STARBUCKS

COMPANY REPORT

CONSUMER DISCRETIONARY

31TH OF DECEMBER, 2017

STUDENT: CHRISTIAN REIS

27216@novasbe.pt

"A Venti company, please!"

How Starbucks is continuing its success story

- By investing in Starbucks now, shareholder can gain a total return of 27.5% via stock price appreciation and dividends.
- The key value drivers for Starbucks share price are the increased food offering, time efficiency via digitalization, a change in its capital structure and growth opportunities in key Asian markets.
- Due to those value drivers, Starbucks is expected to increase its revenue by around 10% p.a. during the next four years. Hereby, "Food" adds a total of 7.1% growth distributed on those years. The digital impact is expected to be in total 13.0% over the next five years in the key region Americas.
- The Comparable valuation analysis suggests a more defensive undervaluation of Starbucks with a share price target in the range of the current share price and USD 63.4.
- Starbucks is able to better manage its working capital in comparison to its competitors. Moreover, the company has been able to increase its EBITDA Margin by enormous 89% since 2013 outperforming its competitors strongly. The ROIC analysis suggests further potential for effective investing.

Company description

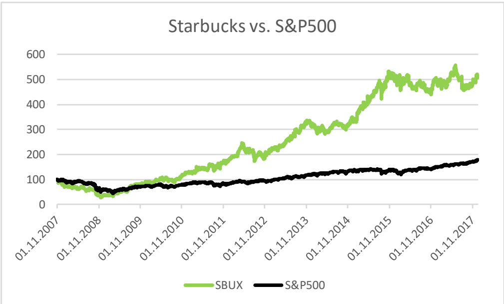
Starbucks Corp. is an American coffee house chain and coffee company operating more than 24,000 retail stores in 70 countries. The product offerings include not only coffee but also products associated with a coffee house like teas, pastries and other treats. Thereby the unique selling proposition is the whole store atmosphere around the offered products.

Recommendation:	**BUY**
Price Target FY18:	**72.44 USD**
Price (as of 3-Jan-18)	**57.74 USD**

Source: Bloomberg

52-week range (USD)	52.58-64.87
Market Cap (USD m)	81,711
Outstanding Shares (m)	1,462

Source: Bloomberg



Source: Bloomberg

(Values in USD millions)	2017	2018F	2019F
Revenues	22,387	24,370	27,017
EBITDA	5,300	5,928	6,616
EBIT	4,288	4,846	5,410
Net Income	2,885	3,506	3,628
EPS	1.97	2.40	2.59
P/E	29.13	30.20	28.0
EV/Sales	3.8	4.5	4.0

Source: Bloomberg, Christian Reis

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Executive summary

The following report shows why Starbucks is currently undervalued. Within the Valuation section two approaches have been identified which result in different prices but both suggest a bullish view on Starbucks. The Discounted Cash Flow model, which lead to the final recommendation, includes information gathered in the following sections.

The company overview highlights Starbucks' strength in providing a special store atmosphere and a digital concept that facilitates the customer journey. Nevertheless, Starbucks has to be aware of its product innovation that can be a driver for growth but also might damage Starbucks' reputation if products are not well concepted and need to be recalled. The more qualitative part of this report is finalised with Starbucks' market opportunities and threats. Together with the value driver digital, the "Food" section, the Channel Development, and key Asian markets are drivers for growth. Starbucks' Reserve Roastery stores serve hereby mainly as a marketing instrument introducing the current lifestyle which the Seattle headquartered American coffee chain company proposes. On the other side, besides competition, the coffee price development can have a significant impact on Starbucks profitability. Usually the company is hedged for only one year, so more persistent price increases can damage its gross margin.

Adding numbers to the research, first of all Starbucks is compared to its competitors. Taking all analysed key metrics into consideration, Starbucks is a well-managed company that runs its daily operations smoothly. The analysis of Starbucks cost of capital reveals that the company might not have yet established the optimal capital structure and that it is currently trying to improve it. Looking finally into the growth potential, it is shown in detail how those identified value drivers are actually translating into quantifiable growth which Starbucks is expected to face. A scenario analysis reveals, that Starbucks current stock price already includes a lot of growth potential and that its valuation is highly depended on how well those growth factors will materialise.

Valuation

Among various valuation methodologies such as Comparable Multiples, Sum of the Parts, Transaction Multiples or the Discounted Cash Flow model, two have been chosen as they are most suitable for Starbucks.

Discounted Cash Flow model

The Discounted Cash Flow model includes the research conducted within this report, deriving assumptions for relevant parameters. Once the financial statements have been forecasted for the next five years the free cash flow is derived. Afterwards there are ten years of interpolation period where the free cash flow growth is constantly declining until it reaches a level of 2.0% which represents the long-term inflation target by the Federal Reserve. Those cash flows are discounted by the Weighted Average Cost of Capital (WACC) discussed in more detail within the Financials section. The Discounted Cash Flow model results in a stock price of USD 72.44. The below table shows how the stock price would behave if the cost of capital (WACC) or the terminal growth rate (g) would change. Since the stock price is highly dependent on the terminal growth rate, a conservative growth of 2.0% is assumed.

WACC/g	-1.5%	-1.0%	-0.5%	0.0%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%
5.0%	77.0	80.4	84.5	89.3	95.3	102.7	112.3	125.0	142.9	169.6
5.5%	70.3	73.0	76.2	80.0	84.6	90.1	97.1	106.0	117.9	134.6
6.0%	64.5	66.7	69.3	72.3	75.8	80.1	85.3	91.8	100.2	111.3
6.5%	59.4	61.2	63.3	65.7	68.6	**71.9**	**75.9**	**80.7**	**86.8**	94.7
7.0%	55.0	56.5	58.2	60.2	62.4	**65.1**	**68.2**	**71.9**	**76.5**	82.2
7.5%	51.1	52.4	53.8	55.4	57.2	**59.3**	**61.8**	**64.7**	**68.2**	72.5
8.0%	47.7	48.7	49.9	51.2	52.7	54.5	56.4	58.7	61.5	64.8
8.5%	44.6	45.5	46.5	47.6	48.8	50.2	51.8	53.7	55.9	58.4
9.0%	41.8	42.6	43.4	44.4	45.4	46.6	47.9	49.4	51.1	53.2
9.5%	39.3	40.0	40.7	41.5	42.3	43.3	44.4	45.7	47.1	48.7

Multiple valuation

Looking at Starbucks Comparables, the first thing that becomes obvious is that there is no really close competitor. Starbucks is operating in the beverage and food sector as all of its peers but with the unique characteristic that the product mix is focused on beverages whereas most competitors focus on providing food. By taking these difference into account for valuation purposes two sets of

Comparables have been defined. A set of closer Comparables including the four narrowest and a set of broader Comparables including companies that are at least partially operating in the same segments.

In order to draw proper conclusions from multiple valuation besides the selection of the peer group, the used multiple is extremely important. In Starbucks' case the most suitable multiple is the EV/EBITDAR multiple, since it excludes rent payments which are a significant proportion of costs for companies operating in the restaurant business. For comparable purposes all numbers have been extracted from Bloomberg.

	Broad multiple	Close multiple	Starbucks relevant figure	Figure value	Starbucks valuation broad	Starbucks valuation close	Starbucks actual value	Deviation in % broad	Deviation in % close
EV/EBITDA									
Average	12.2	16.5	EBITDA	4,810.40	58,868.45	79,221.69	86,140.39	-32%	-8%
Median	11.3	16.2	EBITDA	4,810.40	54,325.50	77,909.81	86,140.39	-37%	-10%
EV/EBITDAR									
Average	**11.7**	**14.1**	**EBITDAR**	**6,139.60**	**72,121.21**	**86,472.54**	**86,140.39**	**-16%**	**0%**
Median	**9.4**	**14.8**	**EBITDAR**	**6,139.60**	**57,461.83**	**90,971.73**	**86,140.39**	**-33%**	**6%**
Price/Earnings									
Average	28.5	26.4	Net income	2,884.70	82,254.07	76,277.30	84,884.25	-3%	-10%
Median	24.3	26.9	Net income	2,884.70	70,180.84	77,721.42	84,884.25	-17%	-8%
EV/Sales									
Average	2.7	6.5	Sales	22,386.80	59,673.62	146,619.08	86,140.39	-31%	70%
Median	1.7	7.3	Sales	22,386.80	37,686.86	163,384.06	86,140.39	-56%	90%

Close competitors are Dunkin Brands, McDonald's, Restaurant Brands International, and Whitbread since their business models are closest to the one of Starbucks. Looking at the multiples one can infer that Starbucks is not valued according to its sales due to extreme deviations between the current EV and the multiple valuation from both broad and close Comparabales. The P/E multiple suggest an overvaluation of Starbucks with a share price range from USD 48.6 to USD 57.0 (considering both broad and close Comparables) vs. currently USD 57.74. The EV/EBITDAR giving a more accurate valuation than the EV/EBITDA multiple suggests a share price between the current one and USD 63.4 taking into account only Starbucks' close Comparables. Since the EV/EBITDAR is the most accurate multiple for this sector and the close Comparables should give the best approximation, the conclusion can be drawn that Starbucks is fairly valued or slightly undervalued.

Company overview

Starbuck's distinguishing chararcteristic

Starbucks is focusing a lot on digitalization in their distribution channel strategy. So far, Starbucks sells through four channels: company-operated stores, licensed stores, CPG and Foodservice operations. The company uses digitalization both in order to increase its reach to customers and to improve internal processes. Since 2013, Starbucks started to integrate the Starbucks Card and the My Starbucks Rewards loyalty program across several countries. By purchasing something via a Starbucks card or the mobile application clients can get various benefits and Starbucks profits from recurring sales and data collection. In the end of 2014 Starbucks launched additionally the Mobile Order and Pay in Portland, Oregon allowing customers to place orders in advance and pick them up at their preselected store. This order system is connected with the customer loyalty program. In 2015, this service has been spread across the US and also internationally in the UK and Canada. Continuing 2016 by launching the mobile application in Indonesia and the mobile payment service in China. During 2017 the company introduced the voice ordering function within the iOS mobile application and the Amazon Alexa platform. When it comes to internal processes, Starbucks uses the cloud connected clover coffee machines in many of its stores tracking the performance of the machines and the preferences of customers. Furthermore, Starbucks is developing smart refrigerators being able to track for example expiration dates of milk and other items inside, smart thermometers, smart door locks and other smart devices where data gathering and analysing is possible.

