



# ROSS Stores Inc. Company Report

Andrej Samardzic & Edoardo Dellaferrera  
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**Investment Recommendation: HOLD**

We maintain a hold rating on Ross Stores Inc. Our valuation yields a per share value of \$119.71, approximately 6% above the current share price (*as of 12/10/2021*) of \$112.86.

The firm is in an attractive segment of retail and will continue expanding at pre-covid levels beginning in 2022. Based on our analysis, we do not see compelling pathways for management to exceed priced-in market expectations.

Andrej Samardzic  
[andrej.Samardzic@yale.edu](mailto:andrej.Samardzic@yale.edu)

Edoardo Dellaferrera  
[edoardo.Dellaferrera@yale.edu](mailto:edoardo.Dellaferrera@yale.edu)

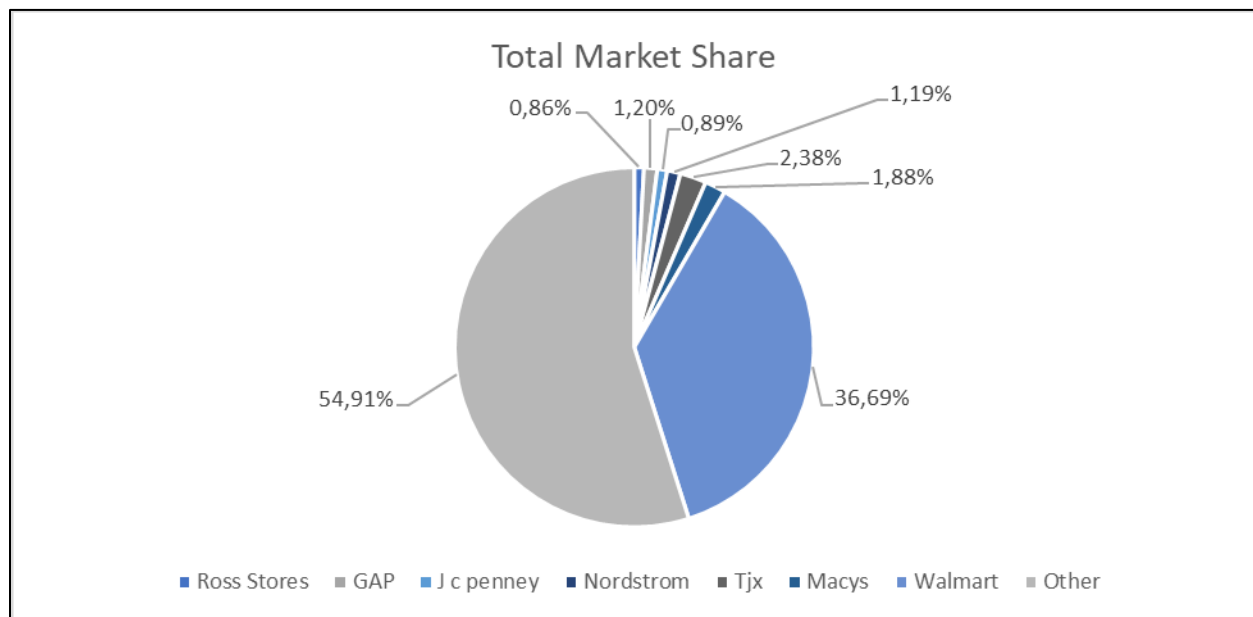
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## Company Overview

Ross Stores Inc. (Ross) is an off-price apparel and home fashion retailer that operates primarily in North America under two brands: Ross Dress for Less and dd's DISCOUNTS, with Ross Dress for Less stores composing 85% of the firm's overall store count. Both brands target middle income customers in the United States and are focused on delivering in-season, name brand apparel, accessories, footwear, and home décor at significant discounts to department store retailers [10k].

If we look at Ross's market share, we see that among some of its closest competitors they only captured a small slice of the whole market (0.86%). However, if we disregard Walmart which is an outlier and not a close comparable, Ross Stores is not excessively far from firms like Nordstrom and GAP which are trying to leverage the potential of online channels.



Source: CSIMarket [1]

According to its 2020 10K, the firm's mission is to deliver value to customers via the four following strategic objectives:

- Maintain an appropriate level of recognizable brands, labels, and fashions at strong discounts throughout the store.
- Meet customer needs on a local basis.
- Deliver an in-store shopping experience that reflects the expectations of the off-price customer.
- Manage real estate growth to compete effectively across all our markets.

A breakdown of Ross's revenue is below; the firm does not break out Ross Dress for Less versus dd's DISCOUNTS revenues nor in-store versus online sales.

