

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

Brew a better world
Equity Research in the Alcoholic Beverage Industry –
Valuation of Heineken

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Abstract

The Heineken N.V. is a multinational brewery operating in 4 regions worldwide. Being the 2nd largest company operating in the Beer Market, it is expected to continue to follow the global trends that characterize the industry, mainly the shift towards low and non-alcoholic beers, expanding the premium and the craft segments. However, there are some factors that can restrain this growth, especially in the short-term. Despite the world economy is slowly recovering from Covid-19, some markets are still being affected, such as China. The inflationary environment and the current conflict in Eastern Europe are rising operating costs, and reducing consumers' disposable income. These factors were taken into consideration when developing expectation about Heineken's future performance in each region where it operates. It was performed a DCF valuation for Heineken in December 2022, reaching a price per share of 97.77€. As such, a HOLD recommendation is the outcome of the valuation.

Keywords: Beer Market, Premiumization, Inflation, Discounted Cash Flow

This report is part of the “Brew a better world” report (annexed), developed by Ana Serafim and Eduardo Medeiros and should be read as an integral part of it.

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Introduction

This report is part of an Equity Research Report about Heineken. The goal is to do a valuation of the company.

This report explores the main trends driving the alcoholic beverage industry, namely the e-commerce, the low and non-alcoholic beers and the premiumization which are expected to continue to deliver strong growth in the future. Moreover, it is also analysed which factors can restrain that growth. Given these factors, it was developed expectations about Heineken's future performance in the different operating segments. This report focused on the Africa, Middle East & Eastern Europe, and Asia Pacific markets. A Discounted Cash Flow model was performed to evaluate the company, as well as a Multiple Analysis to compare Heineken to its main competitors. Lastly, a sensitivity analysis was performed in order to assess the impact of some factors, given we are not sure how they will evolve.

Besides these sections, the joint report analysis the Global Beer Market, the industry per region, how Heineken is positioned in relation to its main competitors and its past performance.

Industry Trends

E-commerce

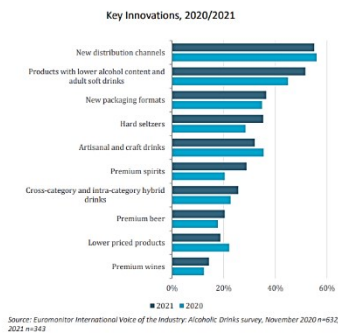


Fig.1: Expected trends impacting alcoholic drinks sale
Source: Euromonitor

The pandemic increased the consumption of alcohol as well as the way people purchase it, as safety and convenience, consequences of the closure of the on-trade channels, became key at the moment of buying any product. Even though e-commerce still represents a small segment of sales, in figure 1, more than 60% of the respondents stated that online channels were and will continue to have a significant impact when buying or selling alcoholic drinks. In fact, the global e-commerce market for alcohol is expected to grow 66% across 2020-2025. With this platforms, brands can grow their business and increase margins as they will be selling directly to customers without recurring to third parties, like supermarkets, while reducing their dependence on off-trade channels, and risk against future health situations like Covid. Heineken has already launched online platforms in 30 markets, capturing €2,8 billion in online sales in 2021, growing 130% compared to 2020. For example, it has launched BeerWulf in Europe and GLUP in Mexico.

Low and non-alcoholic beers

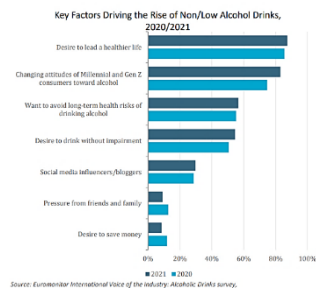


Fig.2: Key factors driving the rise of non/low alcohol drinks

Consumers have been changing their consumption habits, paying more attention to their health. Older generation wants to reduce alcoholic consumption while Millennials and Generation Z want to socialize without the harmful of the alcohol. This trend has been growing especially after the pandemic, with people not taking their health for granted any more. The low and nonalcoholic beer segment is a good opportunity for breweries since the numbers of consumers is increasing. Moreover, it can provide higher gross profit margin (22,2%) than standard beers category, an already saturated market (fig.16).

According with IWSR Drinks Market Analysis, in 2021 the global average volume of low and non-alcohol beverages increased 6% and alcohol-free beer is expected to increase at a CAGR of 11% in 2021-2025. Heineken has been innovating its low and non-alcoholic portfolio to keep up with this trend and it is leading in several markets. Heineken® 0.0 is already present in 100 markets and is registering a strong performance: is the leader in Western Europe, in United States and some countries in Asia Pacific, such as Vietnam – a fast growing market. It is important to continue to expand, to strengthen the brand with the consumer and to compete with rivals who are also betting on this growing segment, like Ab InBev which has launched Budweiser Zero.



Fig.3: Gross profit margin
Source: Statista

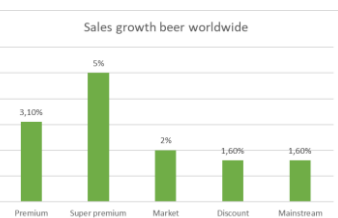


Fig.4: Sales growth of beer category worldwide
Source: Statista



Fig.5: Sales value of hard seltzer worldwide
Source: Statista

Premiumization

Consumers are shifting their preferences towards superior quality beverages, as they are willing to pay more those. In order to address these changes, breweries have been increasing their offer of premium beverages. In fact, this category is able to provide higher gross margins and superior sales growth than standard beers: premium and super premium beers can provide gross profit margins of 17% and 25%, respectively, while standard beers only provide 18%. Regarding sales growth, premium and super premium also outperform standard peers, growing 3,1% and 5%, respectively, since 1999, while Discount and Mainstream only grew 1,6% (fig. 16, fig.17).

The hard seltzer segment is expected to provide good future prospects in the premium category. The market size was value at \$8.95b in 2021 and is forecasted to grow at a CAGR of 22,9% from 2022-2030. North America is the largest market, representing over than 20% in 2020, followed by Asia Pacific. This segment has been increasing since customers are focusing more on health

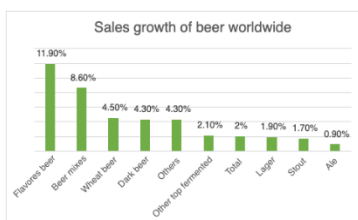


Fig.6: Sales growth of beer worldwide
Source: Statista

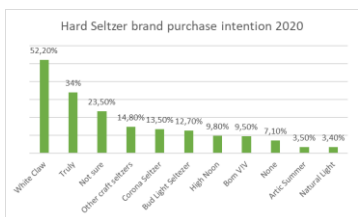


Fig.7: Hard Seltzer brand purchase intention
Source: Statista

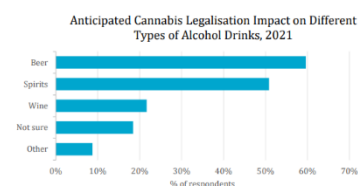


Fig.8: Anticipated cannabis legislations impact
Source: Euromonitor

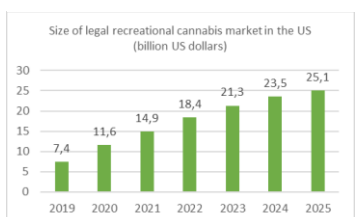


Fig.9: Sales of recreational cannabis in the US
Source: Statista



Fig.10: Size of legal recreational cannabis market in Canada
Source: Statista

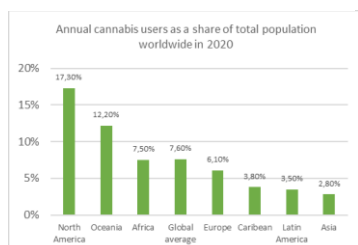


Fig.11: Annual cannabis users as a share of total population
Source: Statista

and wellness, especially younger generations who are demanding lower and free alcohol beverages. Thus, HS can be a substitute of the traditional beer. This is a small but increasingly dynamic market, with continuous launching of new products. Smaller breweries proved the potential of this segment, and now big companies are exploring this market opportunity and rising competition. In the U.S., some big known players as AB InBev and Constellation Brands already have a significant presence with the launch of Bud Light Seltzer and Corona Seltzer, being in 5th and 4th place, respectively, in the market (fig.7). In 2020, Heineken launched the brand Pure Piraña in New Zealand and Mexico and the brand Carnijila in the U.S. but it still has a residual presence. Thus, it is essential to keep developing new products with new flavors in order to catch attention from customers in this fast-moving segment and gain market share.

Craft and speciality beer in exotic flavours

Consumers want to taste new flavors and are more health consciousness than ever, hence they have been shifting their preferences towards craft beers and beverages with new flavors. These could consist of wheat beers with delicate fruit, or sours beers with significant fruit. In fact, this segment can provide gross profit margin of 29%, outperforming standard beers (gross profit margin is 18%). It has also been delivering sales growth of 11,9% since 1999, while lager only has delivered 1,9% growth (fig.19), indicating that this segment provides growth opportunities.

Craft beer is expected to increase at a CAGR of 6,9% from 2022-2032, reaching to \$174,68 Bn by 2032. These could consist of wheat beers with delicate fruit, or sours beers with significant fruit. North America is expected to be the market with the largest growing demand for craft beer until 2032 while in Europe craft breweries have been growing over the last 5 years, showing that there is a sustainable demand. It is expected that big players will continue to expand their portfolio.

Legalization of Cannabis

Cannabis is rising attention from both customers and breweries. Although cannabis can disrupt the alcohol industry, according to Euromonitor, 60% of industry professionals acknowledge a positive and potential business opportunity combining the beer market with cannabis. The beer with infusion of cannabis plant is seen by customers as a healthy alternative to alcohol since it is alcohol-free, slightly effervescent, and boasting low or no calories. The attention towards cannabis is especially increasing in North America, where the recreational use of cannabis is legal in 18 states in the U.S. and became legal in Canada in October 2017. The most attractive market in the U.S. is California, estimated to represent 20% of the U.S. market in 2025. Heineken-owned Lagunitas is present in more than 35 countries and in 2018 was launched a non-alcoholic cannabis beer, making Heineken the first big brand to enter in this segment in the U.S. market. Since this segment is increasing its popularity, being the first entrant may make Heineken expand faster than its rivals.

Risks Restraining Growth

Global economy saw a rebound in 2021, due to the advancement of vaccination and stimulus spending. However, there are still factors that can prevent growth of beer industry in the near future.

Covid-19

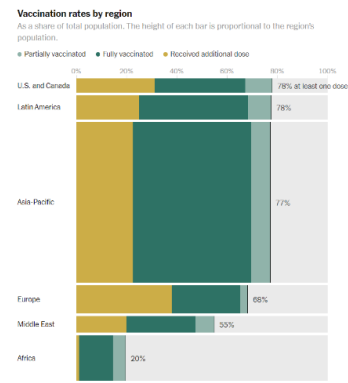


Fig.12: Vaccination rates by region
Source: New York Times

To restrain the spread of Covid infections, Governments have imposed restrictive measures. The beer industry is highly linked to the hospitality sector. Around the world, bars, pubs, restaurants were closed, festivals and sport events were delayed. This had a strong impact in beer sales. Although currently restrictions are diminishing, supply chain bottlenecks are reducing, and vaccination is progressing, the threat of new variants is still a matter of concern. Countries with low vaccination rate will have a stronger impact in both supply and demand. Currently, in Africa, only 20% of the population has received at least the first shot of the vaccine. On one hand, the rapid worldwide spread of the Omicron variant has put more pressure on labor market. The shortage of employees can disrupt the production and the distribution of beer, having then a strong impact in the short term. On the other hand, if a new variant surges, restrictions can return and slow down the recovery of the economy once again.