Starbucks achieves a strong customer connection via providing a special store feeling through its value-added services. In all company-owned stores across the US, Canada and certain international markets Starbucks offers free and unlimited Wi-Fi connectivity. Starbucks customers are also encouraged to spend more time within the store and use the benefits of the Starbucks Digital Network. This Digital Network offers free subscriptions of various premium news sources such as The New York Times or The Wall Street Journal. Additionally, Starbucks offers exclusive iTunes and e-book downloads for its in-store customers and also provides, via a corporation with The New York Times, access to selected articles for My Starbucks Rewards loyalty members via the mobile app. In 2015, a cooperation between Starbucks and Spotify has been established enabling My Starbucks Rewards members to listen to Starbucks music on Spotify and even determine which music is played in stores. Besides, Starbucks offers merchandise including apparel and accessories in order to profit from potential up-selling opportunities.

Starbuck's areas of development

During the past Starbucks has been registering increasing product recalls. For example in 2015, Starbucks had to recall a limited edition of ceramic mugs in Singapore after they have failed to pass tests by the Agri-Food and Veterinary Authority of Singapore. In the same year Sweet Sam's Baking Company recalled the Starbucks Black & White Mini Cookies sold in Starbucks' company-operated stores due to the undeclared ingredient milk which can cause allergic reactions for some people. Later in 2015 Teavana, Starbucks premium tea brand and now after the recent announcement of the sale of Tazo to Unilever for USD 384 mn (announcement made right before the Q4 2017 earnings release) its focus tea brand, recalled its Tristan Glass Pitcher sold in Teavana stores and via the Teavana website due to the risk of burn and laceration hazards. In 2016, Gretchen's Shoebox Express, Starbucks' distributor, recalled the Cheese & Fruit Bistro Box with an "enjoy by date" on or before the 4th of March 2016 due to suspicion of containing an undeclared tree nut allergen. Later in 2016, the company recalled reusable stainless steel, Cold-to-go food-grade drinking straws due to reports of mouth laceration to young children while drinking.

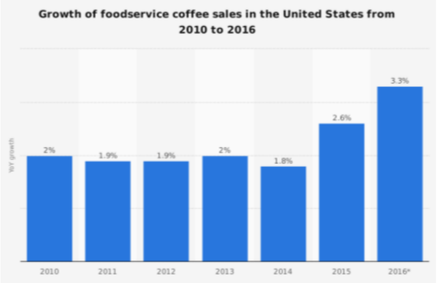
Shareholder structure

As usual for a S&P 500 listed company the biggest shareholders are Vanguard (6.71%) and Blackrock (6.16%). Since their ETF business requires them to hold major stakes in index listed companies it is highly unlikely that they will reduce their stake significantly in the future. The same holds for Capital Group Companies (4.51%) and State Street (4.03%) which are huge strategic buy and hold investors unlikely to revise their strategic asset allocation dramatically within short notice. Howard Schultz (2.56%), the executive chairman, is the fifth largest shareholder. On the 3rd of April he transitioned from CEO to executive chairman. From a Corporate Governance perspective this might be a positive move since the power is now less centred around a single individuum.

The Sector

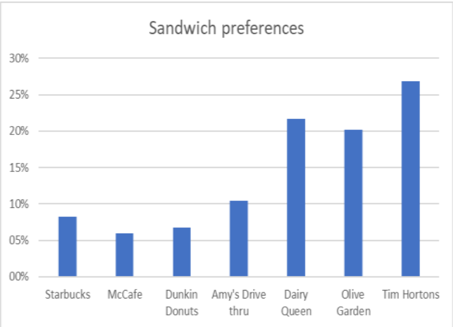
Starbucks operates in the consumer discretionary sector, more specifically in the Beverage and Foodservice industry. Region wise Starbucks is present all over the world, with three classified regions: Americas, EMEA, and CAP.

Market opportunities for Starbucks

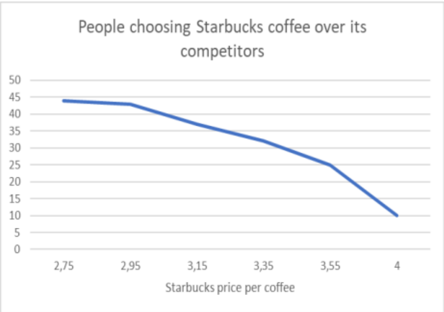


Source: Statista

The Foodservice Industry is constantly growing with an expected sales volume of USD 798.7 bn for the 2017, 4.3% higher than in 2016 and 35.0% higher than in 2010, according to the National Restaurant Association. This growth is mostly attributed to a stronger growing US economy (Q3 GDP growth of 3.3% vs 3.2% expectations) and wage growth combined with a relatively constantly falling unemployment rate (4.1% as of October 2017 vs. 4.8% in the beginning of the year). Starbucks profits both indirectly and directly from this industry trend. Indirectly via selling Starbucks and Seattle's Best Coffee roasted whole bean and ground coffees, a selection of Teavana teas, Starbucks VIA Ready Brew, and other beverages to institutional Foodservice companies that service several industries such as hotels, restaurants, airlines or office coffee distributors. Therefore Starbucks is well positioned to take a piece of an expected customer spending increase.



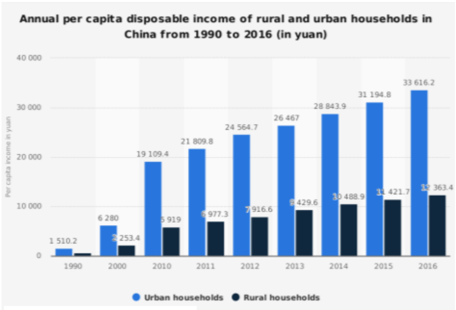
Starbucks can directly profit from its own food business line. Via selling bakery, pastries, salads, sandwiches, yogurts and various other smaller snacks. In the recent Q4 2017 earnings call Kevin Johnson stated that he is confident that Starbucks will reach its target of 25% food mix by 2021 and therefore expressed Starbucks focus on this business area. It is undeniable that bakery and pastries belong to a coffee house chain but it is questionable how successful the more lunch like snacks will be. Will people be going to Starbucks to eat lunch there or to buy a take-away sandwich? In order to get a better picture of Starbucks brand recognition within this food segment, a group of 134 people within the US in the age between 20 and 35 have been asked which of the following sandwiches/bagels they would choose: Starbucks (USD 5.95), McCafe (USD 3.99), Dunkin Donuts (USD 5.89), Amy's Drive thru (USD 3.99), Dairy Queen (USD 3.89), Olive Garden (USD 7.79), or Tim Hortons (USD 6.49). Criteria to be part of the selection was that the restaurant chain has to be offering also coffee in order to ensure at least a relatively similar product offering. In this case most people chose Tim Hortons (26.9%), Dairy Queen (21.6%), and Olive Garden (20.1%). Even though this poll is not representative it shows the perception of people of where to go to buy food. While Starbucks is the place to go for coffee (32.1% chose Starbucks) only a fraction of people would go to Starbucks to buy a sandwich. Now there is the question if people would get the coffee where they choose to eat or go and get the sandwich/ snack where they would like to get their coffee or if they are willing to switch the location. And if people decide to eat at Starbucks' stores, the question arises whether there is enough space for all the customers. The capacity utilization of a lot of Starbucks is available on google. Examining 100 stores within main locations in the US and Europe shows



that in the US the highest store utilization is between 12pm and 3pm while 6am to 9am and 9am to 12am has almost the same utilization. In Europe the highest utilization is within 3pm and 6pm which is more than a fifth higher than the utilization between 12pm and 3pm which is the next highest. This indicates that in Europe there is additional capacity during the lunchtime that could be used for offering lunch to customers. Capacity in that sense means capacity for people to sit in the store and eat, but also capacity for staff to prepare beverages and food without a too high waiting time for customers. Taking into consideration the concept of Starbucks that customers should stay longer within a store and enjoy the atmosphere by using the additional provided services or using it as a place to work it remains questionable if there will be enough space for people to eat in a store. Especially, since a typical Starbucks is usually filled by single people occupying a table with two or more seats. Generally, Starbucks' stores are quite crowded. As a result, it is more likely that Starbucks will be able to upsell food to existing customer who would be coming to the store anyways to drink their coffee or tea instead of attracting new customers because of the expanded food offerings. The take-away potential for food remains questionable as well since it is a different customer motivation to enter a store and get a take-away coffee than it is to get a take-away sandwich. In the first case people usually bring the coffee to their work place or another destination to either drink it there or during their way. People do not usually eat a sandwich or their whole lunch at their office desk or on the go. But since especially in the United States the store utilization drops dramatically between 6pm and 9pm (more than one third compared to prime time) there is potential to go into the evening snack customer segment. But it remains questionable if Starbucks brand recognition is strong enough to actually attract a reasonable amount of people for this food concept (especially since the poll shows that Starbucks is not yet well recognized as a place to go for food). In conclusion one can say that there is potential for growing food business within regular stores via the current and an expanded range of food offerings, and it is possible that Mr Johnson's goal of 25.0% can be reached. However, the question whether there is further potential without a costly rebranding strategy of Starbucks remains unanswered.

Starbucks' executives mention a lot of times Roastery stores when talking to the media. In fact those Roastery stores serve more as a marketing purpose than a significant value driver. Nevertheless, the marketing effect and the functionality as a pilot store for new products should not be underestimated. Roasteries are the flagship stores, the face of Starbucks which shows the exclusivity and embodies high quality products. Moreover, since those stores are significantly bigger and usually very well located, they can function as a laboratory for new

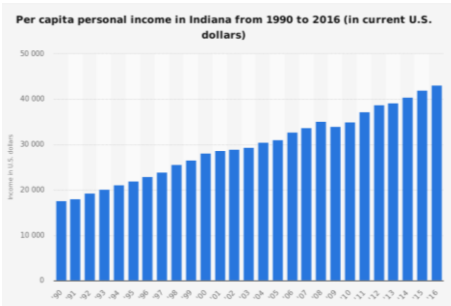
Starbucks product inventions. For example Starbucks recently decided to embed Princi, an artisanal Italian bakery, within every Roastery in the future.