### Ross Stores Inc. Revenue Breakdown 2018-2020

	2020	2019	2018
Home Accents and Bed and Bath	28 %	25 %	26 %
Ladies	23 %	26 %	26 %
Men's	14 %	14 %	14 %
Accessories, Lingerie, Fine Jewelry, and Fragrances	14 %	13 %	13 %
Shoes	12 %	13 %	13 %
Children's	9 %	9 %	8 %
Total	100 %	100 %	100 %

Source: Ross Stores Inc. Annual Reports

### Year-to-Date Revenue Breakdown vs. 2020

	Three Months Ended		Six Months Ended	
	July 31, 2021	August 1, 2020 <sup>1</sup>	July 31, 2021	August 1, 2020 <sup>1</sup>
Ladies	27 %	25 %	25 %	25 %
Home Accents and Bed and Bath	24 %	25 %	25 %	26 %
Men's	15 %	14 %	14 %	13 %
Accessories, Lingerie, Fine Jewelry, and Cosmetics	14 %	13 %	14 %	13 %
Shoes	12 %	14 %	13 %	14 %
Children's	8 %	9 %	9 %	9 %
Total	100 %	100 %	100 %	100 %

Source: Ross Stores Inc. Annual Reports

## Historical Performance

### Sales

Ross has experienced steady sales growth in the researched period (2010 – present), averaging 8.4% from 2010 – 2019 and 7.8% in the last five years (2015 – 2019). Store count rapidly over the same period, from 1,055 stores in 2010 to 1,805 in 2019, with the firm averaging nearly 89 net new store openings annually from 2015 – 2019. While much of Ross Store Inc.'s growth can be attributed to footprint expansion, the firm grew its sales per store metric from \$7.46 in 2010 up to a peak of \$8.89 in 2019, implying improved store performance on top of store count growth. There is minimal mention of digital or online operations; the firm has focused solely on in-person retail, and we expect this to continue in the future.

### Costs

Cost of Goods Sold (COGS) as a percentage of sales has remained relatively flat and actually declined between 2010 and 2019 from 72.8% to 71.9%, respectively. Sales, General, and Administrative (SG&A) experienced a similar trend, declining from over 22% of sales in 2010 to 14.7% in 2019; more recently (since 2014), this figure has remained consistent between 14.5% - 14.8%.

### Earnings

Taken altogether, EBIT as a percentage of sales has ranged from 13.4% - 14.5% since 2015, peaking in 2017. Below are the firm's key financial metrics from 2010 – 2020.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Sales</b>	\$ 7,866	\$ 8,608	\$ 9,721	\$ 10,230	\$ 11,042	\$ 11,940	\$ 12,867	\$ 14,135	\$ 14,984	\$ 16,039	\$ 12,532
YoY Growth (%)	9.5%	9.4%	12.9%	5.2%	7.9%	8.1%	7.8%	9.9%	6.0%	7.0%	-21.9%
Same-Store Sales Growth (%)	5.0%	5.0%	6.0%	3.0%	3.0%	4.0%	4.0%	4.0%	4.0%	3.0%	-6.0%
<b>Cost of Goods Sold</b>	\$ 5,730	\$ 6,241	\$ 7,011	\$ 7,361	\$ 7,938	\$ 8,577	\$ 9,174	\$ 10,043	\$ 10,726	\$ 11,536	\$ 9,839
COGS (% of Sales)	72.8%	72.5%	72.1%	72.0%	71.9%	71.8%	71.3%	71.0%	71.6%	71.9%	78.5%
<b>Gross Profit</b>	\$ 2,136	\$ 2,368	\$ 2,710	\$ 2,869	\$ 3,104	\$ 3,363	\$ 3,693	\$ 4,092	\$ 4,257	\$ 4,503	\$ 2,693
Gross Profit (% of Sales)	27.2%	27.5%	27.9%	28.0%	28.1%	28.2%	28.7%	29.0%	28.4%	28.1%	21.5%
<b>SG&amp;A</b>	\$ 1,788	\$ 1,910	\$ 2,118	\$ 1,526	\$ 1,615	\$ 1,739	\$ 1,890	\$ 2,044	\$ 2,217	\$ 2,357	\$ 2,263
SG&A (% of Sales)	22.7%	22.2%	21.8%	14.9%	14.6%	14.6%	14.7%	14.5%	14.8%	14.7%	18.1%
<b>Other OpEx (Income)</b>	\$ (558)	\$ (606)	\$ (680)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Expenses (% of Sales)	-7.1%	-7.0%	-7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>EBIT</b>	\$ 907	\$ 1,063	\$ 1,272	\$ 1,343	\$ 1,488	\$ 1,624	\$ 1,803	\$ 2,048	\$ 2,041	\$ 2,146	\$ 430
EBIT (% of Sales)	11.5%	12.4%	13.1%	13.1%	13.5%	13.6%	14.0%	14.5%	13.6%	13.4%	3.4%
<b>D&amp;A</b>	\$ 161	\$ 160	\$ 185	\$ 206	\$ 233	\$ 275	\$ 303	\$ 313	\$ 330	\$ 351	\$ 364
D&A (% of Sales)	2.0%	1.9%	1.9%	2.0%	2.1%	2.3%	2.4%	2.2%	2.2%	2.2%	2.9%
<b>EBITDA</b>	\$ 1,067	\$ 1,223	\$ 1,457	\$ 1,549	\$ 1,721	\$ 1,899	\$ 2,105	\$ 2,362	\$ 2,371	\$ 2,497	\$ 794
EBITDA (% of Sales)	13.6%	14.2%	15.0%	15.1%	15.6%	15.9%	16.4%	16.7%	15.8%	15.6%	6.3%
<b>Net Earnings</b>	\$ 554.8	\$ 657.2	\$ 786.8	\$ 837.3	\$ 924.7	\$ 1,020.7	\$ 1,117.7	\$ 1,362.8	\$ 1,587.5	\$ 1,660.9	\$ 85.4
Net Income (% of Sales)	7.1%	7.6%	8.1%	8.2%	8.4%	8.5%	8.7%	9.6%	10.6%	10.4%	0.7%
<b>Store Count (End of Period)</b>	1055	1125	1199	1276	1362	1446	1533	1622	1717	1805	1859
Store Growth	50	70	74	77	86	84	87	89	95	88	54