Inflation

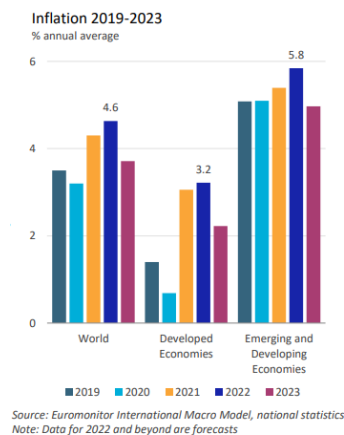


Fig.13: Inflation 2019-2023
Source: Euromonitor

The current inflationary environment is different from previous ones since it is driven by supply-demand mismatches, constrained supply chain, labor shortages and aggressive fiscal stimulus, due to the pandemic, and rising energy costs. Inflation has reached values not seen in several years. Thus, it has been raising concerns regarding its impact on consumer behavior, since it decreases purchasing power. By facing higher prices, consumers may shift to lower priced beer brands and/or decrease the overall consumption of beer, by prioritizing the spend of their disposable income in essential goods. In an interview to the *Financial Times*, Heineken's chief executive Dolf van den Brink said that costs would increase 15% due to the increase in prices of raw materials, implying a higher charge on beer and a potential decrease of beer consumption. However, it is difficult to predict how much consumption can decrease since the usual models used by the sector are not designed to deal with so high inflation values.

Energy costs & Conflict between Russia and Ukraine



Fig.14: Price of natural gas
Source: Bloomberg



Fig.15: Price of crude oil, Brent
Source: Bloomberg



Fig.16: Global barley average price monthly
Source: Bloomberg

Aligned with high inflation, since the last quarter of 2021 it has been seen a rise in energy costs, due to the long winter of 2020/21, the economic recovery from the pandemic that led to a supply-demand mismatch, and less power generation by renewable energy sources. Moreover, the recent war in Eastern Europe has raised even further commodity prices. Crude oil and Natural gas have surpassed the \$100 and \$5 a barrel, respectively. Even though Heineken has already implementing 130 renewable energy projects over the past 3 years, in 2021 only 27% energy consumed in production came from renewable sources, meaning that Heineken is still exposed to the energy swings of financial markets. The current volatility will strongly impact the production costs, and rise transportation prices, potentially causing transportation bottlenecks and decreasing of products deliveries in the short term. In addition, Russia and Ukraine are the breadbasket of the world. According to Bloomberg, barley, one key beer ingredient, will be strongly impacted by the war due to its typical low inventory, meaning that there can be a supply disruption of barley, pushing its price even more up. Although Heineken tries to local sourcing, the European market is specially highly dependent one crops raised in east. Furthermore, Heineken, following the example of other western companies, announced the cease of operations in Russia. This market represents 2,5% of Heineken's sales in Eastern Europe, a significant share of revenues in this region that will stop to exist.

Africa, Middle East and Eastern Europe

AME accounts for 19,54% of total beer consumed worldwide in 2021 and 16,83% in Heineken's total volume. Currently, Heineken is present in 23 countries and several of regional and local brands have iconic status, such as Star in Nigeria and Primus, which is produced in 4 central African countries. In Eastern Europe, Russian market is the most important one.

Market Overview

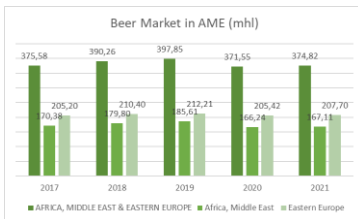


Fig.17: Beer Market in AME
Source: Euromonitor

AME can be divided in 2 sub-regions: Africa & Middle East and Eastern Europe. Both sub-regions grew volume wise until 2019 – Africa & Middle East grew at a 3-year CAGR of 2,89% and Eastern Europe grew at a CAGR of 1,1%. In 2020, due to the Covid-19 global pandemic and consequently border closures and lockdowns imposed by Governments, the beer volume in AME dropped 6,58%. Africa & Middle East was the most impacted sub-region with a decrease of 10,48% of beer volume. However, 2021 was a year of recovery for AME (+0,85%) even though the volume is still below the 2019 values. This rise was led mainly by Eastern Europe sub-region (+1,1%). The largest markets in Africa & Middle East are Nigeria and South Africa, representing 12% and 13% of the beer market, while in Eastern Europe the leading countries are Russia, Poland, and Ukraine, representing 38%, 17,5% and 8,6% of the beer market, respectively.

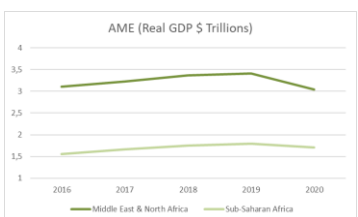


Fig.18: AME GDP
Source: World Bank

According to IMF, after a contraction of 3,99% and 2,01% in real GDP in Middle East & North Africa and Africa Sub-Saharan respectively, due to lockdowns imposed by Governments, the economy is expected grow 4,3% and 3,8% in each respective region. Despite this notable growth, real GDP in Africa Sub-Saharan has been low across the years and the constant conflicts in Africa and Middle East make the macro-environment in the region being challenging. In Eastern Europe is worthy to mention the above-trend rate of 2,7% of Russia real GDP, after the 4,5% registered in 2021. The spending from the National Wealth Fund on domestic infrastructure and higher commodity exports aid the growth. However, uncertainty surrounding the war in Eastern Europe, could shrink Russia real GDP by 7% in 2022, compared to previous previsions of 1,5% - 2% growth of IMF.

Competitors

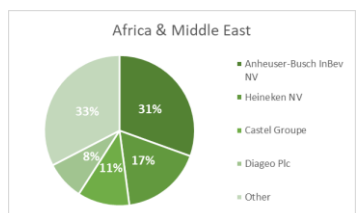


Fig.19: Company shares in Africa and Middle East beer market
Source: Euromonitor, Heineken Annual Report

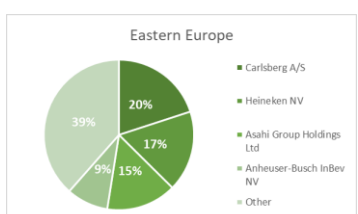


Fig.20: Company shares in Eastern Europe beer market
Source: Euromonitor, Heineken Annual Report

The competition landscape in the region is highly concentrated and is dominated by top breweries. In Africa & Middle East region, the market is dominated by AB InBev with 30,5% market share in 2020, followed by Heineken (17,4%). The acquisition of SAB Miller in 2016 reinforced AB InBev the main player in the region - in 2015, it only had 0,6% of market share. In Eastern Europe, Carlsberg assumes the leading position in 2020, with a market share of 20%, followed by Heineken (17,4%) and Asahi Group Holdings (15,1%). However, Carlsberg have been losing market share to its rivals. However, with the perspective of acquiring Distell and Namibia Breweries Limited in 2022, Heineken will have a wider access to this region and will be in a better position to compete against AB InBev, the leader in the region. We believe Heineken will be able to increase market share from 4,52% to 5,33%.

Heineken

In 2021, the consolidated beer volume was 38,9mhl and net revenue was €3,159M. Both revenues and volume grew until 2019 at a 3-year CARG of 3,62% and 2,91%, respectively, decreasing 17,66% and 9,38% respectively, in 2020 due to COVID-19 and consequently border

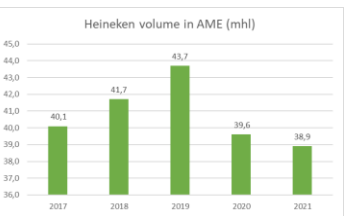


Fig.21: Heineken volume in AME
Source: Heineken Annual Report

closures and lockdowns in place. AME was the only region that did not registered a positive volume growth in 2021. Even though the economy reopened in 2021, restrictions continue in some markets yet at low levels. Nonetheless, AME's premium segment has been outperforming the portfolio, having both local and international brands achieving good results, especially in Nigeria, South Africa, Russia, Ivory Coast and Rwanda. Heineken® growth was driven by the recovery in South Africa and Russia. Its flavored portfolio increased more than 60% reflecting the continuous success of Desperados brand. However, lager is expected to continue the main beer segment in Africa & Middle East, with a projected CAGR of 4% from FY20 to FY25.

Moreover, M&A strategies also plays an important role. In November 2021, Heineken announced its intention of acquiring the control of Distell and Namibia Breweries Limited, expected to be approved in Q3 2022. South Africa is an important market in Africa, expecting to deliver growth of 3,33% until 2025. With this acquisition, together with the Heineken South Africa, Heineken will be positioned to expand operations in 12 markets in Southern and Eastern Africa, capturing significant market share, and be better positioned to compete against AB InBev. All in all, with the rise of disposable income, increased consumption of alcohol by young adults and increasing urbanization, Africa & Middle East is expected to deliver a strong growth in terms of beer volume. We believe the region will grow 3,98% volume wise.

On the other hand, Eastern Europe is a more saturated market with lower opportunities to grow, alongside Western Europe. In addition, the recent conflict between Ukraine and Russia is hampering Heineken's operation. Firstly, both countries are large producers of cereals. Countries in Eastern Europe are significantly dependent on this raw material. It is extremely difficult for Ukraine to continue to provide the cereals for the beer production. Secondly, following the example of other western companies, Heineken will cease operations in Russia in 2022, the principal market in Eastern Europe. Heineken was the 3rd largest brewer in Russia, with 11,8% market share, behind Carlsberg (26,2%) and AB InBev (15,7%). The closure of operations will decrease the volume of beer sold in AME. With the loss of an important market in the region, western beer companies will focus more on the other existing markets, increasing even more the competition in order to compensate the loss revenues in Russia. Nonetheless, we do not expect Heineken loses the 2nd position in Eastern Europe.

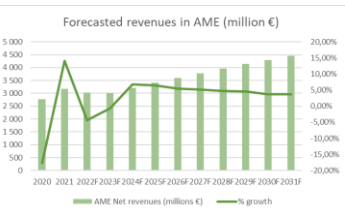


Fig.22: Forecasted Heineken revenue growth in AME
Source: Heineken Annual Report, Personal Estimates

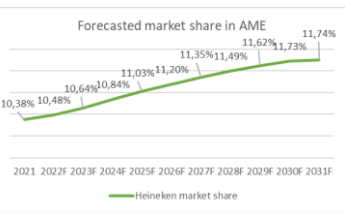


Fig.23: Forecasted Market share in AME
Source: Heineken Annual Report, Personal Estimates

All in all, we expect the beer volume to decrease in FY22 and FY23 in AME, driven by the current conflict in Eastern Europe. However, we think this will be a short-term impact in volume sold since Africa & Middle East are expected to deliver strong volume growth, as well potential market share gains with the acquisition of Distell and Namibia Breweries Limited. Hence, we believe Heineken will increase beer volume from FY24 onwards, reaching the pre-pandemic values in FY26. Africa & Middle East will be the driver for the segment. AME's revenues are expected to increase at a CAGR of 3,47% until FY31.