Source: Statista

Coming to another area for growth potential, one as to take a close look at key Asian markets, in particular China and India. Recently, Starbucks has been aggressively expanding its presence in those areas with a store opening every 15 hours and is ready to profit from a growing middle-class income group and their increasing disposable income. Moreover, the population that will live in cities is expected to increase to 70.0% by 2030 from currently 55.0%. This will support Starbucks revenue in China since its stores are located in the big cities. Within China, Starbucks also opened its first flagship store in Shanghai within the Disney resort in 2016. In order to support this aggressive expanding strategy, Starbucks introduced its mobile payment service in most of its company-operated and licensed stores.

Talking about the Indian market which primarily consists of tea drinkers, Starbucks can either profit from its tea line but also bet on an increasing coffee market. The chances are quite good that this bet will be successful since, as in China, there is a rising middle class population in India and simultaneously there are various international coffee chains spreading across the country. This translates into increased competition but also a better chance to establish a coffee drinking culture in the country. Currently, the biggest coffee chain in India is Café Coffee Day, a local brand operating more than 1,500 stores; while Starbucks is operating around a 100 stores. But Starbucks concept is different from Café Coffee Day's in the sense that Starbucks is selling an atmosphere and a high quality healthy lifestyle. In order to still be able to fit local needs, Starbucks entered the market in 2012 via a joint venture with Tata Global Beverages Limited forming the venture Tata Starbucks Limited. Tata Global Beverages owns and operates Starbucks stores in multiple locations. Starbucks also entered the Indian market directly in 2012 by opening a flagship store in Mumbai. Since then it expanded its presence into several other locations offering its typical products but also local recipes and flavours. In 2016, Starbucks and Tata announced several new joint initiatives including the expansion of coffee roasting capacity for supplying Starbucks stores, the launch of Starbucks fresh brewed coffee service on all Vistara flights and the introduction of the Teavana speciality brand in customized flavours. Besides the Indian market, these joint initiatives also included the introduction of Himalayan Mineral Water in Singapore and the single-origin coffee from Starbucks Reserve Tata Nullore Estates in the US leveraging the market entry in India also for product expansion in the home market. The CAP region is surely one of the main drivers for Starbucks revenue growth especially since there can be several new stores opened without having



Source: Statista

cannibalization effects occurring like they are already present in the US where most cities are already saturated.

Another interesting area with growth potential is the office service market which in the US is expected to grow with about 3.5% p.a. until 2020 (according to a McKinsey study). But not only in the USA the office market can be a growth driver but also in Europe Starbucks is expanding after it tested its office coffee vending in Switzerland in 2012. The office products include Starbucks VIA Ready Brew, other coffee and tea or related products as well as pastries and bakery. This will translate into growth potential for the Channel Development sector that includes CPG and Foodservices.

Starbuck’s threats

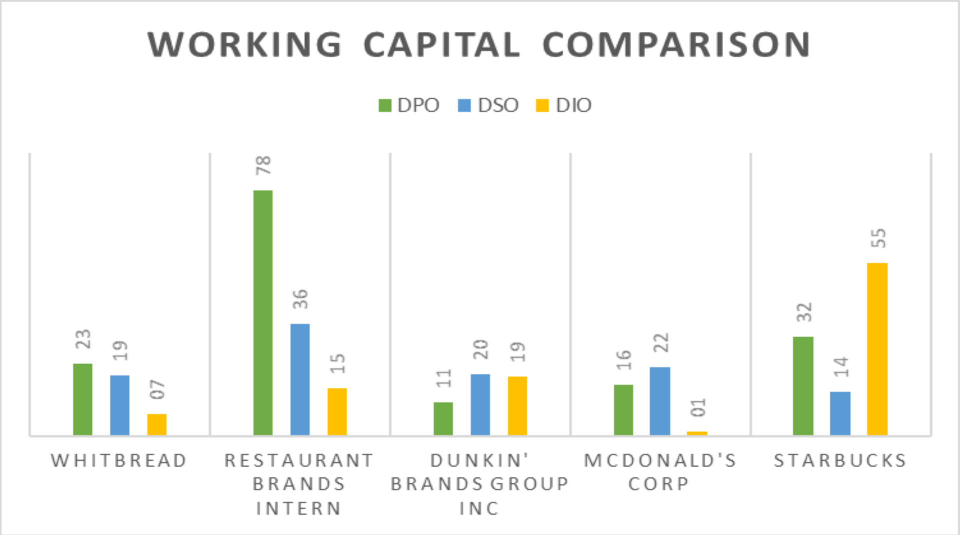
A main threat is the price development of the whole bean arabica coffee beans which Starbucks uses mostly. Although most coffee trades in the commodity market, the high-altitude arabica coffee of the quality that Starbucks is looking for tends to trade on a negotiated basis at a substantial premium above the coffee prices. The supply and price of the coffee beans can be affected by multiple factors including the weather conditions, and the economic and political conditions in the producing countries. Additionally, green coffee prices have been affected and will be potentially affected in the future by actions of certain organizations and associations which have historically attempted to influence green coffee prices via establishing export quotas or restricting coffee supplies. Moreover, the arabica coffee price is also affected by trading activities in the futures market, including market participants such as hedge funds and commodity index funds. Starbucks buys coffee using fixed-price and price-to-be-fixed purchase commitments depending on market conditions. As of October 1, 2017, the total green coffee purchase commitments were USD 1.2 bn of which USD 860 mn were under fixed-price contracts and an estimated USD 336 mn under price-to-be-fixed contracts. All price-to-be-fixed contracts were at the company’s option to fix the price. These purchase commitments are expected to be sufficient to ensure an adequate supply of green coffee throughout fiscal 2018. Accordingly, for the calculation of 2018’s cost of sales a change in coffee price is not as relevant for the model since the price is either already fixed or the optionality lies within Starbucks. When analysing the coffee price development since 1990 up until today, it is interesting that the average annual coffee price return has been 2.6% in this time period whereas the US inflation rate has been 2.4%. That means that either Starbucks was able to translate increasing coffee prices to their customers at a higher rate than inflation would predict or Starbucks had effectively managed the other components of costs in order to have a stable growing Gross Margin.

Financials

Comparables

- Working Capital analysis

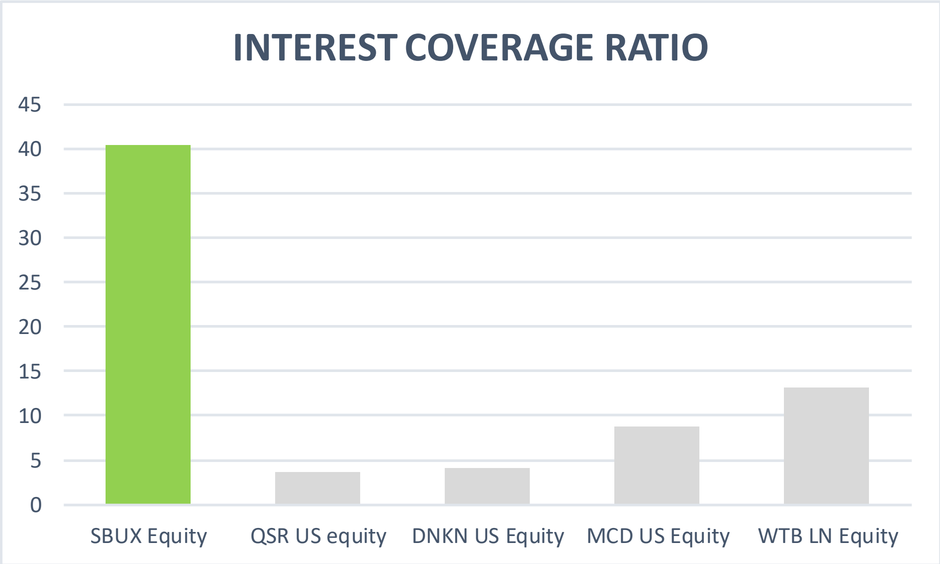
Analysing comparable companies operating in the same sector can give insights on how well Starbucks performs on an operational level. The net working capital analysis is conducted in order to compare how well Starbucks manages its current operations.



The analysis of Days Payables Outstanding (DPO), Days Sales Outstanding (DSO) and Days Inventory Outstanding (DIO) reveals that Starbucks is able to manage its current operations more effectively than its close Comparables. Since Starbucks is able to collect its receivables faster than its Comparables and at same time manages to pay its payables slower than almost all of its Comparables. As a result, Starbucks is able to run the daily operations more smoothly. On the other hand there is not much potential to improve DSO and DPO further. Looking at DIO, Starbucks seems to be managing its inventories worse than its close Comparables. This can be explained with the different business models of the companies. Starbucks is mainly selling coffee and tea which is the company can store for a longer period compared to food ingredients. With a higher inventory Starbucks can react faster on a positive demand shock but on the same time faces higher storage costs. But since the DIO is significantly higher there is potential to further reduce storage costs and manage inventories more efficiently.

- Interest Coverage Ratio

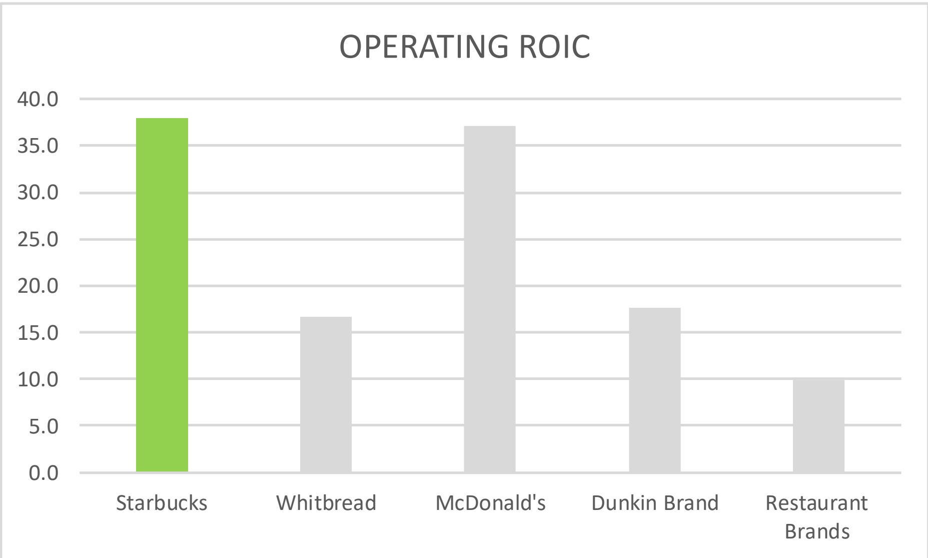
The Interest Coverage Ratio gives insights about how well a company is doing financially. The below graph shows the Interest Coverage Ratios of Starbucks and its close competitors.



