable optimistic future for Latin American region, it is important to note the strong potential implications that the persistence of negative instability can have on Whirlpool’s price.



**Figure 3 – Latin America Net Sales Forecast by scenario**

Latin America's Sensitivity		
Market Size Scenario	Regular	Sensitivity
Price Dec 2020	<b>\$147,30</b>	\$142,19
Total Investor's Return	<b>1,90%</b>	-1,62%
Position	<b>HOLD</b>	<b>SELL</b>

**Table 3 – Latin America’s Instability Scenario: Impact on Whirlpool’s valuation**

<sup>4</sup> The Conversation Journal, “What’s going on in South America? Understanding the wave of protests” (NOV 2019): <https://theconversation.com/whats-going-on-in-south-america-understanding-the-wave-of-protests-126336>

Daily Mail UK (OCT 2019) : <https://www.dailymail.co.uk/news/article-7591383/Troops-streets-Chilean-capital-Santiago-state-emergency-announced.html>

Financial Times, “Economic malaise behind Latin America’s year of unrest” (OCT 2019): <https://www.ft.com/content/553d1ce2-f4ed-11e9-a79c-bc9acae3b654>