Asia Pacific

Asia Pacific accounts for 33,88% of total beer consumed worldwide and 12,72% in Heineken's total volume. Heineken in present in 24 markets, being 3 under license and 5 Minority Joint Ventures. The region's key brands are Heineken®, Anchor, Bia Viet, Tiger and Bintang.

Market Overview

Emerging markets are expected to have a stronger growth than Advanced economies (6,3% vs 3,4%) in 2022, led by India with an expected growth of 8%. This growth is driven by the reopening of the economy, the acceleration of vaccination rates, the continue increasing trend for premium products and low and non-alcoholic beers and middle-class growth. According to McKinsey, Asian consumers are expected to represent half of worldwide consumption growth in the next decade and “one of two upper-middle-income and above households is expected to be in Asia”.

Beer market in Asia has increased at moderate growth rates until 2019. The pandemic had a strong impact in this region, decreasing 9,17% the beer volume. 2021 was a recovery year (+1,15%), amounting to 64 999 million liters. The largest beer market is China, representing 66,3% of beer consumed in Asia Pacific. It is followed by Japan and Vietnam, which represent 7,3% and 7% of the market, respectively. However, in Japan, beer consumed has been decreasing at a 5-year CAGR of 3,6% and is expected to continue to decrease. The beer volume in China and Japan have been declining over the years, due to ageing population. On the other hand, markets in Southeast Asia, especially Vietnam, Philippines and Cambodia are expected to continue to strongly grow due to the increase in disposable income and its young population who want to taste different flavors. In fact, according to Euromonitor, Vietnam is expected to overtake Japan as the 2nd largest beer market in Asia in 2023. Nonetheless, even in markets as Japan, there are growing opportunities in the dark beer and non and low alcoholic beers segment, that has been increasing due the increase of the craft beer trend and rising attention to health. In Asia, the non and low alcoholic beer segment is expected to growth at a 5-year CAGR of 5,7%.

Competitors

The Asian market is highly fragmented and is composed by many small players. In 2020, the main players were China Resources Holdings with 16,7% market share, AB InBev (12,7%), and Tsingtao Brewery (12%), accounting together 41,4% market share. Heineken appears in the 6th position with 4,1% market share. Nonetheless, it has been gaining position in the Asian market, growing from 3,7% in 2017 to 4,1% in 2020.

Heineken

Asia Pacific is the smallest operating segment of Heineken, representing 12,72% of total volume. In 2021, the consolidated beer volume was 29,4mhl and net revenue was €2,765M. Both volume and revenues increased until 2019. However it was the most impacted segment in terms of volume sold in 2020, with a decrease of 9,65%. Although the economy started to slowly recover in 2021, during the 2nd half of the year most markets went back into restrictions and lockdowns, hampering a fully recovery. Moreover, the current Zero-covid policy in China is also impacting consumption, since people are not allowed to leave their houses, to prevent the spread of the virus, and food and beverages are provided by the Government. However, Asia Pacific still has good growth opportunities. Moreover, in July 2021 Heineken obtained control of United Breweries Limited (UBL), the market leader in India. Until now, Heineken had a residual presence in India (0,4%), but this acquisition will boost Heineken sales in the region. India accounts for 18% of world population but 1% of worldwide beer market. The young population and an emerging middle class in the country are good opportunities for long term growth. Furthermore, markets such as Vietnam and Cambodia are good opportunities to grow through volume. The former is the principal market of Heineken in the region (fig.28). The market is dominated by Thai Beverage

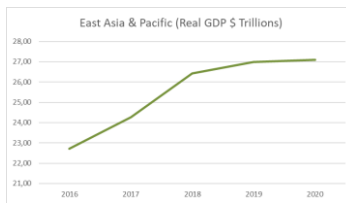


Fig.24: East Asia and Pacific GDP
Source: World Bank



Fig.25: Beer market volume in Asia Pacific
Source: Statista

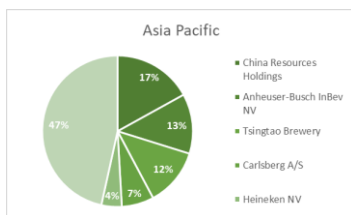


Fig.26: Company shares in Asia Pacific beer market
Source: Euromonitor, Heineken Annual Report

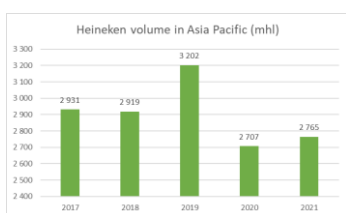


Fig.27: Heineken volume in Asia Pacific
Source: Heineken Annual Report

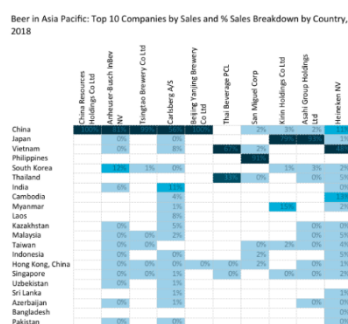


Fig.28: Top beer companies by % sales and by country in Asia Pacific
Source: Euromonitor



Fig.29: Forecasted Heineken revenue growth in Asia Pacific
Source: Heineken Annual Report, Personal Estimates

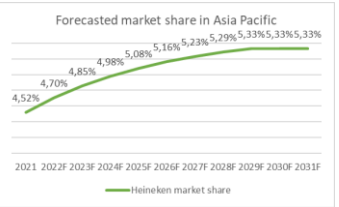


Fig.30: Forecasted Market share in Asia Pacific
Source: Heineken Annual Report, Personal Analysis

	2021-25	2025-31	2021-31
Heineken Volume CAGR			
EUROPE	1.00%	0.22%	0.72%
AMERICAS			
Latin America	1.94%	0.74%	1.38%
North America	2.99%	1.12%	2.12%
AME	0.37%	0.13%	0.27%
Africa, Middle East	0.29%	2.08%	1.51%
Eastern Europe	3.98%	3.03%	3.46%
ASIA PACIFIC	0.93%	0.85%	0.94%
ASIA PACIFIC	2.39%	1.00%	3.64%

Fig.31: Heineken Volume CAGR
Source: Heineken Annual Report, Personal Estimates

Heineken Revenue CAGR	2021-31
Europe	2.39%
Americas	3.77%
AME	3.47%
Asia Pacific	6.08%
Total Net Revenues	3.59%

Fig.32: Heineken Revenue CAGR
Source: Heineken Annual Report, Personal Estimates

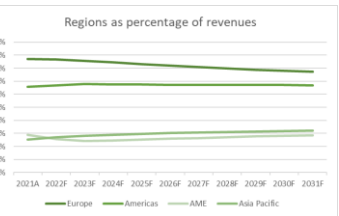


Fig.33: Regions' weights on net revenues
Source: Heineken Annual Report, Personal Estimates



Fig.34: Operating costs, 2021
Source: Heineken Annual Report

PCL and Heineken, representing 36,9% and 36,3% of the market, respectively. The increasing disposable income, a young population with strong beer drinking culture and the fast expansion of the premium segment (in 2021 premium beer represented 30% of the total beer market and grew seven times faster than lager), makes Vietnam the ideal market for Heineken to continue to expand its Tiger and Heineken Silver brand, for example.

Given Heineken's position to further penetrate Asia and gain market share, we believe market share will increase from 4,52% to 5,33 during the forecasted period, volume and revenues will grow at a CAGR of 3,34% and 5,58%, respectively, until FY31.

Forecasts

Revenues

Revenues were estimated per region considering the company's operating segments: Europe; Americas; Africa, Middle East, and Eastern Europe; Asia Pacific. It was used a top-down approach, were firstly it was forecasted the total market of beer per region and Heineken's market share per region, in order to find Heineken's volume. Afterwards, revenues were obtained by multiplying the volume by the price per million hectolitres. Heineken is already taking advantage of market premiumization, consumers' preference shifting towards low and non-alcoholic beers and craft beers. Considering Heineken decreases its ability to grow in the long run, we applied a decreasing factor when estimating the future market share. Regarding the volume estimation, we took a more conservative position than the market due to the current macro scenario - high inflation and the conflict in Eastern Europe - that will have impact in consumers' disposable income and consequently their consumption. Prices were estimated considering the local real growth and the expected inflation of the reporting currency (euro). In FY22, inflation is expected to be 5,1%, decreasing to 2,2% in FY23, and stabilizing in 1,9% from FY24 onwards.

Asia Pacific and Africa & Middle East are the markets expected to grow more volume wise: 3,64% and 3,46%, respectively, during the forecasted period. Asia is expected to be the fastest growing market in terms of revenues (6,08% until FY31), growing from 12,6% of net revenues in FY21 to 15,97% in FY 31. Although Europe has been decreasing its weight on revenues (it represented 43% of net revenues in FY21 and is expected to represent 39% in FY31), it will continue to be the principal market of Heineken. All in all, Heineken's revenues are expected to grow 3,59% until FY31.

Operating expenses

Heineken's most representative operating expenses are cost of goods sold, representing 38,3% of operating expenses in 2021. COGS are expected to continue its upward trend, experiencing a significant increase in 2022 and 2023. Alongside with the higher rising demand for premium products, which requires using more expensive ingredients in the production of beer, the rise of inflation, and the energy crises have been strongly affecting the price of raw materials, namely barley – a key ingredient for beer production. Furthermore, as stated previously, Russia and Ukraine are important exporters of cereals. With the current conflict, crops might be in danger, reducing the production of barley, which increases prices even more, and consequently the costs of raw materials for Heineken. In fact, Heineken's CEO announced that is expected a 15% increase in costs. Hence, Gross Margin will decrease in the short term due to Heineken's inefficiencies in its cost structure. Even though it is uncertain how long the conflict will last and its



Fig.35: Forecasted COGS
Source: Heineken Annual Report, Personal Estimates

impacts in the financial market, inflation is expected to decrease in FY24 below the ECB's target of 2%, hence we believe the price of raw materials will decrease to accommodate the stabilization of prices. From 2025 onwards, COGS are expected to continue to increase as Heineken's portfolio changes more towards premium brands, but at a more moderate rate, stabilizing at 36,10% of net revenues. As revenues continue to increase, Gross Margin is expected to recover from FY24 onwards at similar rates as sales (although never reaching the FY21 value due to the increase in COGS), stabilizing at 63,9% in the long term.

Given the uncertainty of the crude oil and energy in financial markets, transportation expenses are expected to increase 25% and 15% in FY22 and FY23, respectively. We believe that from FY24 onwards, as the conflict in Eastern Europe eases and financial market stabilizes, crude oil and energy prices will start to fall, decreasing the weight of transportation expenses in net revenues.