Source: Ross Store Inc. Annual Reports

## COVID-19 Impact

2020 was a challenging year for many retailers, and Ross Stores Inc. was no exception. Sales for the firm fell 21.9%. COGS and SG&A both jumped as a result of deep discounting and a growth in costs associated with the pandemic, to 78.5% and 18.1%, respectively. As did many other retailers, Ross increased its total debt in 2020, but at levels significantly higher than industry peers: from \$312.4M to \$2,513.1M, accomplished primarily via a \$2B senior notes offering in April 2020.

<b>Long-term debt.</b> Unsecured senior debt, net of unamortized discounts and debt issuance costs, as of January 30, 2021 and February 1, 2020 consisted of the following:			
(\$000)		2020	2019
6.53% Series B Senior Notes due 2021	\$	64,910	\$ 64,963
3.375% Senior Notes due 2024		248,365	247,928
4.600% Senior Notes due 2025		694,624	—
0.875% Senior Notes due 2026		493,595	—
4.700% Senior Notes due 2027		239,049	—
4.800% Senior Notes due 2030		132,262	—
1.875% Senior Notes due 2031		494,132	—
5.450% Senior Notes due 2050		146,148	—
<b>Total long-term debt</b>	<b>\$</b>	<b>2,513,085</b>	<b>\$ 312,891</b>
Less: current portion		64,910	—
<b>Total due beyond one year</b>	<b>\$</b>	<b>2,448,175</b>	<b>\$ 312,891</b>

Source: Ross Store Inc. Annual Report

## Forecast

### Sales Growth

We performed an analysis focusing on the Ross Dress for Less brand on a sales-per-store basis, using management guidance as well as analogous scenario analysis of TJX's Marmaxx brand and Burlington. In

2019, Ross Stores Inc. achieved a sales-per-store value of \$8.89, which has grown at approximately 2% per year since 2012 while the firm expanded its store count by an average of 85 stores annually.

Ross Store Inc.'s area of business (off-price apparel and home fashion), sales-per-store, and store count mirror that of TJX's Marmaxx brand in 2012. At that time, Marmaxx had 1,940 stores (v. 1,805) and achieved a sales-per-store figure of \$8.77 (v. \$8.89), giving it a basis for estimating Ross Store Inc.'s sales forecasts.

Marmaxx Comp Change in Sales v. Store Growth										
	2012	2013	2014	2015	2016	2017	2018	2019		
Sales	17011.4	17929.6	18687.9	19948.2	21246	22249.1	24058	25664.8		
Stores	1940	2021	2094	2163	2221	2285	2343	2403	AVG	
Store Growth		81	73	69	58	64	58	60	66	
Sales/Store	8.768763	8.871648	8.924499	9.222469	9.565961	9.737024	10.26803	10.68032	AVG	
Sales/Store Growth		1.2%	0.6%	3.3%	3.7%	1.8%	5.5%	4.0%	2.9%	
ROSS Sales/Store	\$ 8.11	\$ 8.02	\$ 8.11	\$ 8.26	\$ 8.39	\$ 8.71	\$ 8.73	\$ 8.89		
Sales/Store Growth	6.0%	-1.1%	1.1%	1.9%	1.6%	3.8%	0.1%	1.8%	1.9%	
Store Growth	74	77	86	84	87	89	95	88	85	
						for 10yr period 2010-2019, use				2%

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
CAPEX for new stores	\$ 137.00	\$ 134.00	\$ 137.00	\$ 81.00	\$ 90.54	\$ 139.29	\$ 160.18	\$ 181.07	\$ 201.96	\$ 222.86
New stores	96	99	98	66	65	100	115	130	145	160

*Our own calculations*

Using Ross Store Inc.'s historical sales-per-store growth of 2% and an estimate of their footprint expansion, we built a sales forecast model through 2026 multiplying sales/store by store count. Using Marmaxx's sales-per-store performance as a benchmark, we believe a sales-per-store figure of \$10.65 by 2026 is feasible.