Starbucks' Interest Coverage Ratio is well above the one of its competitors, suggesting more financial stability and the ability to faster react to changing market environments due to an easier access to financing means. On the other hand this huge difference suggest that Starbucks might not yet have established the optimal capital structure.

- ROIC Analysis

The Return On Invested Capital analysis reveals how well Starbucks uses its

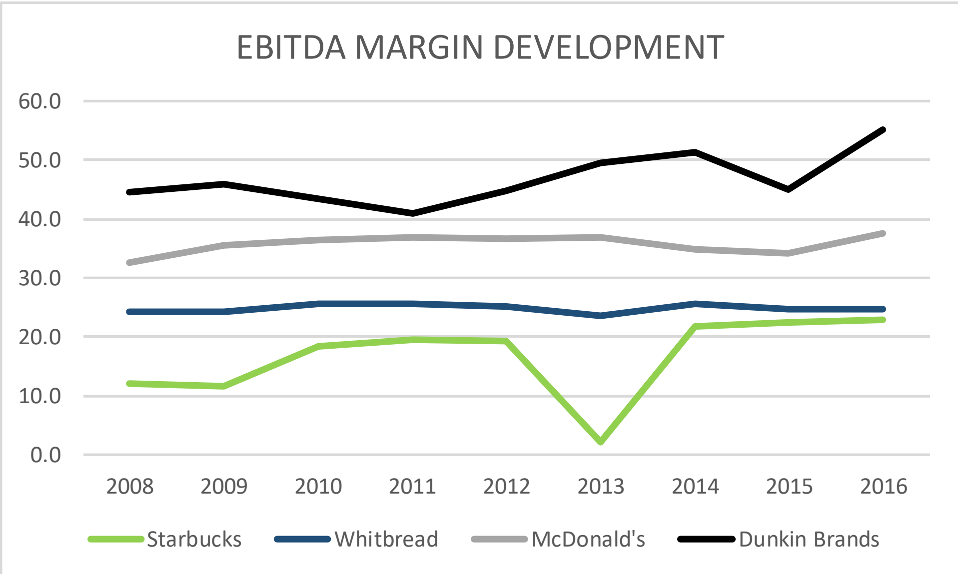


money to generate returns. Again, the Comparable analysis shows whether Starbucks is doing well compared to others or if there is room for improvement.

The analysis states that Starbucks is using its capital very effectively in comparison to other companies with a similar business model. The ROIC of 38.0% reflects also the huge potential for Starbucks growth, since it is more than five times the current cost of capital. Consequently, Starbucks could grow tremendously as the numbers suggest. But in order to grow effectively there has to be further growth potential in the market which Starbucks has identified but needs to build on carefully.

- EBITDA Margin

The EBITDA Margin indicates how well a company is translating its revenues in profit on an operational level. Before comparing Starbucks to its competitors it is important to note, that Starbucks operates a lot of its stores on its own (roughly 50%), while McDonald's' or Dunkin Brands' business model is based on franchise. This will translate into the EBITDA Margin and results in a way better looking margin for Starbucks competitors. Therefore it is more interesting to look at the slope of Starbucks Margin in comparison to its competitors.



As the above graph shows Starbucks has except 2013, when the company was facing litigation charges, increased its EBITDA Margin to a level that is very close to Whitbread nowadays. Most importantly, Starbucks has increased its EBITDA Margin by 89.0% over the depicted years. This is a significant improvement, especially compared to its competitors which achieved growth rates of 2.0% (Whitbread), 16.0% (McDonald's), and 24.0% (Dunkin Brands). Via its already mentioned digital improvements on the cost side (internet of things, involving coffee machines, refrigerators etc.) Starbucks might be able to increase its

EBITDA margin further. (Note: All numbers in the previous section have been extracted from Bloomberg).

Cost of Capital and Capital Structure

The cost of capital used to discount the free cash flow within the Discounted Cash Flow model is the weighted cost of capital (WACC). In the following the different components for the cost of capital are determined and explained.

- Levered beta

There are two approaches to determine beta used in this model in order to be able to look at elasticities within the Capital Asset Pricing Model (CAPM). The first approach to determine the beta is by its definition as the covariance of the asset and the market returns divided by the variance of market returns. In order to reduce the noise and look at a period that reflects recent market conditions, monthly Starbucks returns over the last five years have been regressed on monthly S&P500 risk premia (actual return minus 10 years US government rate at that point in time). In order to challenge the result a second regression has been made with daily returns from the last ten years in order to include periods with high market volatility in which usually the beta of company moves more closely with the market. Since this period has been included there is no adjustment like Bloomberg has made to its beta in order to account for more simultaneous movement in period of extreme market deterioration. Within both regressions the minimum of the lower 95% confidence interval and the maximum of the upper 95% confidence intervals have been extracted and are included in the following CAPM scenario analysis . As expected the more recent beta is lower (0.75) than the one including financial crises (1.06).

The second approach to determine beta is the comparable analysis. Via un-levering competitors levered betas and re-levering those betas with the debt-to-equity ratio and marginal tax rate of Starbucks. Not surprisingly the beta is relatively low, since Starbucks has no really close Comparables. And companies like Whitbread, Dunkin Donuts, or McDonald's do their main business with food which is more independent from market movements than a premium coffee chain like Starbucks. Since in phases of economic downturn people would like to switch to a cheaper alternative when it comes to coffee but are still likely to eat out every now and then especially in restaurants that are not really expensive as those used to determine Starbucks beta. Logically, the beta is a bit underestimated using this approach (beta of 0.68).

- CAPM

Since the range for beta is determined, there is the risk-free rate and the market risk premium missing in order to calculate the return on equity. For the risk-free rate it is most suitable to take the current 10 years US government bond yield. For the scenario analysis the highest and lowest 10 year US government bond yield within the last ten years have been taken in order to simulate what would happen if the risk free rate changes. Following the current monetary policy in the US it is likely that during the next year there will be several rate hikes (one has been made this December already and there are three more announced for the near future). During the past year the yield curve flattened a lot mainly due to the fact that Trumps economic impact has been overestimated and therefore people believed that since quantitative easing is coming to its end the short term and belly rates will increase while this condition will be rather stable and therefore long-term interest rates came down a little bit. Looking forward, there is potential for an upwards movement for the whole yield curve affecting also the 10 years rate. Mainly due to the fact that a flattening has already happened and current expectations for a rate hike are already priced. If the Fed continues to hike rates this will lead to a lift in the whole yield environment. Especially since the core consumer inflation rate is on the run to the Fed's 2.0% target, with currently 1.8% in October versus 1.7% in September, a hawkish rate policy is quite likely.

Regarding the market risk premium, the return of the S&P500 of the last 10 years has been taken into consideration since during the shorter period of time we have been in a boom phase with strong market performance likely to overestimate the market risk premium. At each observation point the market risk premium is calculated (see approach to determine beta).

RF/Beta	*0.3677*	*0.4522*	*0.5366*	*0.6210*	*0.7054*	*0.7899*	*0.8743*	*0.9587*	*1.0431*	*1.1275*
1.35%	3.12%	3.53%	3.93%	4.34%	4.75%	5.15%	5.56%	5.97%	6.37%	6.78%
1.76%	3.53%	3.93%	4.34%	4.75%	5.15%	5.56%	5.97%	6.37%	6.78%	7.19%
2.16%	3.93%	4.34%	4.75%	5.15%	**5.56%**	**5.97%**	**6.37%**	**6.78%**	**7.19%**	7.59%
2.57%	4.34%	4.75%	5.15%	5.56%	**5.97%**	**6.37%**	**6.78%**	**7.19%**	**7.59%**	8.00%
2.98%	4.75%	5.15%	5.56%	5.97%	6.37%	6.78%	7.19%	7.59%	8.00%	8.41%
3.38%	5.15%	5.56%	5.97%	6.37%	6.78%	7.19%	7.59%	8.00%	8.41%	8.81%
3.79%	5.56%	5.97%	6.37%	6.78%	7.19%	7.59%	8.00%	8.41%	8.81%	9.22%
4.20%	5.97%	6.37%	6.78%	7.19%	7.59%	8.00%	8.41%	8.81%	9.22%	9.63%
4.60%	6.37%	6.78%	7.19%	7.59%	8.00%	8.41%	8.81%	9.22%	9.63%	10.03%
5.01%	6.78%	7.19%	7.59%	8.00%	8.41%	8.81%	9.22%	9.63%	10.03%	10.44%

The bold printed numbers represent the most likely return on equity for the CAPM model resulting from the explanations made above.

Cost of debt

For the cost of debt there have been three approaches conducted in order to come up with a proper range of costs of debt. The first approach is taking the yield of the most recently issued bond (2.9%). Since the latest bond should best reflect the current perception of Starbucks credit worthiness by the market. Another approach is the one of Maug (2014)[1] in which he describes measuring the cost of debt with a debt beta with the following regression:

$$r_{j,t}^{D} = \alpha_{j,0} + h_{j,E} r_{j,t}^{E} + \alpha_{j,F} r_{t}^{F} + u_{j,t}$$

Where $r_{j,t}^{D}$ is the return of company j's bonds, $r_{j,t}^{E}$ is the return of j's equity, and r_{t}^{F} is the risk free rate, all in period t. The following table shows the result of the regressions for different ratings:

Empirical hedge ratios	AAA	AA	A	BBB	BB	B
$h_E \times 100$	0.61	1.17	3.16	4.00	8.27	15.22

Since Starbucks Rating is A minus, 3.16 is used within the CAPM model as the debt beta. This approach results in a cost of debt of 2.5% therefore slightly lower than the recent yield approach. But since this model is already been calibrated three years and might need some recalibration with latest data, it has been used more as a verification.