Although the high regulation in the alcoholic beverages industry, Heineken is planning to continue to increase the investment in marketing, mainly in the short term in order to increase sales to the pre-pandemic values. For this, Heineken is using more often data analytics tools to reach the target market and increase the returns of its campaigns more easily. From FY24 onwards, marketing expenses will continue to increase but in line with the percentage registered before the pandemic. Lastly, through the program EverGreen, Heineken since 2020 has been reducing the workforce globally, with the aim of reducing 8000 employees until 2023. Furthermore, with the expected closure of operations in Russia due to the decision of leaving the country, in FY23 the workforce will decline 1800, adding to the pre-determined number of employees to lay off. Nonetheless, as sales are expected to increase at a CAGR of 2,48% from FY25 to FY31, we expect the number of employees to increase in order to sustain sales growth.

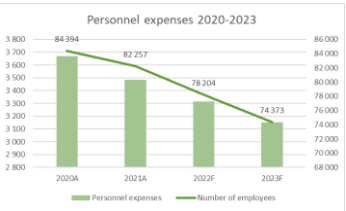


Fig.36: Forecasted Personnel Expenses
Source: Heineken Annual Report, Personal Estimates

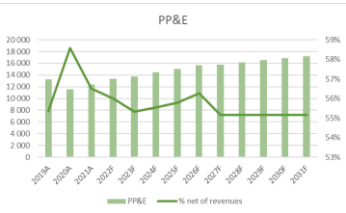


Fig.37: Forecasted Heineken PP&E
Source: Heineken Annual Report, Personal Estimates

CAPEX

Capital Expenditures is related to PP&E and Intangible Assets. Since PP&E depends on the volume produced, this caption was estimated as a % of net revenues. Heineken is being very active in M&A activities, acquiring important brands in each geographic segment and investing in the expansion of its principal brand. The PP&E in 2022 was estimated mainly taking into consideration the expansion in Africa with the acquisition of Distell and Namibia Breweries Limited. However, due to the closure of operations in Russia until the end of FY22, following the example of other western companies, we were more conservative in the projection of PE&E expansion in FY22. In the long term, we expect PP&E will involve in line with the past.

Regarding the Intangible Assets, considering the evolution of the E-Commerce, we expect Heineken will continue to invest in its online platform and in data analytical tools to support their target-oriented marketing, since, as stated previously, this online alcoholic market is expected to grow 66%. Heineken's competitors are also investing heavily in the digital, so we believe Heineken will follow this trend in order to sustain its market position.

From FY27 onwards, as the company is stabilizing, we estimate the Intangible Assets as the average of 5 last historical years.

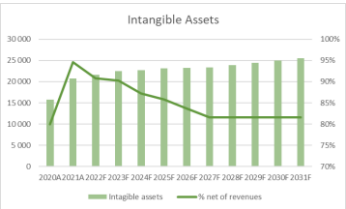


Fig.38: Forecasted Heineken Intangible Assets
Source: Heineken Annual Report, Personal Estimates

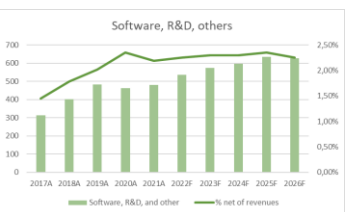


Fig.39: Forecasted Heineken Software, R&D and others
Source: Heineken Annual Report, Personal Estimates

Net Working Capital

Firstly, operating cash was considered to represent 2% of net revenues, hence since net revenues are expected to increase during the forecasted period, operating cash will follow that

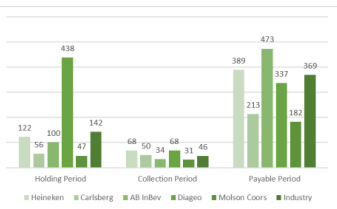


Fig.40: Industry Average Holding, Collection and Payable Period
Source: Heineken Annual Report

trend. Heineken's continuous negative and decreasing Working Capital indicates that the company has been able to efficiently manage its Cash Conversion Cycle (CCC), being above the industry average only behind AB InBev, in 2021. Hence, we believe this trend will continue. We expected a longer inventory holding period due to portfolio shifts towards premium products that requires longer period of maturation. Heineken's holding period lies between the AB InBev and Diageo holding periods. Regarding the collection period, Heineken is above the industry, holding the second longest receivable period, only behind Diageo. Since its peers have been decreasing the collection period, we think reasonable to assume that Heineken will follow this trend, however without reaching the values of its rivals. On payables, the industry has been taking more time to pay to the suppliers, which reveals the strong bargaining power of these big companies over their suppliers. Heineken is above the industry average and holds the 2nd position, only behind AB InBev. We believe Heineken's payable period will continue to increase but still below AB InBev's payable period.

Valuation

Discount Rates

Re	6,09%
β_e	0,85
Adjusted β_e to future D/EV	1,02
Risk-free rate (10Y Dutch Government Bond)	1,013%
Market Risk Premium	5%
Rd	3,38%
β_d	0,474
Recovery Rate	51%
Actual Rating (Moody's)	Baa1
Probability of default	0,24%
Default rate	2,93%
Yield to Maturity (YTM)	3,50%
Tax Rate	25%
Market Cap (million €)	56 900
Net Debt in 2021	16 501
D/EV	0,22
D/E target	0,27
E/(D+E)	0,79
D/(D+E)	0,21
β_u	0,90
WACC	5,33%
Unlevered cost of capital	5,51%

Fig.41: Discount Rates
Source: Heineken Annual Report, Personal Estimates



Fig.42: Historical D/E
Source: Heineken Annual Reports

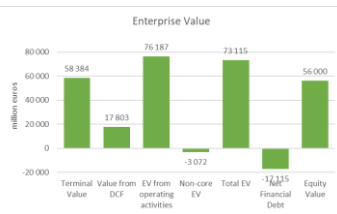


Fig.43: Heineken Enterprise Value
Source: Heineken Annual Report, Personal Estimates

The weighted average cost of capital (WACC) was obtained from the estimation of cost of equity (Re), cost of debt (Rd), and the target Debt-to-Equity ratio (D/E).

The cost of equity of 6,09% was estimated based the CAPM model. The 10-year Dutch Government Bond was used as proxy for the risk-free rate and the Market Risk Premium was based on the KPMG Netherlands Research published in December 2021. Regarding the levered Beta, we regressed Heineken's monthly historical returns against the STXE 600, a well-diversified index as a proxy of the European market. It was obtained a beta of 0,85 with a 95% confidence interval from 0,7 to 1 meaning that the company is less cyclical than the market. Afterwards, the Beta was unlevered, and it was compared to its peers, reaching to an industry average value of 0,8. However, we assumed a value of 0,9 due to the great exposition of Heineken to the current conflict in Eastern Europe. The beta was then relevered assuming a D/E of 27%.

The cost of debt (3,38%) was computed by subtracting Heineken's probability of default (PD) times the loss given default (LGD) from the company's outstanding bonds (with 12 years to maturity and a face value of €500M). Heineken was assigned a credit rating Baa1 by Moody's. By basing in Moody's "Annual default study: After a sharp decline in 2021, defaults will rise modestly this year", we estimated the PD and LGD assuming the bonds were senior unsecured.

The capital structure was based on the debt and equity market values, using the book value of Heineken's net financial assets and on the market capitalization from the Annual Reports, respectively. D/E has been decreasing, so it was assumed it would continue to decline, assuming a value of 27%.

DCF Analysis

The Enterprise value was obtained through the Discounted Cash Flow Model at a WACC of 5,33%. In FY22, ROIC has a value of 7,2%, which is higher than the WACC, meaning that the company is managing its resources efficiently and is creating value. ROIC is projected to slightly decrease in FY22 and FY23 compared to FY21, due to higher capital intensity. From FY 24 onwards, ROIC is expected to increase, stabilizing at 9,5% in FY31. The company reaches to the steady state in FY30-31, year at which core result stabilizes at 2,4%, under a 25% reinvestment

Target stock price @ Dec 2022	97,29 €
Current stock price @ May 2022	92,60 €
Capital Gain	5,06%
Dividend	0,57 €
Return	5,68%
Recommendation	HOLD
Trigger price to BUY	101,29 €
Trigger price to SELL	92,03 €

Fig.44: Heineken Recommendation
Source: Personal Estimates

rate. From FY31 onwards it was used a perpetuity with a perpetual growth of 2,4%. Beer market will be more saturated in the long term, meaning it will be difficult to outperform the market. Hence, we believe a perpetual growth of 2,4% is reasonable given the nominal growth GDP in 2030 is projected to be 4,2%. The Core Enterprise Value was obtained by summing the discounted free-cash flow during the forecasted period and the terminal value, reaching to a value of €76 465 million. The Equity Value (€56 278 million) was reached by adding the Non-Core Value (€3 072 million) and subtracting the Net Financial Assets (€17 115 million). Dividing the Equity Value by the number of outstanding shares in 2021 (576 million), we obtain a target price per share of €97,29. The recommendation on Heineken is to “HOLD”, given that holding the stock only provides a capital gain of 5,68%.

Sensitivity Analysis

We performed a sensitivity analysis in order to assess the impact of small changes in the parameters used to estimate the WACC, since they will influence the company’s share price.

Price	Market Risk Premium					
	97,29	4,8%	5%	5,50%	6,0%	6,50%
Rf	0,996%	106,73	98,05	80,42	66,93	56,28
	0,967%	108,24	99,38	81,41	67,70	56,90
	1,011%	105,97	97,38	79,91	66,53	55,96
	1,013%	105,86	97,29	79,84	66,48	55,92
	1,038%	104,61	96,18	79,01	65,83	55,40

Fig.45: Market Risk Premium
Source: Personal Estimates

Price	g					
	97,29	2,0%	2,2%	2,4%	2,6%	2,8%
W	4,7%	117,77	123,87	131,01	139,50	149,74
A	5,0%	102,57	107,06	112,23	118,25	125,36
C	5,3%	90,11	93,47	97,29	101,67	106,74
C	5,6%	79,71	82,26	85,12	88,36	92,06
	5,9%	70,90	72,84	75,01	77,44	80,18

Fig.46: WACC
Source: Personal Estimates

Company	EV/EBITDA	P/E	EV/Revenue	EV/EBIT
Heineken	13,8x	16,3x	3,0x	18,6x
AB InBev	11,0x	24,9	3,6x	13,6x
Carlsberg	11,6x	21,2x	2,5x	15,7x
Diageo	21,2x	28,3x	6,9x	22,5x
Molson Coors Brewing	7,8x	10,9x	1,8x	10,6x
Asahi Group Holdings	11,9x	15,4x	1,8x	18,8x
The Boston Beer Company	36,2x	319,8x	2,3x	84,3x
Average	12,1x	19,5x	2,9x	16,6x
Median	11,8x	18,8x	2,8x	17,2x

Fig.47: Heineken and Peers Multiples Valuation
Source: Bloomberg



Fig.48: Heineken Football Field
Source: Personal Estimates

Firstly, we analysed the impact of the Market Risk Premium and the Risk-Free rate. MRP is a highly sensitive input. A MRP higher than the current 5% would change our recommendation from a HOLD to a SELL (since the share price would be lower than the current share price), while if MRP is lower than 5%, we would recommend a BUY, regardless the risk-free used. On the other hand, if consider as proxy for the risk-free rate a Dutch bond with 15, 20, 25 or 30 years to maturity instead of 10 years and keep the current MPR, our recommendation would be still a HOLD, since the share price would be above the current share price but below the trigger price to change the recommendation. Thus, what impacts the most the value of the company is the MRP.