	2017	2018	2019	2020	Thru Q3 2021	2021E	2022E	2023E	2024E	2025E	2026E
Sales	\$ 14,135	\$ 14,984	\$ 16,039	\$ 12,532	\$ 13,896	\$ 18,570	\$ 19,815	\$ 21,253	\$ 22,894	\$ 24,748	\$ 26,826
YoY Growth (%)		6.0%	7.0%	-21.9%		48.2%	6.7%	7.3%	7.7%	8.1%	8.4%
Store Count	1,622	1,717	1,805	1,859	1,924	1,924	2,013	2,117	2,236	2,370	2,519
Store Growth		95	88	54	65	65	89	104	119	134	149
Sales / Store	\$ 8.71	\$ 8.73	\$ 8.89	\$ 6.74	\$ 7.22	\$ 9.65	\$ 9.84	\$ 10.04	\$ 10.24	\$ 10.44	\$ 10.65
Sales / Store Growth		0.1%	1.8%	-24.1%		43%	2%	2%	2%	2%	2%

*Source: Our Independent Calculations*

## Operating Expenses

### COGS (Cost of Goods Sold)

To forecast COGS in 2021 we started from the Q3 value of 71.5% (COGS % sales). In the last 3 years, during the last quarter of the year the firm experienced an increase of COGS % of sales, constantly impacting the gross margin with an average 0.4% compression. Therefore, we forecast an ending value of 71.9%. For 2022 onwards we relied on what happened between 2018 and 2019. In their 2020 annual report, Ross Stores indicates that in 2019 a part of the increase of COGS (\$809.9M) was caused by higher sales generated from the opening of 88 net new stores during the year. Dividing these two values we get 9.2, which is the increase of COGS caused by any net additional store opened during the fiscal year. We multiplied this value by our expected future net openings to calculate the absolute COGS values. The future COGS % sales resulting from this method are extremely close to the historical and constant average of 71.5%.

	2021E	2022E	2023E	2024E	2025E	2026E
Cost of Goods Sold	\$ 13,351.89	\$14,170.99	\$15,144.61	\$16,289.32	\$17,600.28	\$19,063.82
COGS (% of Sales)	71.90%	71.52%	71.26%	71.15%	71.12%	71.06%

*Our calculations shown*

### SG&A (Sales, General, & Administrative)

Sales, general, and administrative (SG&A) as a percentage of sales is expected to remain at the year-to-date level of 15.2% of sales in 2021, followed by a reduction to historical averages by 2024. The primary driver of this is an anticipated reduction in COVID-19 related expenses; in Ross Store Inc.'s latest earnings call, management stated that 35 bps of SG&A are directly attributable to COVID-19 expenses, which we bake in over 2022 and 2023.

	YTD2021 - Q3	2021E	2022E	2023E	2024E	2025E	2026E
<b>SG&amp;A</b>	\$ 2,119	\$ 2,831.32	\$ 2,986.47	\$ 3,165.97	\$ 3,353.56	\$ 3,625.15	\$ 3,929.61
<i>SG&amp;A (% of Sales)</i>	15.2%	15.2%	15.1%	14.9%	14.6%	14.6%	14.6%

Our calculations shown

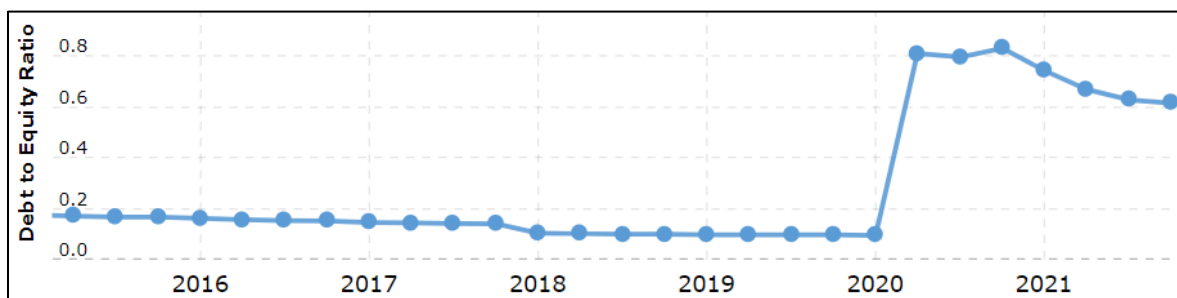
## Forecast Earnings

	2021	2022	2023	2024	2025	2026
<b>EBITDA</b>	\$ 2,387.02	\$ 2,657.78	\$ 2,942.40	\$ 3,250.71	\$ 3,522.22	\$ 3,832.64
<i>EBITDA % of Sales</i>	12.85%	13.41%	13.84%	14.20%	14.23%	14.29%
<b>EBIT</b>	\$ 2,017.37	\$ 2,274.39	\$ 2,547.51	\$ 2,840.04	\$ 3,091.32	\$ 3,376.94
<i>EBIT % of Sales</i>	10.86%	11.48%	11.99%	12.41%	12.49%	12.59%

Our calculations shown

## Valuation

The assumption of constant D/E ratio will not hold in the next years (2021-2026), therefore the best approach to value the company is the APV method until 2026. For our future debt level we used the information within the last quarterly report, in which we can see that in 2024, 2015 and 2026, the firm will repay certain tranches of debt, going back to their historically low and stable levels of leverage, as shown by the graph below. Therefore, we will rely on WACC from 2026 onwards.