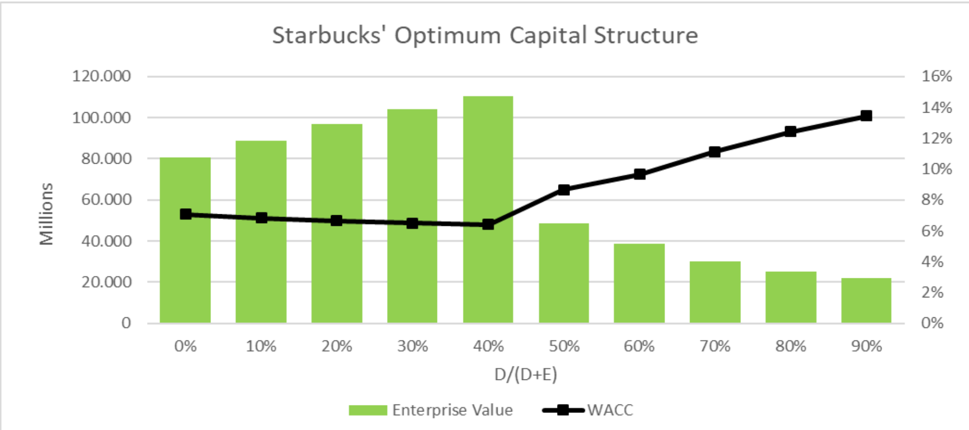
The third approach is a comparable analysis related to bond ratings. The average of a selected sample of 20 A minus rated bond yields among the S&P500 companies results in a cost of debt of 2.7%. The highest observed bond yield in the sample has been 3.9% and is taken as the upper border in the scenario analysis for the weighted average cost of capital.

Capital Structure

Having a glance at the capital structure a debt-to-equity ratio based on market values of 4.7% seems quite low. An analysis for the optimal capital structure results in a debt-to-equity ratio of 66.6%. This seems to be a quite huge increase but taking into account the S&P rating and corresponding spread table Starbucks would still be able to attain an A minus Rating (before the announcement of returning USD 15 bn to shareholders Starbucks was rated A) mainly due to its strong EBITDA figure which translates into a good interest coverage ratio even if the interest payments would rise due to the increased indebtedness.

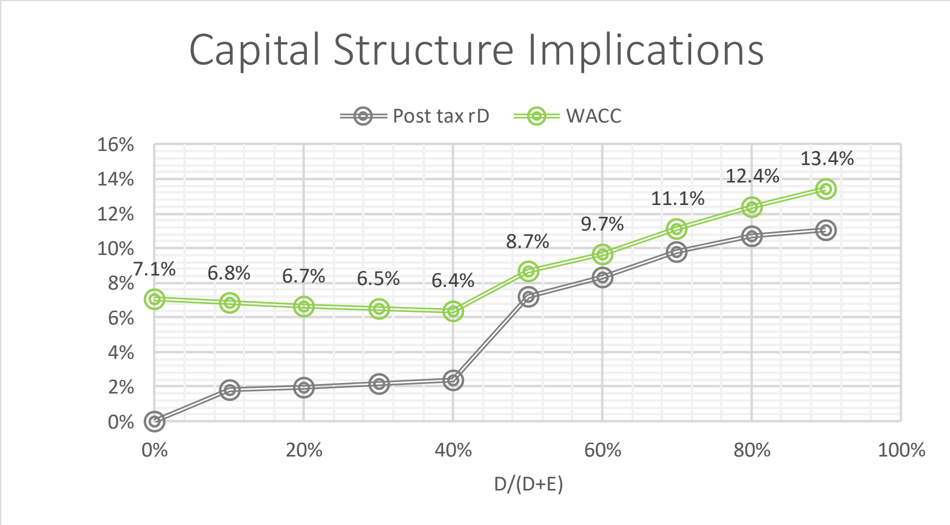
[1] E. Maug (2014), Estimating Debt Betas, Working Paper, University of Mannheim

Since the analysis of the capital structure suggests an increase in debt it remains questionable why Starbucks currently sticks to its low ratio. In the past, growth has been able to be financed mostly via retained earnings (after the cash inflow from the IPO). Looking forward there are no major strategic changes about to happen that would require a lot of cash and thus it is unlikely that Starbucks would issue debt due to needed investments. Especially, since in the US Starbucks is approaching a number of stores that will likely face cannibalization effects if Starbucks would increase its new store openings. But what is likely and also suggested by the capital structure analysis is that Starbucks can take up debt and on the same time decrease its market value of equity via share repurchases. The new bond issue announced in November will increase the debt level by USD 1.0 bn while partially replacing maturing bonds. At the same time the company announced to distribute USD 15.0 bn to its shareholders via dividends and share repurchases. Consequently, Starbucks is in the process of changing its capital structure towards a higher debt-to-equity ratio which through the increased benefit of the resulting tax shields will lead to a higher Enterprise



Value. In the Graph the effect of an increase in indebtedness is depicted. Once the debt level reaches a certain level that leads to a downgrade in rating the WACC jumps and therefore the Enterprise Value decreases. As shown in the graph the Market value could be increased by USD 26.3 bn pushing the share price to USD 76.4 assuming the number of shares outstanding would be the same as currently. This huge potential that lies within the capital structure optimization originates from Starbucks' strong Interest Coverage ratio of currently 40.5.

Since a downgrading according to the S&P table would only occur if the Interest Coverage Ratio falls below a level of 3.0. Note here, that according to this Rating table Starbucks should be rated AAA, but since the Interest Coverage Ratio is not the only determinant those Enterprise Values are indicative and should illustrate more the potential of a change than providing actual numbers. The below sensitivity analysis illustrates the relation between the capital structure, the resulting cost of debt, and the resulting cost of capital (WACC).



If Starbucks completes its targets of distributing USD 15.0 bn to its shareholders, partially financed by debt, the company is expected to take up USD 500.0 mn more debt in 2020 in order to have a sufficient level of excess cash. Since Tazo has been sold for USD 384 mn recently, Starbucks has already generated some cash for this capital structure reshape. Taking into account this already public information the capital structure for the DCF valuation is assumed to be 6.1%.

- WACC

Now since all components are calculated the final cost of capital can be determined. The table below shows the different resulting WACCs using as scenarios changing costs of debt (row) as well as changing costs of equity (column). Thereby, the debt-to-equity ratio is kept constant at 6.1%. The ranges for both cost of equity and cost of debt stem from the analyses above and therefore depict realistic scenarios.

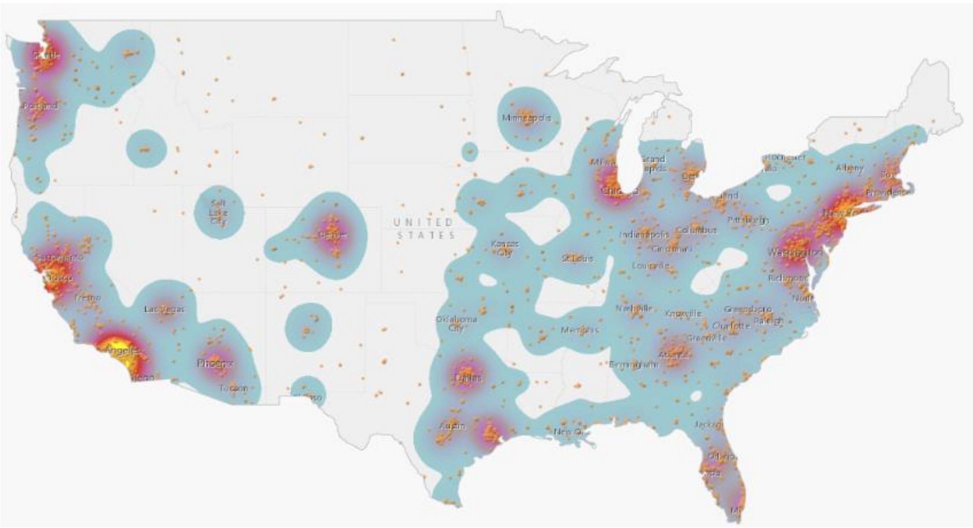
rE/rD	*2.50%*	*2.65%*	*2.81%*	*2.96%*	*3.11%*	*3.27%*	*3.42%*	*3.57%*	*3.73%*	*3.88%*
3.93%	3.79%	3.80%	3.81%	3.81%	3.82%	3.82%	3.83%	3.84%	3.84%	3.85%
4.34%	4.18%	4.18%	4.19%	4.19%	4.20%	4.21%	4.21%	4.22%	4.22%	4.23%
4.75%	4.56%	4.56%	4.57%	4.58%	4.58%	4.59%	4.59%	4.60%	4.61%	4.61%
5.15%	4.94%	4.95%	4.95%	4.96%	4.96%	4.97%	4.98%	4.98%	4.99%	4.99%
5.56%	5.32%	5.33%	5.33%	5.34%	5.35%	5.35%	5.36%	5.36%	5.37%	5.38%
5.97%	5.70%	5.71%	5.71%	5.72%	5.73%	5.73%	5.74%	5.75%	5.75%	5.76%
6.37%	6.08%	6.09%	6.10%	6.10%	6.11%	6.11%	6.12%	6.13%	6.13%	6.14%
6.78%	6.47%	6.47%	**6.48%**	**6.48%**	**6.49%**	**6.50%**	**6.50%**	**6.51%**	**6.51%**	6.52%
7.19%	6.85%	6.85%	**6.86%**	**6.87%**	**6.87%**	**6.88%**	**6.88%**	**6.89%**	**6.90%**	6.90%
7.59%	7.23%	7.24%	7.24%	7.25%	7.25%	7.26%	7.27%	7.27%	7.28%	7.28%

Forecasting

Revenues

Revenues are forecasted region specific and depending on three main drivers: store growth, ticket size growth, and transaction per store growth. These growth rates are applied on the different segments especially due to the fact that region specific Starbucks have different growth strategies and markets experience different growth drivers. This section depicts exemplary the revenue forecast for the region Americas.