Afterwards, we performed a sensitivity analysis on the WACC and on the perpetual growth rate. Our terminal value represents 77% of the Enterprise Value, meaning that most of the company’s value comes from the perpetual growth. If we only change the perpetuity growth rate, the share price ranges from €90,54 to €107,29 which would change our recommendation to a SELL if the perpetuity growth rate were 2% and to a BUY if the perpetuity growth rate is above 2,4%. If we change the WACC and keep the perpetuity growth rate at 2,4%, the share price can assume a wider range. This means that the cost of capital has a stronger impact on the share price. An increase in the WACC would imply a SELL, regardless of the perpetuity growth rate.

Multiples Valuation

We performed a relative valuation as an auxiliary tool for Heineken’s valuation. The multiples used were EV/EBITDA, EV/EBIT and EV/ Revenues. The peer group considered were chosen based on the companies’ sizes (if they have a significant market share in the beer industry) and if they are present in the same geographical regions as Heineken. We analyzed the peer group minimum, maximum and average multiples, excluding the outliers of the sample. Relying on the EV-multiples, the target share price, using the average, is €96,15 reinforcing our recommendation: HOLD.

“HEINEKEN N.V.”

“ALCOHOLIC BEVARAGES”

STUDENT: “ANA SERAFIM” “EDUARDO MEDEIROS”

COMPANY REPORT

MAY 2022

31968@novasbe.pt; 41022@novasbe.pt

Brew a better world

Equity Research in Alcoholic Beverages Industry

- Heineken is eager to continue its recovery from losses caused by Covid-19. **Net revenues are expected to rise in all segments**, estimating a potential growth 3,59% for FY21-FY30. However, inflation and energetic crises are expected to hamper Heineken in the short term, due to prices and costs increases.
- Vote of confidence for Africa.** With an ambitious investment seeking a long-term growth, the African segment is set to thrive and flourish. After the acquisition of two large breweries in South Africa, Heineken is determined to create the ideal regional beverage. Volume is expected to grow at **3.46% CAGR** until FY31.
- Heineken is prone to meet with costumer's expectations and keep up with new industry trends.** The swift ascent of low and non-alcoholic beers popularity seems to be a great opportunity for the brewery, once they already manage a portfolio with an expressive range of different products. The industry is expected to grow 11% for the following 3 years.
- Our recommendation is to **HOLD**. Considering a **target stock price of €97.77**, and a **return of 5.38%**, it will not be safely enough to negotiate. A **DCF valuation** was performed at a **WACC of 5.33%** and **terminal growth rate of 2.4%**.

Company description

Heineken N.V. is a Dutch Brewer, founded in 1864. It was responsible for the crafting of more than 10% of the world's beers in 2020. Today the company operates in more than 190 countries, divided by 4 different segments, and holds more than 300 brands. With a wide range of distinguished and unique products in its portfolio, Heineken is considered the largest brewer in Europe and the 2nd largest in the world.

Recommendation: **HOLD**

Vs Previous Recommendation

Price Target FY22: **97.77 €**

Vs Previous Price Target

Price (as of 07-May-2022) **92.6 €**

Reuters: HEIA.AS, Bloomberg: HEIA.NA

52-week range (€)	77.5-104.60
Market Cap (€m)	56.900
Outstanding Shares (m)	576

Source: Yahoo Finance



Source: Yahoo Finance, Analyst Estimate

(Values in € millions)	2021	2022E	2023F
Revenues	14 672	15 068	15 321
Gross Margin	66.9%	63.4%	61.5%
EBITDA	6 442	5 107	4 637
EBITDA Margin	29.4%	21.5%	18.6%
NOPLAT	2 133	2 277	1 887
Comprehensive income	4 562	1 645	1 303
Net Debt	16 501	17 155	16 961
ROIC	8.1%	7.2%	5.8%

Source: Heineken Annual Report; Analysts Estimates

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY ANA SERAFIM & EDUARDO MEDEIROS, A MASTER IN FINANCE STUDENT OF THE NOVA SCHOOL OF BUSINESS AND ECONOMICS. THE REPORT WAS SUPERVISED BY A NOVA SBE FACULTY MEMBER, ACTING IN A MERE ACADEMIC CAPACITY, WHO REVIEWED THE VALUATION METHODOLOGY AND THE FINANCIAL MODEL. (PLEASE REFER TO THE DISCLOSURES AND DISCLAIMERS AT END OF THE DOCUMENT)

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Company Overview

The Heineken N.V. is a Dutch multinational brewing company founded by Gerard Adriaan Heineken in February 15th 1864, headquartered in Amsterdam, Netherlands. In 2016, after the merger of Anheuser-Busch InBev and SAB Miller, Heineken's main competitors, the Dutch company became the second largest brewery in the world and the number one in Europe. The beer industry across the world is a highly competitive business with several noteworthy international companies seeking to produce and deliver a top-quality product to their end customer. The fight for market share is truly intense, each and every opportunity or investment decision may be crucial for a company's future in this aggressive market.

The company is responsible for the production, distribution, and sale of more than 235 mhl (millions of hectoliters) of beverages worldwide. During the last year of 2021, the company consolidated more than 231.2 mhl of beer and 4.9 mhl of cider across the globe. Today, Heineken owns offices across the globe and divide their operations through 4 distinct regions (Europe, Americas, Asia Pacific and Africa, Middle East & Eastern Europe) employing more than 82,000 workers. The Dutch company operates more than 160 breweries, malteries, cider plants and other specific facilities necessary for the delivery of their final product around the world. Its biggest segments, both in terms of volume and revenues, are Europe and Americas. In 2021, Europe and Americas had 33,52% and 36,94% of Heineken 's beer volume, respectively, representing 43,43% and 32,93% of Heineken's revenues, correspondingly.

Heineken possess a wide range of internationally consolidated brands in its portfolio. The company desires a greater presence of their brand worldwide and are constantly analysing new markets to expand their trademark. According to the company's last annual report, Heineken are presently operating in more 190 countries, with more than 300 different regional brands, each one of them crafted to meet customers' demands and expectations. Following the company's iconic and flagship beer brand Heineken, the company has also been able to brew some remarkable and tasteful beers, by expanding its portfolio towards premium beverages. Some of the most popular ones brewed by the Heineken group are, Amstel, famous in Europe and Americas; the American beer Tecate; Tiger, the company's most know brand in Asia and finally, Sol, a Mexican inspired beer distinguished by its refreshment.

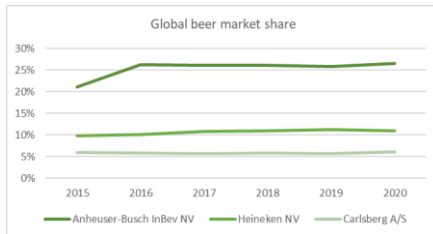


Fig.1: Top breweries market share
Source: Company Report; Euromonitor



Fig.2: Heineken consolidated beer volume
Source: Heineken Annual Report

Share contribution per region to Net Revenues, 2021

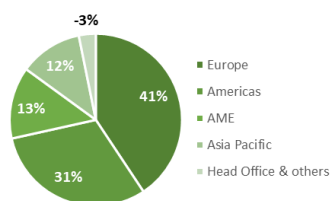


Fig.3: Heineken's share revenues per region
Source: Heineken Annual Report

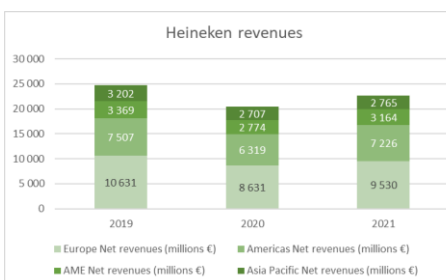


Fig.4: Heineken's revenues per region
Source: Heineken Annual Report 2021

Regarding its Distribution Channel, over the last years, the world has constantly changed and evolved into a more digital era. Companies were required adapt themselves in order to keep up and meet with consumers shopping patterns. Heineken was committed to deliver a customer experience different from the competition with a focus on convenience and their values. The Dutch brewery are regularly investing in their eB2B platform and are currently operational in 30 different markets. This new technology acquired by the company simplifies their sales and distribution around the globe. Finally, in 2021 Heineken recorded over €2.8 billion in digital sales, an increase in 130% compared with the previous year.

Shareholders Structure

Heineken N.V. ownership is divided in three main players. To secure control and engagement of the Heineken family in their business, Heineken Holding N.V. owns 50.005% of the company, FEMSA retains a smaller stake of 8.632% and the remaining 41.363% of the shares are daily traded in the stocks exchange and held by public shareholders.

Since the Heineken family inherits a greater amount of the company's shares, any major decisions or business proposals will have to be approved by the household, with public shareholders having little power to impose their views of the company. Thus, this format may demotivate other potential investors in acquiring any larger number of shares. However, according to a study from McKinney, although family businesses often face performance and governance challenges, they tend to have lower levels of leverage and cost of capital than companies majority owned by institutional investors, thus potentially yielding to a higher ROIC.

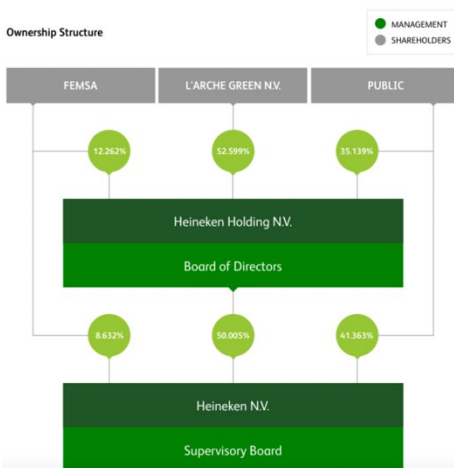


Fig.5: Shareholder Structure
 Source: Heineken's institutional website

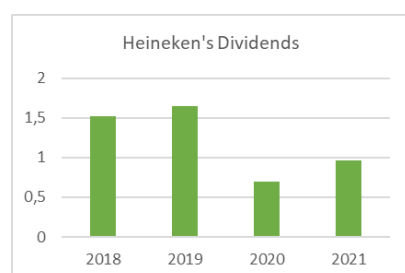


Fig.6: Heineken's dividends paid
 Source: Heineken's Annual Report

Heineken N.V. has a dividend policy that "has been set-up to ensure growth and independence of the company". The payout ratio is set between 30% and 40%. Recently this year, Heineken compensated their shareholders for €0,96 per share, a significant increase of 37% when compared with their value from approximately one year ago, €0,70 per share. However, when comparing the dividend yield in relation to the years pre pandemic, Heineken provides an inferior rate. After two years of pandemic, the dividend rate per share is predicted to continue increasing and return to its usual value.