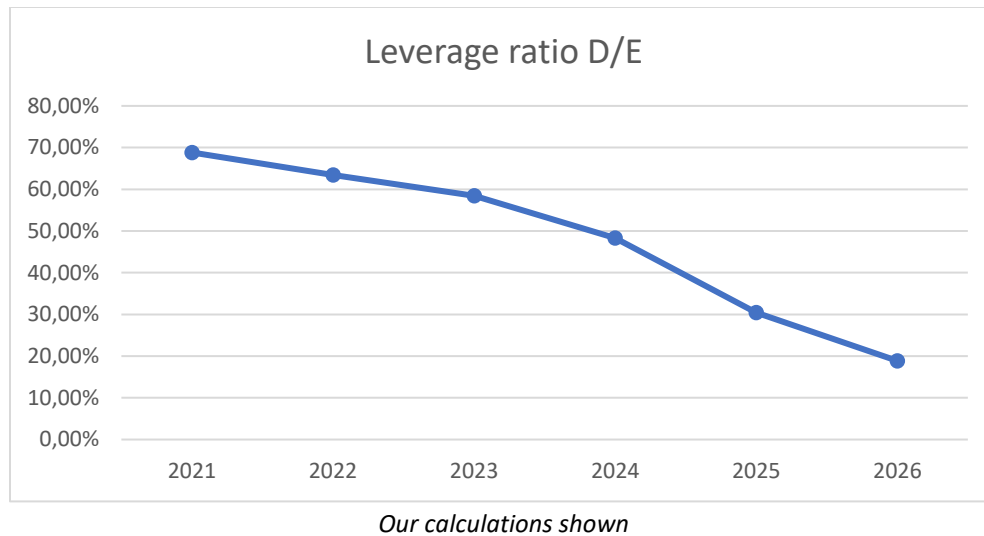


Source: Macrotrends [3]

	YTD2021 - Q3	2021E	2022E	2023E	2024E	2025E	2026E
<b>LT Debt</b>	\$ 2,450.00	\$ 2,450.00	\$ 2,450.00	\$ 2,450.00	\$ 2,450.00	\$ 2,202.00	\$ 1,507.00
Debt due 2024 (rate = 3.375%)					\$ (248.00)		
Debt due 2025 (rate = 4.600%)						\$ (695.00)	
Debt due 2026 (rate = 0.875%)							\$ (494.00)
<b>LT Debt end</b>		\$ 2,450.00	\$ 2,450.00	\$ 2,450.00	\$ 2,202.00	\$ 1,507.00	\$ 1,013.00
<b>Interest rate</b>		3.24%	3.24%	3.24%	3.42%	3.66%	3.65%
<b>Interest expenses</b>		\$ 79.45	\$ 79.45	\$ 79.45	\$ 75.27	\$ 55.10	\$ 36.95