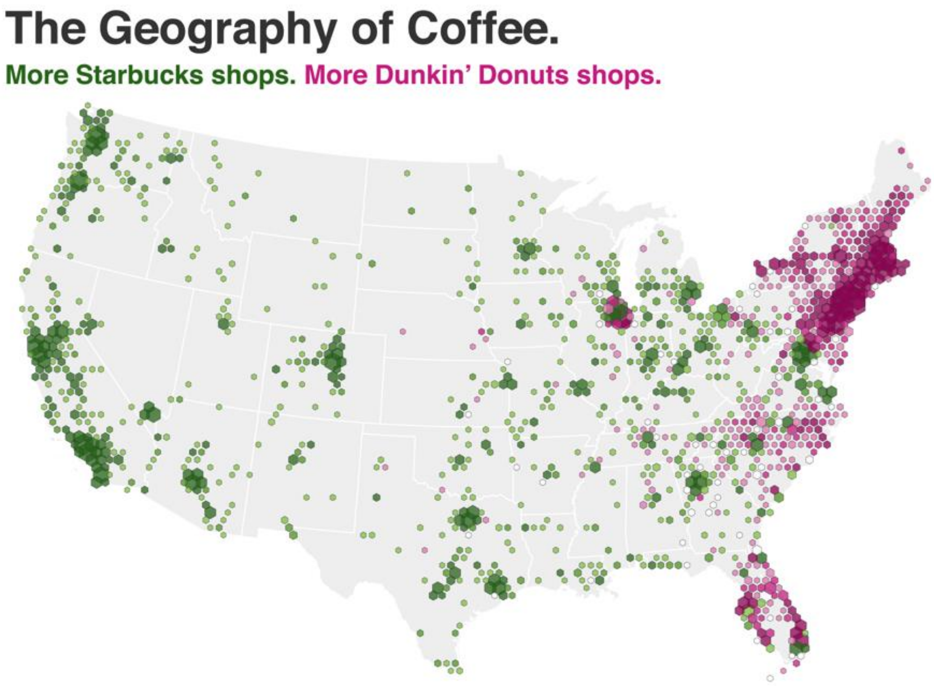
Starting with the store growth factor, Starbucks has disclosed its historic store development and its target store openings for the next year - all regional specific. Starting with Americas (mainly US), Starbucks plans to open 900 new stores, both co-operated and licensed stores in equal amounts. This would be an increase of 4.8% in new co-operated store openings. Since last year Starbucks missed its target of new store openings by 1.0%, a store growth factor of 3.8% is assumed for 2018. Important to note here is, that Starbucks is already approaching a saturation level. The company is starting to open new stores in suburban regions due to threats of cannibalizing its own store revenue within top locations. The below Heatmap[2] shows, that Starbucks has a significant presence within top locations.



And if we take additionally the store occupation of one of Starbucks main competitors, Dunkin Brands, the below Heatmap[3] reveals that Starbucks has a better position on the West Coast but faces significant competition on the East Coast. As a result, Starbucks has either to try to gain market share from Dunkin

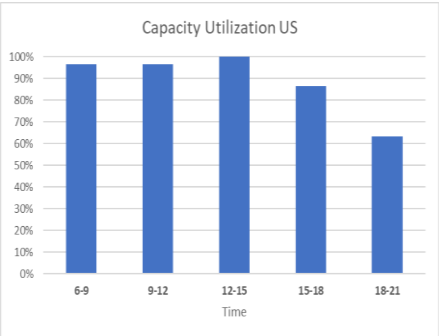
[2] Source: Business Insider
[3] Source: Business Insider, Data by poi-factory.com

on the East Coast, where it already has a strong presence or needs to put more colour on the grey areas on the above heat map. Both might work on the short run but is questionable looking five or more years into the future.



Therefore, after 2018 the store growth rate is expected to constantly decline by 1% per year up until the end of the forecasted period of 2022. Talking about the average ticket size, CEO Howard Schultz stated recently that the average customer spends USD 5.0 in a usual Starbucks store and USD 20.0 in a Roastery. In terms of square meters the Roasteries make up to ~ 0.6% of the total space of Starbucks stores and are therefore not separately forecasted. Drivers for the ticket size are inflation, wage growth, the unemployment rate and Starbucks product mix. The first two are quite straight forward, with the Fed's inflation target of 2%, wage growth of 2.5% with a target of about one percent higher and an unemployment rate of 4.1%. Since the wage growth is higher than inflation, a ticket base growth rate of 2.5% increasing by 0.1 percentage points each year (getting slowly closer to the target) is assumed. The unemployment rate is already quite low and therefore there is no real justifiable further potential growth that can be achieved via an increasing working population. Considering the product mix, an increase of the Foodservice towards 25% means that revenues generated by food will need to increase by six percentage points compared to the current level (currently 19.0%). This will impact the average ticket of USD 5.0 since a usual sandwich sells for USD 5.95. As the capacity analysis in the US suggests that there is potential for attracting additional customers with the lunch business but since stores already seem to be full during the lunch time it is more likely that Starbucks will benefit from an increase in the ticket size per customer instead of the amount of customers. So, if on average on top of the USD 5.0 6.0% of the customers would buy the average sandwich the average ticket per customer would increase to USD 5.4 (7.1%) over the next years to 2021. Afterwards it assumed that it just grows with inflation since Starbucks is still recognised as a beverage company as the survey showed and therefore limited to a product mix in which Foodservice takes up to 25.0%.

The next pillar of growth is the number of transactions per store. Currently the estimated average number of daily customers per store is between 450 and 500. Main driver of an increased number of transactions per day is mobile order & pay. Starbucks has several incentives in place via its My Starbucks Rewards loyalty program to transform the average customer who visits a store six times per month to a loyal customer who goes in and out 16 times. On the same time Starbucks hopes to better utilize its capacity by reducing the time a customer needs to spend in the store. What sounds legitimate is currently causing operational problems since Starbucks was not ready for the fast adoption of the mobile order & pay system by its customers. This is reflected in Starbucks in the 0.0% increase in transactions in 2017 despite store growth of 4.4% in its co-operated stores. Taking into account this store growth rate and the total revenue growth and the ticket growth rates, the growth in the number of transactions per store can be backed out. This resulting decrease of 2.6% is mainly caused by Hurricane Irma effect and these operational challenges. In 2018 the effect is expected to be 0.0% since Starbucks is working on those operational challenges. Afterwards Starbucks is able to harvest the benefits of digitalization. The main advantage of the mobile order & pay system is an improved capacity utilization. Conducting a survey of an one hour observation period at different dates and times resulted in an average of 61.1 customers being served in one hour. That means there are 1.02 customer served within a minute. There are basically three main actions to be done ordering a coffee: giving the order, paying the bill, and waiting for the pickup. Via mobile order & pay the first two steps can be removed since the coffee still has to be prepared. And since this is happening at the same time as regular customers are served there are also additional human and machinery capacity needed. Talking in proportions the observations revealed that roughly 70% of the waiting time is spent on actually waiting for the coffee to be prepared while roughly 30% (ordering and paying) could be saved. Currently 30% of Starbucks customers order mobile on co-operated stores in the US. The capacity utilization analysis revealed that in 80% (4/5 time slots, see graph on the left) of the time a Starbucks store is utilized up until a level that a time reduction could gain an increase in sales. That means sales could be increased by 7.2% (for 30% of the customers 30% of the time can be saved in 80% of the day)



during the forecasted years if the proportion of mobile user would stay the same and Starbucks is able to harvest the time saving efficiently. But since mobile users in the recent past grew by 1.2 percentage points per quarter, in 2022 it would be 54.0% using mobile payment. Consequently, a growth of 13.0% can be distributed among the years to 2022 (equal distribution is a simplification).

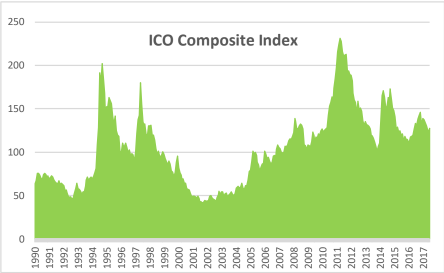
Adding all growth rate components together the final growth rate for the co-operated stores in Americas is determined. All other regions are determined via the same approach including region specific growth factors as well as cross regional assumptions. For the Foodservice & other segment an annual growth rate of 3.5% is assumed. This is the growth rate of the food deliverable market estimated by McKinsey.

The below table illustrates stock price implications for certain scenarios (it is always assumed that anything other than mentioned in the scenario will remain base case forecast):

Scenario	Stock Price Implication
1) "Food" will remain at 19% of the product mix, "Digital" has no impact	USD 60.39
2) New US store opening will just cover their costs due to saturation	USD 64.75
3) Scenario 1) and 2) combined	USD 53.96
4) CAP growth will slow down dramatically (store growth rates of region Americas)	USD 62.27
5) Scenario 3) and 4) combined	USD 44.13
6) "Food" will increase to 30% of the product mix in the US	USD 74.74
7) "Digital": Time saving in the US is only achieved in 40% of the cases than 80%	USD 67.29
8) Channel development will grow at historic growth (instead of 3.5%)	USD 78.17

This table also shows the risk of Starbucks valuation. Starbucks current stock price already assumes a certain growth either via store opening in the US, “Food” impact, “Digital” impact, or strong growth rates in the CAP region. If one of those value drivers is not going to materialise the growth potential vanishes.