Industry Overview

Beer Market

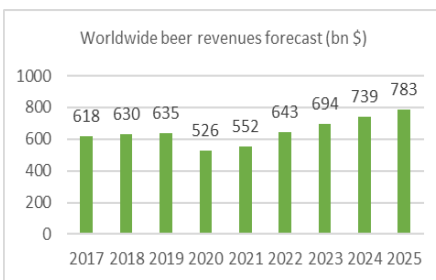


Fig.7: Global beer revenues
Source: Statista

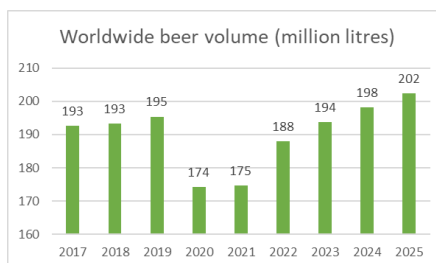


Fig.8: Global beer volume
Source: Statista

Company	2018	2019	2020
Anheuser-Busch InBev NV	26,2%	25,9%	26,5%
Heineken NV	11,0%	11,2%	11,0%
Carlsberg A/S	5,8%	5,7%	6,1%
China Resources Holdings Co Ltd	5,7%	5,6%	5,7%
Molson Coors Brewing Co	4,6%	4,5%	4,5%

Fig.9: Global beer market share
Source: Euromonitor

The concept of beer industry is associated with fermented beverages made from malt. When analyzing this market, both alcoholic and non-alcoholic beer will be taken into consideration, once Heineken and their leading competitors manufacture the two types of beer.

According to Fig.7, revenues in the beer industry have been increasing, reaching in 2019 a value around 635 million dollars. However, due to the lockdowns and restrictions imposed by Governments, the global economy slowed down in 2020. Beer revenues decreased 17,22% and the market endured a considerable markdown in the volume of alcoholic and non-alcoholic beer commercialized across the globe, registering a deficit of 11% and 2% respectively from 2019 in comparison with 2020. Nevertheless, after a difficult year in 2020, the industry began to show signs of recovery for the succeeding years. The industry's revenues are expected to deliver a compound annual growth rate (CAGR) of 6,8% from 2022 until 2025, while volume sold is expected to increase at a CAGR of 2,5% in the same period.

The top 5 companies operating in the beer market are AB InBev, Heineken, Carlsberg, China Resources Holding and Molson Coors. These companies together represent more than half of the beer market, indicating a highly consolidation of this industry. AB InBev is the leading company with a market share of 26,5% in 2020 and has kept relatively stable market share. It is followed by Heineken with 11%. The Dutch company has been continually increasing its market share globally since 2015, although at a slower pace: its market share increased 7,2% in 2017 (mainly due to the acquisition of Kirin Brazil) but from that year onwards the increase was lower than 2%. In fact, in 2020, its market share declined slightly. On the other hand, China Resources Holding and Molson Coors have been losing market share from 2016 to 2020: CRH from 6,1% to 5,7% Molson Coors from 4,9% to 4,5%. Carlsberg, after some years losing market share, gain some position in 2020, indicating a possible upward trend in the future. Due to the saturation of the industry, it is difficult to grow organically, thus companies have been engaging in M&A strategies and changing its portfolio towards high quality beverages to consolidate their positions in the market.

Cider Market

Although the Cider market may not carry the same volume and margins compared to beer business, it is a fast-growing industry supported by young

Forecasted market value of cider worldwide (million \$)

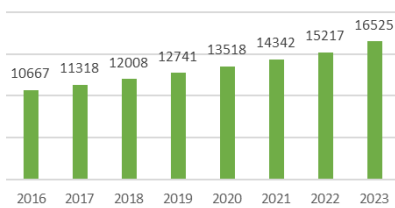


Fig.10: Global cider market value
 Source: Statista

Cider/Perry market share

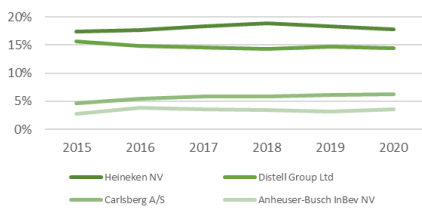


Fig.11: Global Cider market share
 Source: Euromonitor

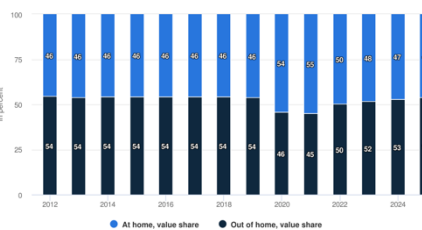
Beer - Out-of-Home Revenue Share
Worldwide (percent)

Fig.12: Worldwide beer out-of-home revenue share
 Source: Statista

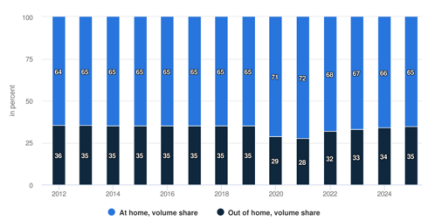
Beer - Out-of-Home Volume Share
Worldwide (percent)

Fig.13: Worldwide beer out-of-home volume share
 Source: Statista

adults who seek a lighter and healthier beverage. Heineken was responsible for the production of 4,9 mhl of cider in 2021, only 2% compared to the brewery's mass beer production. However, over the last years, the new trendy market has grown in popularity and consumers expect a top-quality product, a niche from this industry with huge potentials and market shares to be seized. The cider market is a fast-growing industry with a lot of potential growth and market share yet to be explored. The business is expected to reach a market value of U\$16,252 million by 2023. An impressive growth of almost 20% in only 3 years when compared with 2020. The industry has proven over the last years to grow as a fairly new trend for consumers, Heineken has the opportunity to seize this moment and continue to lead the market by investing and expanding their portfolio.

Once again, world's leading cider producer, Heineken manage to strengthen their portfolio for this category. In November, the company began negotiations to acquire Distell Group, manufacturer of the favored South African cider, Savannah Dry. This new acquisition is set to add value for Heineken's business and consolidate their position as leading brewery for this industry. Heineken direct competitors AB InBev and Carlsberg have also been expanding their business towards the cider segment and gaining market share, being ranked 8th and 4th worldwide, respectively.

At home, off trade

Regarding the Distribution Channel, during the last few years, the market has continuously displayed a well-balanced value share of 46% at home and 54% out of home. Subsequent to rise of the pandemic, people around the world were forced to stay at home in order to protect themselves and others from the Covid-19 virus. The reaction of this sudden change was immediate and as a result, the at home value share increased significantly and surpassed the percentage regarding out of home rate. The new values obtained for the industry in 2020 were now 54% at home and 46% out of home.

The industry's out of home revenue share is expected to increase back to 54% until 2025, following a raise in the market's out of home volume share of 35%.

Moreover, over the last years, the world has constantly changed and evolved into a more digital era. Companies were required adapt themselves in order to keep up and meet with consumers shopping patterns. Heineken was committed to deliver a customer experience different from the competition with a focus on convenience and their values. The Dutch brewery are regularly investing in their eB2B platform and are currently operational in 30 different markets. This new technology acquired by the company simplifies their sales and distribution around

the globe. Finally, in 2021 Heineken recorded over €2.8 billion in digital sales, an increase in 130% compared with the previous year.

Industry Trends

E-commerce

The pandemic increased the consumption of alcohol as well as the way people purchase it, as safety and convenience, consequences of the closure of the on-trade channels, became key at the moment of buying any product. Even though e-commerce still represents a small segment of sales, in figure 14, more than 60% of the respondents stated that online channels were and will continue to have a significant impact when buying or selling alcoholic drinks. In fact, the global e-commerce market for alcohol is expected to grow 66% across 2020-2025. With this platforms, brands can grow their business and increase margins as they will be selling directly to customers without recurring to third parties, like supermarkets, while reducing their dependence on off-trade channels, and risk against future health situations like Covid. Heineken has already launched online platforms in 30 markets, capturing €2,8 billion in online sales in 2021, growing 130% compared to 2020. For example, it has launched BeerWulf in Europe and GLUP in Mexico.

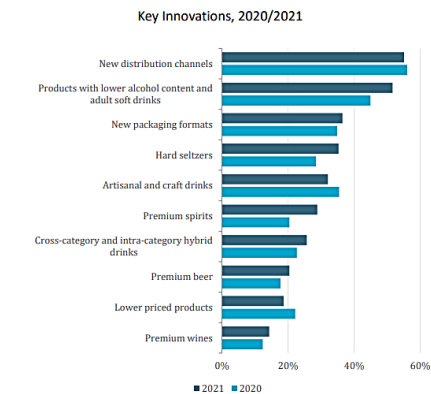


Fig.14: Expected trends impacting alcoholic drinks sale

Source: Euromonitor

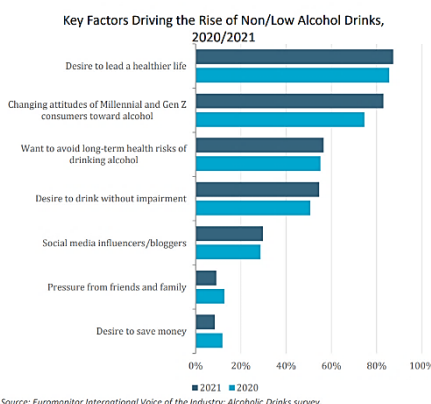


Fig.15: Key factors driving the rise of non/low alcohol drinks

Source: Euromonitor

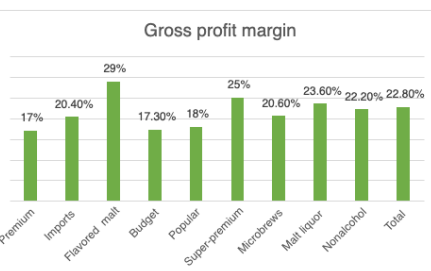


Fig.16: Gross profit margin

Source: Statista

Low and non-alcoholic beers

Consumers have been changing their consumption habits, paying more attention to their health. Older generation wants to reduce alcoholic consumption while Millennials and Generation Z want to socialize without the harmful of the alcohol. This trend has been growing especially after the pandemic, with people not taking their health for granted any more. The low and nonalcoholic beer segment is a good opportunity for breweries since the numbers of consumers is increasing. Moreover, it can provide higher gross profit margin (22,2%) than standard beers category, an already saturated market (fig.16).