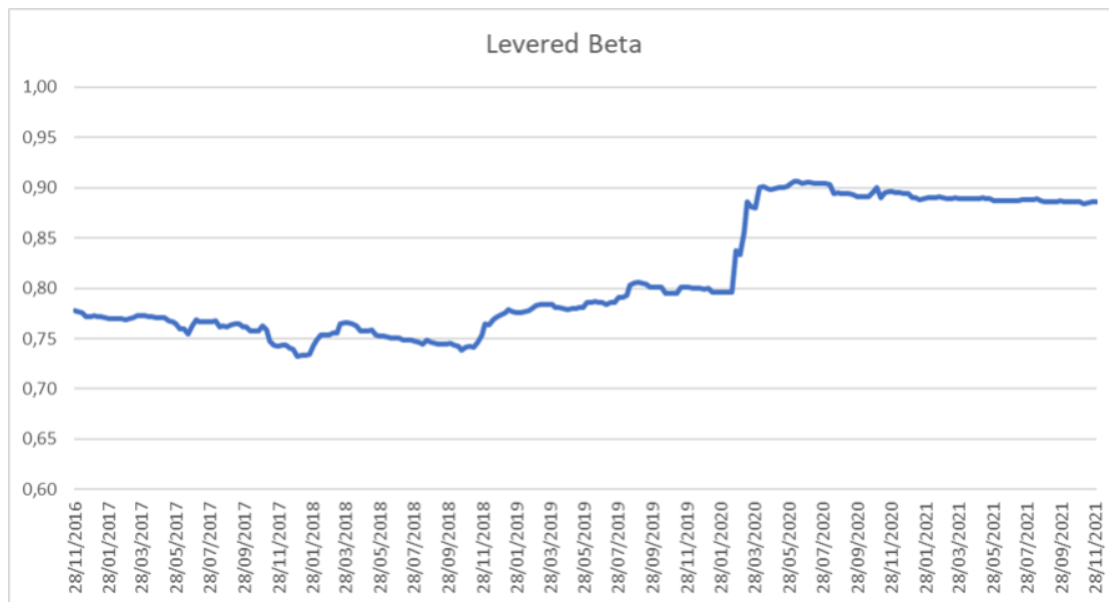
Our calculations show





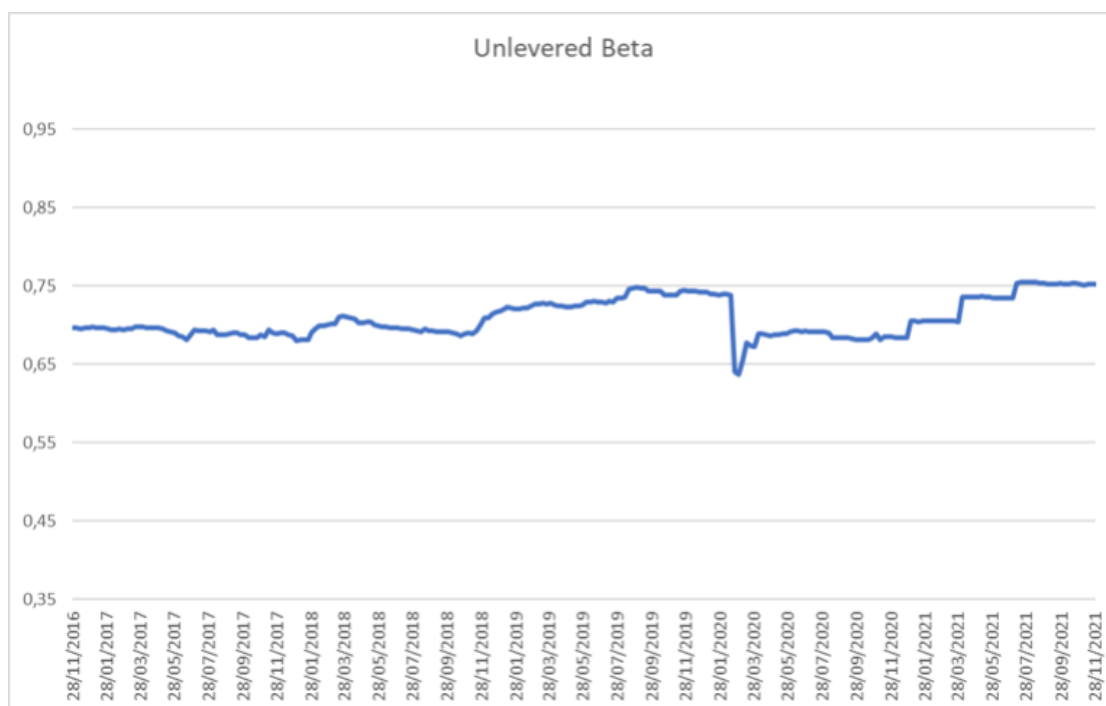
## Cost of equity and debt

To calculate the unlevered cost of equity we started looking at the past 5 years rolling beta, calculated using weekly returns data for Ross Stores versus the Wilshire5000. As we can see the levered beta increased at the beginning of the pandemic in the US, reaching the current value of approximately 0.9. We then calculated the unlevered beta assuming a debt beta of 0.34 as the credit rating of Nordstrom's debt is A2 according to Moody's [4]



*Source: Yahoo Finance [5]*

In this case, we see how stable the unlevered beta is for Ross Stores, despite the fluctuations of the levered one. Thus, we used a value of 0.75.



Source: Yahoo Finance and own calculations

The market risk premium used comes from the website of Professor Damodaran (4.77%).

As a risk free for the next five years, we used the yield of the 5Y US treasury bond, while for our terminal value period we used the yield of a 10Y US treasury bond.

Risk free 5Y US yield	1.15%
Risk free 10Y US yield	1.43%
MRP (Damodaran)	4.77%
Debt Beta (A)	0.34
Beta levered	0.9
Unlevered Beta	0.70
<b>Cost of equity Un. next 5 years</b>	<b>4.49%</b>
<b>WACC</b>	<b>5.72%</b>

Sources: U.S. Department of the treasury [6], Prof. Damodaran

The cost of debt used for the PV of tax shield (and the IS interest expenses too) is 3.41%, which is the the average of the outstanding senior notes' interest rates, weighted according to each tranche size.

The tax rate used for our tax shield is 23%. This value has been taken from the latest company guidance.

## FCF components

Regarding the firm's future CAPEX, in their 2020 annual report, management forecasted \$700M for 2021. However, in past years they repeatedly missed the target by \$50M. Indeed, in last 10Q they predict \$650M, which will be our value for this ending year. For 2022 onwards we split total CAPEX in 2 parts: investments in new stores and CAPEX for information systems, corporate, distribution centers etc.

To calculate future investments in new stores we calculated the historical CAPEX to open a new one. We divided the exact amount of CAPEX that was necessary to build their new selling points from 2017 to 2019, by the respective numbers of new openings in every year (around 100 new stores per year). We excluded 2020 to avoid including a market situation that does not reflect the forecasted future. As the resulting CAPEX per store is constant across those three years, we calculated an average and multiplied that value by the future number of store openings. Regarding the future number of stores, we applied the same methodology seen in the sales paragraph. As we mentioned, management is targeting 100 new stores per year for the incoming years, stating that they are targeting what they did in the past. However, we needed to adjust this figure by taking into consideration the competition coming from Burlington.