Cost of Sales



The Cost of Sales are highly dependent on the coffee price. Starbucks hedges itself usually for the supply of the next year in order to have planning certainty. Since Starbucks separates between cost of sales, store operating expenses, other operating expenses, depreciation and amortization expenses, and general and administrative expenses within the cost of sales actual production costs for beverages and food are included. The scenario analysis is conducted for the year 2019 since Starbucks is already fully hedged for 2018 (as stated in the their annual report), meaning that price deteriorations in the next year are only going to affect hedges for the year after. Therefore the 2019 cost of sales are taken and food (19%), tea (expected to be USD 3.0 bn in the next 4 years, therefore roughly USD 2.0 bn in 2019 which equals 7.7%) and others (4%) are excluded. The worst-case scenario is the mean return of the coffee price (2.6%) plus one standard deviation (24.8%) and the best case scenario is subtracting a standard deviation. The table below summarizes the results:

	2019 worst case	*2019 base case*	*2019 best case*
Sales	27,017	27,017	27,017
Cost of Sales	12,867	10,862	9,238
% dependent on coffee price	67%	67%	67%
% independent of coffee price	33%	33%	33%
Coffee price movement	+27.4%	+2.6%	-22.2%
Gross Margin	14,150	16,155	17,779
in %	**52%**	**60%**	**66%**

This table shows the significant impact on the Gross Margin. A coffee price movement on its own could lead to a difference of 14.0 percentage points on the gross margin. For the valuation, the base case scenario is assumed.

Appendix

Financial Statements

Income Statement (in USD mn)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total net revenues	**14,866.8**	**16,447.8**	**19,162.7**	**21,315.9**	**22,386.8**	**24,369.9**	**27,017.0**	**29,775.9**	**32,707.5**	**35,396.9**
Check	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*					
Cost of sales as reported total	6,382.3	6,858.8	7,787.5	8,511.1	9,038.2	9,819.1	10,862.4	11,954.4	13,118.6	14,196.2
Store operating expenses reported total	4,286.1	4,638.2	5,411.1	6,064.3	6,493.3	7,093.5	7,902.1	8,740.4	9,629.3	10,428.1
Other operating expenses as reported total	431.8	457.3	522.4	545.4	553.8	582.6	633.4	683.0	736.1	788.0
Dep & amortization expenses as reported total	621.4	709.6	893.9	980.8	1,011.4	1,082.0	1,206.5	1,333.2	1,462.8	1,583.8
G&A expenses as reported total	937.9	991.3	1,196.7	1,360.6	1,393.3	1,381.9	1,486.6	1,589.3	1,677.8	1,732.2
Total operating expenses w/o Litigation charge	**12,659.5**	**13,655.2**	**15,811.6**	**17,462.2**	**18,490.0**	**19,959.1**	**22,091.1**	**24,300.4**	**26,624.6**	**28,728.2**
Litigation charge / credit	2,784.1	(20.2)	0.0	0.0	153.5	0.0	0.0	0.0	0.0	0.0
Total operating expenses	**15,443.6**	**13,635.0**	**15,811.6**	**17,462.2**	**18,643.5**	**19,959.1**	**22,091.1**	**24,300.4**	**26,624.6**	**28,728.2**
Check	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*					
Income from investees	**251.4**	**268.3**	**249.9**	**318.2**	**391.4**	**435.2**	**484.1**	**538.0**	**597.0**	**661.1**
Check	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*					
Total operating income / loss before tax	**2,458.7**	**3,060.9**	**3,601.0**	**4,171.9**	**4,288.2**	**4,846.0**	**5,410.1**	**6,013.6**	**6,680.0**	**7,329.8**
Check	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*					
Taxes	272.1	(1,064.5)	(1,153.3)	(1,370.4)	(1,368.6)	(1,594.0)	(1,779.5)	(1,978.0)	(2,197.2)	(2,410.9)
Operating income after tax	2,730.8	1,996.4	2,447.7	2,801.5	2,919.6	3,252.1	3,630.6	4,035.6	4,482.8	4,918.9
Gain resulting from acquisition of JV	0.0	0.0	390.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Litigation charge / credit	(2,784.1)	20.2	0.0	0.0	(153.5)	0.0	0.0	0.0	0.0	0.0
Unrealized holding gains / losses on available for	(0.4)	1.0	0.9	2.2	(6.6)	-0.58	-0.58	-0.58	-0.58	-0.58
Unrealized gains / losses on cash flow hedging in	22.5	16.3	30.8	(82.1)	40.6	5.62	5.62	5.62	5.62	5.62
Unrealized gains / losses on net investment hedg	20.7	16.1	2.7	0.0	12.7	10.44	10.44	10.44	10.44	10.44
Translation Adjustment	(41.3)	(77.4)	(216.7)	104.5	(40.7)	-54.32	-54.32	-54.32	-54.32	-54.32
Reclassification adjustment for net (gains) / losses realized in net earnings for available-for-sale securities, hedging instruments, and translation adjustment	42.8	2.3	(42.4)	66.4	(53.2)	3.18	3.18	3.18	3.18	3.18
Other Comprehensive Income	**44.3**	**(41.7)**	**(224.7)**	**91.0**	**(47.2)**	**-35.7**	**-35.7**	**-35.7**	**-35.7**	**-35.7**
Net Operating Result	**(9.0)**	**1,974.9**	**2,613.6**	**2,892.5**	**2,718.9**	**3,216.4**	**3,594.9**	**3,999.9**	**4,447.1**	**4,883.2**
Interest income and other, net	123.6	142.7	43.0	108.0	275.3	532.8	148.8	148.8	148.8	148.8
Interest expense	(28.1)	(64.1)	(70.5)	(81.3)	(92.5)	(142.0)	(152.9)	(168.4)	(152.9)	(137.4)
Loss on extinguishment of debt	-	-	(61.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Financial Result before Tax	95.5	78.6	(88.6)	26.7	182.8	390.8	(4.1)	(19.6)	(4.1)	11.4
Tax Shield	33.4	27.5	(9.6)	9.3	64.0	136.8	(1.4)	(6.9)	(1.4)	4.0
Net Financial Result after tax	62.1	51.1	(79.0)	17.4	118.8	254.0	(2.7)	(12.7)	(2.7)	7.4
Net earnings attributable to non-controlling inter	(0.5)	0.4	(1.9)	(1.2)	(0.2)					
Net Income	**8.3**	**2,068.1**	**2,757.4**	**2,817.7**	**2,884.7**	**3,506.1**	**3,627.9**	**4,022.8**	**4,480.1**	**4,926.3**
Comprehensive Result	**53.1**	**2,026.0**	**2,534.6**	**2,909.9**	**2,837.7**	**3,470.4**	**3,592.3**	**3,987.2**	**4,444.5**	**4,890.6**

Balance Sheet (in USD mn)