According with IWSR Drinks Market Analysis, in 2021 the global average volume of low and non-alcohol beverages increased 6% and alcohol-free beer is expected to increase at a CAGR of 11% in 2021-2025. Heineken has been innovating its low and non-alcoholic portfolio to keep up with this trend and it is leading in several markets. Heineken® 0.0 is already present in 100 markets and is registering a strong performance: is the leader in Western Europe, in United States and some countries in Asia Pacific, such as Vietnam – a fast growing market. It is important to continue to expand, to strengthen the brand with the

Sales growth beer worldwide



Fig.17: Sales growth of beer category worldwide

Source: Statista

Sales value of hard seltzer worldwide from 2020 to 2030 (million US dollars)

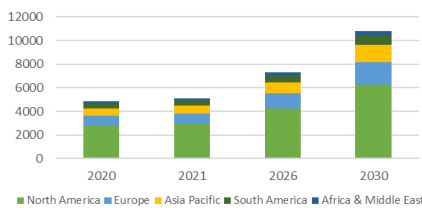


Fig.18: Sales value of hard seltzer worldwide

Source: Statista

Sales growth of beer worldwide

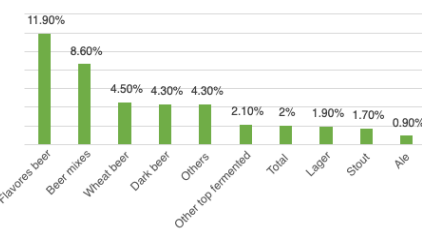


Fig.19: Sales growth of beer worldwide

Source: Statista

Hard Seltzer brand purchase intention 2020

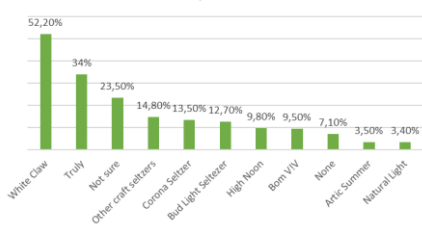
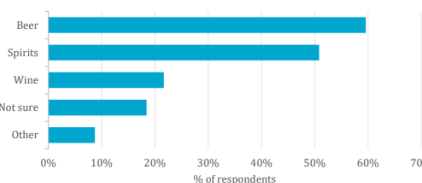


Fig.20: Hard Seltzer brand purchase intention

Source: Statista

Anticipated Cannabis Legalisation Impact on Different Types of Alcohol Drinks, 2021



Source: Euromonitor International Voice of the Industry: Alcoholic Drinks survey, November 2021 n=240

Fig.21: Anticipated cannabis legislations impact

Source: Euromonitor

consumer and to compete with rivals who are also betting on this growing segment, like Ab InBev which has launched Budweiser Zero.

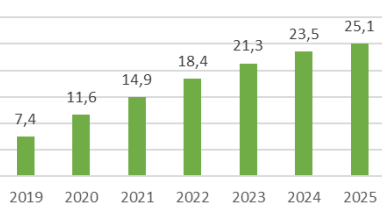
Premiumization

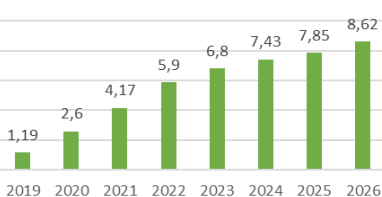
Consumers are shifting their preferences towards superior quality beverages, as they are willing to pay more for those. In order to address these changes, breweries have been increasing their offer of premium beverages. In fact, this category is able to provide higher gross margins and superior sales growth than standard beers: premium and super premium beers can provide gross profit margins of 17% and 25%, respectively, while standard beers only provide 18%. Regarding sales growth, premium and super premium also outperform standard peers, growing 3.1% and 5%, respectively, since 1999, while Discount and Mainstream only grew 1.6% (fig. 16, fig.17).

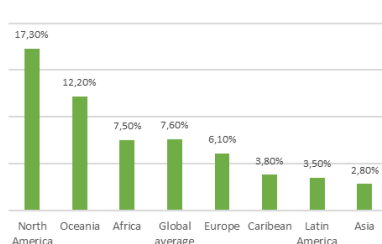
The hard seltzer segment is expected to provide good future prospects in the premium category. The market size was valued at \$8.95b in 2021 and is forecasted to grow at a CAGR of 22.9% from 2022-2030. North America is the largest market, representing over 20% in 2020, followed by Asia Pacific. This segment has been increasing since customers are focusing more on health and wellness, especially younger generations who are demanding lower and free alcohol beverages. Thus, HS can be a substitute of the traditional beer. This is a small but increasingly dynamic market, with continuous launching of new products. Smaller breweries proved the potential of this segment, and now big companies are exploring this market opportunity and rising competition. In the U.S., some big known players as AB InBev and Constellation Brands already have a significant presence with the launch of Bud Light Seltzer and Corona Seltzer, being in 5th and 4th place, respectively, in the market (fig.19). In 2020, Heineken launched the brand Pure Piraña in New Zealand and Mexico and the brand Carnijila in the U.S. but it still has a residual presence. Thus, it is essential to keep developing new products with new flavors in order to catch attention from customers in this fast-moving segment and gain market share.

Craft and speciality beer in exotic flavours

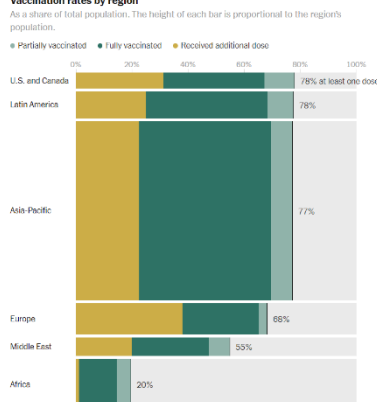
Consumers want to taste new flavors and are more health conscious than ever, hence they have been shifting their preferences towards craft beers and beverages with new flavors. These could consist of wheat beers with delicate fruit, or sours beers with significant fruit. In fact, this segment can provide a gross profit margin of 29%, outperforming standard beers (gross profit margin is 18%). It has also been delivering sales growth of 11.9% since 1999, while lagers only

Size of legal recreational cannabis market in the US
 (billion US dollars)

 Fig.22: Sales of recreational cannabis in the US
 Source: Statista

 Size of legal recreational cannabis market in Canada (billion
 Canadian dollars)

 Fig.23: Size of legal recreational cannabis
 market in Canada
 Source: Statista

 Annual cannabis users as a share of total population
 worldwide in 2020

 Fig.24: Annual cannabis users as a share of
 total population
 Source: Statista

Vaccination rates by region


 Fig.25: Vaccination rates by region
 Source: New York Times

has delivered 1,9% growth (fig.19), indicating that this segment provides growth opportunities.

Craft beer is expected to increase at a CAGR of 6,9% from 2022-2032, reaching to \$174,68 Bn by 2032. These could consist of wheat beers with delicate fruit, or sours beers with significant fruit. North America is expected to be the market with the largest growing demand for craft beer until 2032 while in Europe craft breweries have been growing over the last 5 years, showing that there is a sustainable demand. It is expected that big players will continue to expand their portfolio.

Legalization of Cannabis

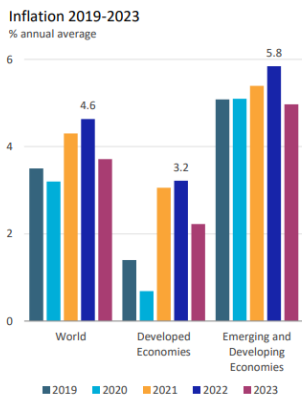
Cannabis is rising attention from both customers and breweries. Although cannabis can disrupt the alcohol industry, according to Euromonitor, 60% of industry professionals acknowledge a positive and potential business opportunity combining the beer market with cannabis. The beer with infusion of cannabis plant is seen by customers as a healthy alternative to alcohol since it is alcohol-free, slightly effervescent, and boasting low or no calories. The attention towards cannabis is especially increasing in North America, where the recreational use of cannabis is legal in 18 states in the U.S. and became legal in Canada in October 2017. The most attractive market in the U.S. is California, estimated to represent 20% of the U.S. market in 2025. Heineken-owned Lagunitas is present in more than 35 countries and in 2018 was launched a non-alcoholic cannabis beer, making Heineken the first big brand to enter in this segment in the U.S. market. Since this segment is increasing its popularity, being the first entrant may make Heineken expand faster than its rivals.

Risks Restraining Growth

Global economy saw a rebound in 2021, due to the advancement of vaccination and stimulus spending. However, there are still factors that can prevent growth of beer industry in the near future.

Covid-19

To restrain the spread of Covid infections, Governments have imposed restrictive measures. The beer industry is highly linked to the hospitality sector. Around the world, bars, pubs, restaurants were closed, festivals and sport events were delayed. This had a strong impact in beer sales. Although currently restrictions are diminishing, supply chain bottlenecks are reducing, and vaccination is progressing, the threat of new variants is still a matter of concern. Countries with low vaccination rate will have a stronger impact in both supply and demand.



Source: Euromonitor International Macro Model, national statistics
 Note: Data for 2022 and beyond are forecasts

Fig.26: Inflation 2019-2023
 Source: Euromonitor

Currently, in Africa, only 20% of the population has received at least the first shot of the vaccine. On one hand, the rapid worldwide spread of the Omicron variant has put more pressure on labor market. The shortage of employees can disrupt the production and the distribution of beer, having then a strong impact in the short term. On the other hand, if a new variant surges, restrictions can return and slow down the recovery of the economy once again.

Inflation

The current inflationary environment is different from previous ones since it is driven by supply-demand mismatches, constrained supply chain, labor shortages and aggressive fiscal stimulus, due to the pandemic, and rising energy costs. Inflation has reached values not seen in several years. Thus, it has been raising concerns regarding its impact on consumer behavior, since it decreases purchasing power. By facing higher prices, consumers may shift to lower priced beer brands and/or decrease the overall consumption of beer, by prioritizing the spend of their disposable income in essential goods. In an interview to the *Financial Times*, Heineken's chief executive Dolf van den Brink said that costs would increase 15% due to the increase in prices of raw materials, implying a higher charge on beer and a potential decrease of beer consumption. However, it is difficult to predict how much consumption can decrease since the usual models used by the sector are not designed to deal with so high inflation values.

Energy costs & Conflict between Russia and Ukraine

Aligned with high inflation, since the last quarter of 2021 it has been seen a rise in energy costs, due to the long winter of 2020/21, the economic recovery from the pandemic that led to a supply-demand mismatch, and less power generation by renewable energy sources. Moreover, the recent war in Eastern Europe has raised even further commodity prices. Crude oil and Natural gas have surpassed the \$100 and \$5 a barrel, respectively. Even though Heineken has already implementing 130 renewable energy projects over the past 3 years, in 2021 only 27% energy consumed in production came from renewable sources, meaning that Heineken is still exposed to the energy swings of financial markets. The current volatility will strongly impact the production costs, and rise transportation prices, potentially causing transportation bottlenecks and decreasing of products deliveries in the short term. In addition, Russia and Ukraine are the breadbasket of the world. According to Bloomberg, barley, one key beer ingredient, will be strongly impacted by the war due to its typical low inventory, meaning that there can be a supply disruption of barley, pushing its price even more up. Although Heineken tries to local sourcing, the European market is specially highly

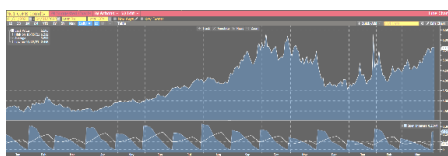


Fig.27: Price of natural gas
 Source: Bloomberg

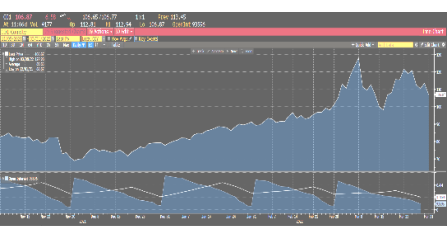


Fig.28: Price of crude oil, Brent
 Source: Bloomberg



Fig.29: Global barley average price monthly
 Source: Bloomberg

dependent one crops raised in east. Furthermore, Heineken, following the example of other western companies, announced the cease of operations in Russia. This market represents 2,5% of Heineken's sales in Eastern Europe, a significant share of revenues in this region that will stop to exist.