To forecast the remaining part of future CAPEX we divided the investments to build, expand, and improve distribution centers, improve existing stores, and for various other expenditures related to our information technology systems, by the revenues of that year. The composition of this second half of CAPEX varies every year and it is hard to forecast without further data and indications that we could not find. However, we noticed that in years like 2017 and 2018 the % CAPEX other/Sales was relatively stable, while in 2019 and 2020 the number rose. This was caused by the construction of the distribution center in Brookshire which will be completed by this year. Therefore for 2022 onwards we return to the historical average pre-2019, as management does not expect further significant investments such as the one in Brookshire.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
CAPEX for new stores	\$ 137.00	\$ 134.00	\$ 137.00	\$ 81.00	\$ 90.54	\$ 139.29	\$ 160.18	\$ 181.07	\$ 201.96	\$ 222.86
New stores	96	99	98	66	65	100	115	130	145	160
CAPEX per store	\$ 1.43	\$ 1.35	\$ 1.40	\$ 1.23	\$ 1.39	\$ 1.39	\$ 1.39	\$ 1.39	\$ 1.39	\$ 1.39
CAPEX other	\$ 234.00	\$ 280.00	\$ 418.00	\$ 324.00	\$ 559.46	\$ 349.17	\$ 374.50	\$ 403.41	\$ 436.08	\$ 472.70
CAPEX other % of Sales	1.66%	1.87%	2.61%	2.59%	3.01%	1.76%	1.76%	1.76%	1.76%	1.76%
<b>CAPEX</b>	<b>\$ 371.00</b>	<b>\$ 414.00</b>	<b>\$ 555.00</b>	<b>\$ 405.00</b>	<b>\$ 650.00</b>	<b>\$ 488.45</b>	<b>\$ 534.68</b>	<b>\$ 584.48</b>	<b>\$ 638.04</b>	<b>\$ 695.56</b>

*Source: past annual reports and our own calculations*

D&A values have been calculated assuming a useful life of 16 years, according to our calculations from past years using their Fixed Assets and D&A expenses. The number has always been constant, and it is aligned with the indications given in their annual reports. We assumed that for the first year of a new investment the depreciation will be halved.

	2017	2018	2019	2020	YTD2021 - Q3	2021	2022	2023	2024	2025	2026
Old D&A	\$ 313.00	\$ 330.00	\$ 351.00	\$ 364.00	\$ 262.00	\$ 349.33	\$ 327.50	\$ 307.03	\$ 287.84	\$ 269.85	\$ 252.99
D&A Capex 2021						\$ 20.31	\$ 40.63	\$ 40.63	\$ 40.63	\$ 40.63	\$ 40.63
D&A Capex 2022							\$ 15.26	\$ 30.53	\$ 30.53	\$ 30.53	\$ 30.53
D&A Capex 2023								\$ 15.97	\$ 31.95	\$ 31.95	\$ 31.95
D&A Capex 2024									\$ 16.71	\$ 33.41	\$ 33.41
D&A Capex 2025										\$ 17.46	\$ 34.93
D&A Capex 2026											\$ 18.25
<b>D&amp;A</b>						<b>\$ 369.65</b>	<b>\$ 383.39</b>	<b>\$ 394.16</b>	<b>\$ 407.65</b>	<b>\$ 423.82</b>	<b>\$ 442.67</b>

*Our calculations shown*

For our future delta trading working capital values we mainly used our expectations for Ross Stores days of inventory, payables and receivables outstanding.

To calculate payables, we assumed for 2021 a relatively high DPO as an average of 2021YTD and 2020, as some payments have been postponed given the prolonged health crisis, but there is an effort to get back to a more normal situation. From 2022 onwards the value goes back to a historical average. Regarding the days of inventory outstanding for 2021, we put more weight on 2021 Q3 than a simple average 2021 2020 as it seems they are having some problems: supply chain issues above all. They did not even comment on the expected ending level when they have been asked about it in one of the earnings calls. For 2022 we do not expect an immediate return to historical average as management did not comment on next year, and supply chain issues could persist.