Balance Sheet in (USD mn)	*2013*	*2014*	*2015*	*2016*	*2017*	2018	2019	2020	2021	2022
Operating Assets										
Working Cash	74.3	82.2	95.8	106.6	111.9	121.8	135.1	148.9	163.5	177.0
In % of Sales	*0.5%*	*0.5%*	*0.5%*	*0.5%*	*0.5%*	*0.50%*	*0.50%*	*0.50%*	*0.50%*	*0.50%*
Equity and cost investments	496.5	514.9	352.0	354.5	481.6	492.0	502.6	513.5	524.5	535.9
in % of Total Operating Assets	*6.0%*	*6.0%*	*3.3%*	*3.2%*	*4.3%*	*4.1%*	*4.0%*	*3.9%*	*3.8%*	*3.7%*
PPE net	3,200.5	3,519.0	4,088.3	4,533.8	4,919.5	5,083.2	5,321.8	5,515.5	5,656.5	5,726.5
in % of sales	*21.5%*	*21.4%*	*21.3%*	*21.3%*	*22.0%*	*20.9%*	19.7%	18.5%	17.3%	16.2%
Deferred income taxes net	967.0	903.3	828.9	885.4	795.4	1,113.6	1,243.2	1,381.9	1,535.0	1,684.4
In % of taxes paid	*-355.4%*	*84.9%*	*71.9%*	*64.6%*	*58.1%*	*69.9%*	*69.9%*	*69.9%*	*69.9%*	*69.9%*
Other long-term assets	173.9	180.9	361.2	411.3	338.4	293.1	293.1	293.1	293.1	293.1
in % of Total Operating Assets	*2.1%*	*2.1%*	*3.4%*	*3.7%*	*3.0%*	2.5%	2.3%	2.2%	2.1%	2.0%
Other intangible assets	274.8	273.5	520.4	516.3	441.4	405.3	405.3	405.3	405.3	405.3
in % of Total Operating Assets	*3.3%*	*3.2%*	*5.0%*	*4.7%*	*3.9%*	3.4%	3.2%	3.1%	2.9%	2.8%
Goodwill	862.9	856.2	1,575.4	1,719.6	1,539.2	1,539.2	1,539.2	1,539.2	1,539.2	1,539.2
in % of Total Operating Assets	*10.4%*	*9.9%*	*15.0%*	*15.6%*	*13.7%*	13.0%	12.3%	11.7%	11.1%	10.7%
Accounts Receivable net	561.4	631.0	719.0	768.8	870.4	919.2	1,019.0	1,123.1	1,233.7	1,335.1
Days Sales Outstanding (DSO)	*13.6*	*13.8*	*13.5*	*13.0*	*14.0*	13.6	13.6	13.6	13.6	13.6
Inventories	1,111.2	1,090.9	1,306.4	1,378.5	1,364.0	1,530.8	1,693.5	1,863.7	2,045.2	2,213.2
Inventory Turnover ratio		*6.2*	*6.5*	*6.3*	*6.6*	6.4	6.4	6.4	6.4	6.4
Prepaid expenses and other current assets	275.2	256.9	283.4	322.3	344.7	365.7	387.9	411.5	436.6	463.1
in % of Total Operating Assets	*3.3%*	*3.0%*	*2.7%*	*2.9%*	*3.1%*	3.1%	3.1%	3.1%	3.2%	3.2%
Deferred income taxes net	277.3	317.4	381.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
in % of Total Operating Assets	*3.4%*	*3.7%*	*3.6%*	*0.0%*	*0.0%*	0.0%	0.0%	0.0%	0.0%	0.0%
Total Operating Assets	8,275.0	8,626.2	10,512.5	10,997.1	11,206.5	11,863.9	12,540.7	13,195.7	13,832.7	14,372.8
Operating Liabilities										
Other long-term liabilities	357.2	392.2	610.8	618.1	733.2	689.6	787.6	899.7	977.4	1,064.0
In % of Sales	*2.4%*	*2.4%*	*3.2%*	*2.9%*	*3.3%*	*2.8%*	*2.9%*	*3.0%*	*3.0%*	*3.0%*
Accounts Payable	491.7	533.7	684.2	730.6	782.5	815.2	901.9	992.5	1,089.2	1,178.7
Days Payables Outstanding (DPO)	*27.7*	*28.0*	*31.6*	*30.9*	*31.2*	29.9	29.9	29.9	29.9	29.9
Accrued Liabilities	3,854.1	1,272.2	1,444.5	1,616.0	1,488.6	1,797.5	1,992.7	2,196.2	2,412.5	2,610.8
In % of Sales	*25.9%*	*7.7%*	*7.5%*	*7.6%*	*6.6%*	*7.4%*	*7.4%*	*7.4%*	*7.4%*	*7.4%*
Insurance Reserves	178.5	196.1	224.8	246.0	215.2	212.1	218.8	223.4	223.1	218.5
in % of Total Operating Liabilities	*3.2%*	*6.1%*	*5.7%*	*5.6%*	*4.8%*	*4.4%*	*4.0%*	*3.6%*	*3.2%*	*2.8%*
Stored value card liability	653.7	794.5	983.8	1,171.2	1,288.5	1,509.8	1,819.6	2,166.1	2,523.1	2,886.2
in % of Sales	*4.4%*	*4.8%*	*5.1%*	*5.5%*	*5.8%*	6.2%	6.7%	7.3%	7.7%	8.2%
Total Operating Liabilities	5,535.2	3,188.7	3,948.1	4,381.9	4,508.0	4,812.1	5,501.8	6,254.5	7,002.2	7,739.7
Net Operating Assets	2,739.8	5,437.5	6,564.4	6,615.2	6,698.5	7,051.7	7,038.9	6,941.2	6,830.6	6,633.1
Non-recurring items	2,784.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial Assets										
Excess Cash	2,501.4	1,626.2	1,434.3	2,022.2	2,350.4	2,160.2	630.3	411.6	3,095.9	6,268.8
in % of Financial Total Assets	*77.2%*	*76.5%*	*74.2%*	*60.7%*	*74.4%*	73.7%	45.0%	34.8%	80.0%	89.0%
Long-term investments	58.3	318.4	312.5	1,141.7	542.3	474.6	474.6	474.6	474.6	474.6
in % of Financial Total Assets	*1.8%*	*15.0%*	*16.2%*	*34.3%*	*17.2%*	16.2%	33.9%	40.1%	12.3%	6.7%
Other long-term assets	11.4	18.0	54.7	6.4	24.4	23.0	23.0	23.0	23.0	23.0
in % of Financial Total Assets	*0.4%*	*0.8%*	*2.8%*	*0.2%*	*0.8%*	0.8%	1.6%	1.9%	0.6%	0.3%
Short-term investments	658.1	135.4	81.3	134.4	228.6	247.6	247.6	247.6	247.6	247.6
in % of Financial Total Assets	*20.3%*	*6.4%*	*4.2%*	*4.0%*	*7.2%*	8.4%	17.7%	20.9%	6.4%	3.5%
Prepaid expenses from derivative assets	12.5	28.7	50.8	27.7	13.4	26.6	26.6	26.6	26.6	26.6
in % of Financial Total Assets	*0.4%*	*1.3%*	*2.6%*	*0.8%*	*0.4%*	0.9%	1.9%	2.2%	0.7%	0.4%
Total Financial Assets	3,241.7	2,126.7	1,933.6	3,332.4	3,159.1	2,932.0	1,402.1	1,183.4	3,867.7	7,040.6
Financial Liabilities										
Long-term debt	1,299.4	2,048.3	2,347.5	3,202.2	3,932.6	4,932.6	4,932.6	5,432.6	4,932.6	4,432.6
in % of Total Financial Liabilities	*99.7%*	*99.9%*	*98.6%*	*86.7%*	*99.0%*	99.2%	99.2%	99.3%	99.2%	99.1%
Other long-term liabilities	0.5	0.0	14.5	71.6	22.1	22.1	22.1	22.1	22.1	22.1
in % of Total Financial Liabilities	*0.0%*	*0.0%*	*0.6%*	*1.9%*	*0.6%*	0.4%	0.4%	0.4%	0.4%	0.5%
Accrued Liabilities	3.5	2.4	19.2	18.0	16.4	16.4	16.4	16.4	16.4	16.4
in % of Total Financial Liabilities	*0.3%*	*0.1%*	*0.8%*	*0.5%*	*0.4%*	0.3%	0.3%	0.3%	0.3%	0.4%
Current Portion of Long-Term Debt	0.0	0.0	0.0	400.0	0.0	0.0	0.0	0.0	0.0	0.0
in % of Total Financial Liabilities	*0.0%*	*0.0%*	*0.0%*	*10.8%*	*0.0%*	0.0%	0.0%	0.0%	0.0%	0.0%
Total Financial Liabilities	1,303.4	2,050.7	2,381.2	3,691.8	3,971.1	4,971.1	4,971.1	5,471.1	4,971.1	4,471.1
Net Financial Assets	1,938.3	76.0	(447.6)	(359.4)	(812.0)	(2,039.1)	(3,569.0)	(4,287.7)	(1,103.4)	2,569.5
Non-Controlling Interests	2.1	1.7	1.8	6.7	6.9	6.9	6.9	6.9	6.9	6.9
Common Shareholder's Equity	4,676.0	5,511.8	6,115.0	6,249.1	5,879.6	4,621.7	3,463.0	2,646.6	5,720.3	9,195.6

Cash Flow Statement (in USD mn)

Cash Flow Statement	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net Operating Result	(9.0)	1,974.9	2,613.6	2,892.5	2,718.9	3,216.4	3,594.9	3,999.9	4,447.1	4,883.2
Investment in Net Working Capital										
Change in Working Cash		7.9	13.6	10.8	5.4	9.9	13.2	13.8	14.7	13.4
Change in Deferred Income Taxes		(63.7)	(74.4)	56.5	(90.0)	318.2	129.6	138.7	153.1	149.3
Change in Other Long-Term Assets		7.0	180.3	50.1	(72.9)	(45.3)	0.0	0.0	0.0	0.0
Change in Accounts Receivable		69.6	88.0	49.8	101.6	48.8	99.8	104.1	110.6	101.4
Change in Inventories		(20.3)	215.5	72.1	(14.5)	166.8	162.7	170.2	181.5	168.0
Change in Prepaid Expenses and other Current Assets		(18.3)	26.5	38.9	22.4	21.0	22.3	23.6	25.0	26.6
Change in Deferred Income Taxes		40.1	64.3	(381.7)	0.0	0.0	0.0	0.0	0.0	0.0
Change in Other Long-Term Liabilities		35.0	218.6	7.3	115.1	(43.6)	98.0	112.0	77.7	86.6
Change in Accounts Payable		42.0	150.5	46.4	51.9	32.7	86.6	90.7	96.7	89.5
Change in Accrued Liabilities		(2,581.9)	172.3	171.5	(127.4)	308.9	195.3	203.5	216.2	198.4
Change in Insurance Reserves		17.6	28.7	21.2	(30.8)	(3.1)	6.7	4.5	(0.3)	(4.6)
Change in Stored Card Value Liability		140.8	189.3	187.4	117.3	221.3	309.8	346.5	357.1	363.1
Total Change in Investments in Net Working Capital		(2,368.8)	245.6	537.3	174.1	(3.2)	268.8	306.9	262.5	274.2
Gross CAPEX										
Change in Equity and Cost Investment		18.4	(162.9)	2.5	127.1	10.4	10.6	10.8	11.1	11.3
Change in PPE net		318.5	569.3	445.5	385.7	163.7	238.6	193.8	141.0	70.0
Change in Intangible Assets		(1.3)	246.9	(4.1)	(74.9)	(36.1)	0.0	0.0	0.0	0.0
Change in Goodwill		(6.7)	719.2	144.2	(180.4)	0.0	0.0	0.0	0.0	0.0
Change in Capex		328.9	1,372.5	588.1	257.5	137.9	249.2	204.6	152.1	81.3
Total Investment		(2,697.7)	(1,126.9)	(50.8)	(83.4)	(141.1)	19.5	102.2	110.4	192.9
Free Cash Flow		(722.8)	1,486.7	2,841.8	2,635.5	3,075.3	3,614.5	4,102.2	4,557.5	5,076.1
Debt Financing										
Net Financial Result after Tax		51.1	(79.0)	17.4	118.8	254.0	(2.7)	(12.7)	(2.7)	7.4
Change in Excess of Cash		(875.2)	(191.9)	587.9	328.1	(190.2)	(1,529.9)	(218.7)	2,684.3	3,172.8
Change in Short Term Investments		(522.7)	(54.1)	53.1	94.2	19.0	0.0	0.0	0.0	0.0
Change in Long Term Investments		260.1	(5.9)	829.2	(599.4)	(67.7)	0.0	0.0	0.0	0.0
Change in Other Long Term Assets		6.6	36.7	(48.3)	18.0	(1.4)	0.0	0.0	0.0	0.0
Change in Prepaid Expenses fom Derivative Instruments		16.2	22.1	(23.1)	(14.3)	13.2	0.0	0.0	0.0	0.0
Change in Long-term debt		748.9	299.2	854.7	730.4	1,000.0	0.0	500.0	(500.0)	(500.0)
Change in Other long-term liabilities		(0.5)	14.5	57.1	(49.5)	0.0	0.0	0.0	0.0	0.0
Change in Accrued Liabilities (Derivatives Liabilities)		(1.1)	16.8	(1.2)	(1.6)	0.0	0.0	0.0	0.0	0.0
Change in Current Portion of Long-Term Debt		0.0	0.0	400.0	(400.0)	0.0	0.0	0.0	0.0	0.0
Debt Financing Cash Flow		1,913.4	444.6	(70.9)	571.5	1,481.1	1,527.2	706.0	(3,187.0)	(3,665.4)
Equity Financing Cash Flow		(1,190.6)	(1,931.2)	(2,774.6)	(3,207.0)	(4,728.3)	(4,751.0)	(4,803.6)	(1,370.8)	(1,415.3)
Financing Cash Flow		722.8	(1,486.6)	(2,845.5)	(2,635.5)	(3,247.2)	(3,223.8)	(4,097.6)	(4,557.8)	(5,080.7)

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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.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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