	2017	2018	2019	2020	YTD2021 - Q3	2021	2022	2023	2024	2025	2026
Inventory	\$ 1,642.00	\$ 1,750.00	\$ 1,832.00	\$ 1,509.00	\$ 2,231.00	\$ 2,666.74	\$ 2,369.48	\$ 2,396.23	\$ 2,547.31	\$ 2,703.45	\$ 2,864.78
Trade receivables	\$ 88.00	\$ 97.00	\$ 102.00	\$ 155.00	\$ 159.00	\$ 212.49	\$ 125.89	\$ 134.06	\$ 142.52	\$ 151.25	\$ 160.28
Other current Assets (no cash)	\$ 131.00	\$ 144.00	\$ 147.00	\$ 249.00	\$ 195.00	\$ 260.60	\$ 185.23	\$ 197.26	\$ 209.70	\$ 222.55	\$ 235.83
DIO	59.35	59.22	57.65	55.68	81.51	72.90	60.96	57.97	57.97	57.97	57.97
DSO	2.27	2.36	2.32	4.51	4.18	4.18	2.32	2.32	2.32	2.32	2.32
Other CA % of Sales	0.93%	0.96%	0.92%	1.99%	1.40%	1.40%	0.93%	0.93%	0.93%	0.93%	0.93%
Current assets (no cash)	\$ 1,861.00	\$ 1,991.00	\$ 2,081.00	\$ 1,913.00	\$ 2,585.00	\$ 3,139.83	\$ 2,680.60	\$ 2,727.56	\$ 2,899.53	\$ 3,077.25	\$ 3,260.89
Account payables	\$ 1,060.00	\$ 1,177.00	\$ 1,296.00	\$ 2,257.00	\$ 2,653.00	\$ 3,314.15	\$ 1,549.38	\$ 1,647.55	\$ 1,751.43	\$ 1,858.78	\$ 1,969.71
Other current Liabilities	\$ 781.00	\$ 832.00	\$ 1,405.00	\$ 1,654.00	\$ 1,757.00	\$ 1,987.40	\$ 1,310.32	\$ 1,395.43	\$ 1,483.41	\$ 1,574.34	\$ 1,668.29
DPO	38.53	40.05	41.00	83.73	97.47	90.60	39.86	39.86	39.86	39.86	39.86
Other current Liabilities % Sales	5.53%	5.55%	8.76%	13.20%	12.64%	10.70%	6.61%	6.61%	6.61%	6.61%	6.61%
Current liabilities	\$ 1,841.00	\$ 2,009.00	\$ 2,701.00	\$ 3,911.00	\$ 4,410.00	\$ 5,301.55	\$ 2,859.69	\$ 3,042.99	\$ 3,234.84	\$ 3,433.12	\$ 3,638.00
Trading WC	\$ 20.00	\$ (18.00)	\$ (620.00)	\$ (1,998.00)	\$ (1,825.00)	\$ (2,161.73)	\$ (179.10)	\$ (315.43)	\$ (335.31)	\$ (355.87)	\$ (377.10)

*Our calculations shown*

The terminal growth rate we selected is 1.3%. From 2014 to 2019 (pre-covid period) the growth of the market has been declining on average by 0.23% every year [7]. Starting with the 2.7% growth of 2019, we subtracted from that value 1.38%, which is  $0.23\% \times 6$  where 6 represents the length of our forecasted period (years). We eventually get 1.3%. We assume that the growth rate of our industry will remain around this value which is slightly below the inflation rate targeted by central banks, and the historical US GDP growth rate. However, being an extremely mature industry, this value is not unrealistic.

Summing the value of tax shield, the unlevered and levered firm values (discounted to December 10<sup>th</sup>, 2021) and dividing them by the outstanding number of shares of 353M, we get a target share price of \$119.71. Therefore, our final recommendation is to HOLD this stock as there is just a potential 6.07% upside from the share price of \$112.86 (as of December 10<sup>th</sup>, 2021).

## Valuation Model

	2021	2022	2023	2024	2025	2026
Cost of Debt	3.41%	3.41%	3.41%	3.41%	3.41%	3.41%
Tax rate	22%	22%	22%	22%	22%	22%
Interest expenses	\$ 79.45	\$ 79.45	\$ 79.45	\$ 75.27	\$ 55.10	\$ 36.95
Tax shield	\$ 17.48	\$ 17.48	\$ 17.48	\$ 16.56	\$ 12.12	\$ 8.13
Discount rate	1.00	0.96	0.93	0.90	0.87	0.84
PV Tax shield (12/10/2021)	\$ 17.43	\$ 16.86	\$ 16.30	\$ 14.93	\$ 10.57	\$ 6.86
<b>Value tax shield</b>	<b>\$ 82.96</b>					
FCF	\$ 1,629.92	\$ (313.66)	\$ 1,985.85	\$ 2,065.95	\$ 2,231.79	\$ 2,425.22
Discount rate	1.00	0.95	0.91	0.87	0.84	0.80
PV FCF	\$ 1,624.24	\$ (299.14)	\$ 1,812.55	\$ 1,804.65	\$ 1,865.76	\$ 1,940.36
<b>Unlevered value</b>	<b>\$ 8,748.42</b>					
Firm value WACC						\$38,267.35
<b>PV firm value WACC</b>	<b>\$30,616.84</b>					
<b>EV</b>	<b>\$ 39,448.22</b>					
Net Debt	\$ (2,809.00)					
Equity value	\$ 42,257.22					
N. shares	353					
<b>Intrinsic share price</b>	<b>\$ 119.71</b>					
Share price (12/10/2021)	\$ 112.86					
Delta	6.07%					

*Our calculations shown*

## Ross Stores historical stock price



*Source: Google Finance [8]*

## References

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