Business Situation

Europe

Europe accounts for 14,68%% of total beer consumed worldwide in 2021 and 33,52% in Heineken's total volume. Currently, Heineken is present in 22 countries.

Market Overview

Beer volume in Europe have been increasing since 2017, although at low rates. However, due to the pandemic, the volume sold decreased 9.4% in 2020, from 294 mhl to 267mhl. Nonetheless, with the ease of the restrictions imposed by Governments, the beer industry in Europe manage to recover in 2021, with beer volume growing 4,38% in 2021, although not reaching the pre-pandemic values. In 2021, beer volume sold was 278mhl. Thus, Europe registered a 5-year CAGR of -0,07%. Principal markets are Germany, Spain, and UK, which represent 34%, 13%, 15% of the market, respectively. France, Italy, and Netherlands are also important markets, since together represent 17,90% of the European beer market. In fact, France and Italy are expected to the highest beer volume growth until 2025 in Europe: 3,2% and 3,77%, respectively.

The European market is a highly competitive and mature market, so it is difficult to grow organically. To overcome this, companies have been focusing on developing and offer premium products, so that value can be created though the charge of higher prices. The increased awareness of the benefits of a healthier lifestyle boosted by the consequences caused by the pandemic, have influenced the rise of non and low alcoholic beers in the region. Craft beer is also trending, as customers are choosing more frequently quality over quantity.

In general, the percentage of craft beers of total beer sold have been increasing in all European countries, reinforcing the consumers' preference shifting towards the premium segment. In Germany the percentage of craft beer consumed in 2015 represented 0,6% and in 2020 increased to 3,8%, while in the UK, in 2010 this segment represented 0,2% and in 2020 was 7,9%, being the European market where craft beer is more relevant.

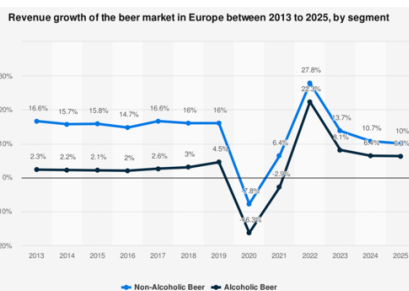


Fig.30: Revenue growth of beer market in Europe
Source: Statista



Fig.31: Volume of beer commercialized in Europe
Source: Euromonitor

Competitors

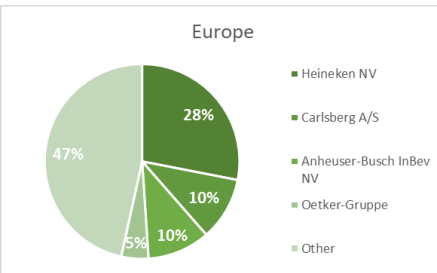


Fig.32: Company shares in European beer market

Source: Heineken's Annual Report; Euromonitor

The scenario for Heineken's competition in Europe, differs from the other three segments. After consolidating their position as the main player, with 28% market share, the company has the mission to maintain their position as largest brewery to sell liters of beer in the continent. Carlsberg and AB InBev together with Heineken dominate almost half of the European market (49% in 2020). These 3 breweries have maintained a relatively stable market share over the years, and since the European market is a mature market where is difficult to growth through volume, we do not expect the stakes of each company will change in the future, i.e., we predict constant market share during the forecasted period, with Heineken maintaining the leading position in the segment.

Heineken

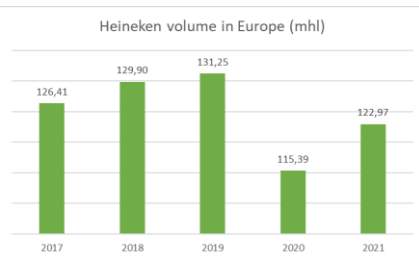


Fig.33: Heineken beer volume in Europe

Source: Heineken Annual Report

The progression in European continent is key for Heineken's visions and achievements, as this segment is the largest region in terms of revenues and the 2nd largest volume wise. According to their latest annual report of 2021, Heineken has recorded a consolidated beer volume of 77.5 mhl alongside a revenue of €9,494 million. The Dutch company was growing at a 3-year CAGR of 1,39% and 3,31% in term of volume and revenues, respectively, until 2019. It was the most impacted segment with revenues decreasing 18,9%. However, it was able to improve its performance in 2021, although not reaching the pre-pandemic values.

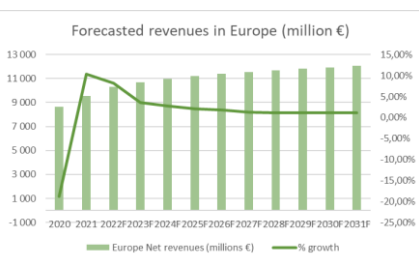


Fig.34: Forecasted Heineken revenue growth in Europe

Source: Heineken Annual Report, Personal Estimates

Throughout the last couple of years, Heineken started to bet and invest more in premium local brands, to fulfill the market expectation and demands. In Europe, their target customer today are younger consumers who seek for a superior quality for their drinks. Leading this recent innovation, the Dutch beer Birra Moretti has successfully gained popularity among teenagers and young adults. Some of Heineken's most popular beers in European market today are, Birra Moretti, Ichnusa, Desperados, Inch's and of course, their flagship brand, Heineken. Moreover, the growing focus on health opened new opportunities in the region, with the expansion of free-alcoholic beer. Given this, we expect the fierce competition between top breweries to continue. Heineken is leading of the non and low alcoholic beer segment in Europe, registering double-digit growth. However, AB InBev and Carlsberg are also betting on this segment. AB InBev have launched its brand Budwiser and Carlsberg, although registering a decline in total volume sold in 2020, it registered a growth of 11% of its new free-alcoholic beer in that year, and 17% growth in 2021. Despite this intense competition, we believe Heineken will be able to maintain its leading position in the low and free-alcohol segment and in Europe in general.

Market conditions are expected involve favourably as restrictions with Covid-19 are eased, even though the limitations still in place. However, due to the rise of inflation, we were more conservative when forecasting the volume sold. We expect the volume sold to continue to increase, although at a slower pace than in the past, as due to prices increases already announced by the company, consumers may allocate its disposable income more towards primary necessity goods. Hence, we predict Heineken's volume will grow at a 0,72% CAGR until FY31 and revenues at 2,4% CAGR during the forecasted period (FY21 to FY 31).

Americas

Americas accounts for 31,2% of total beer consumed worldwide in 2021 and 36,94% in Heineken's total volume. Currently, Heineken is present in 9 countries, being Mexico, Brazil, and United States the key markets.

Market Overview

The Americas segment is branched by two distinct regions, North America, and Latin America, representing more than 40% of the global beer market value. After facing the consequences caused by the pandemic which led to a worldwide lockdown, the beer industry recorded a total revenue of €155,411 million during 2021. Beer volume in 2021 amounted to 592 million hectoliters, registering a 5-year CAGR of 6,4%. This low growth is driven by the decline of beer volume sold in North America, with Canada and United States registering a negative CAGR in the last 5 years (-1,48% and -1,43%, respectively). On the other hand, Americas segment is led by the Latin America region, which despite the contraction during the pandemic, was able to surpass the pre pandemic beer volume sold. The largest market in the region is Brazil, representing 41,7% of the market, volume wise. It is followed by Mexico, which due to the rising demand, has been increasing the volume sold, representing 25,3% of the market.

Competitors

The North American and Latin America beer market is a deeply consolidated industry. With such a great dominance from, gaining market share can become a great challenge for companies like Heineken. In North America, the top four players dominate more than 50% of the market. The segment is led by AB InBev, with 43% market share, while Heineken ranks in the 4th position, with 4,3% of the market. Constellation Brands have been increasing its market share (10,9% in 2020), while other breweries have maintained a relatively stable market share. In

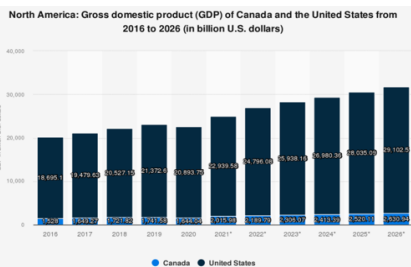


Fig.35: North America GDP

Source: Statista

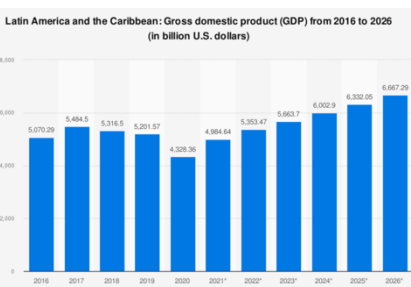


Fig.36: Latin America and Caribbean GDP

Source: Statista



Fig.37: Americas beer revenue

Source: Statista



Fig.38: Volume of beer commercialized in Americas

Source: Euromonitor

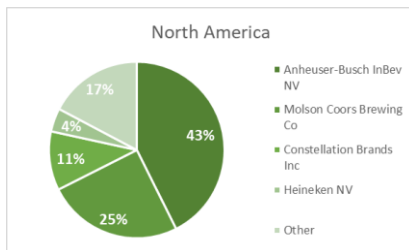


Fig.39: Company shares in North America beer market

Source: Euromonitor, Heineken Annual Report

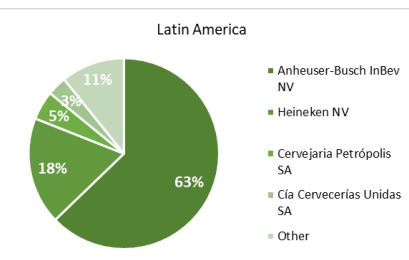


Fig.40: Company shares in Latin America beer market

Source: Euromonitor, Heineken Annual Report

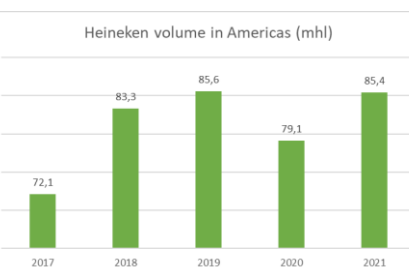


Fig.41: Heineken beer volume in Americas

Source: Heineken Annual Report

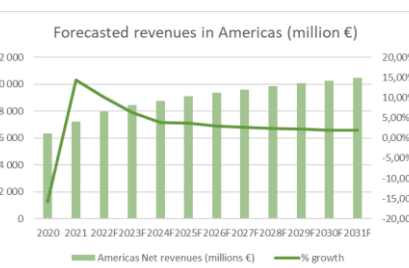


Fig.42: Forecasted Heineken revenue growth in Americas

Source: Heineken Annual Report, Personal Estimates

Latin America, AB InBev and Heineken dominate the market, with the Dutch company holding the second position with 18% market share.

Heineken

The Americas market is the largest segment in terms of volume sold and second most lucrative one, representing 32,93% of net revenues. After facing the consequences caused by the pandemic on 2020, Heineken was able to recover their position in the following year. The company manage to increase their consolidated beer volume by almost 8%, from 79,1 mhl to 85,4 mhl. Both revenues and volume grew at a 5-year CAGR of 3,4% and 4,3%, respectively.

Heineken's key brands in this segment are Heineken®, Lagunitas, Dos Equis, Tecate and Amstel ULTRA. In pursuance of cementing their position behind the regional leaders AB InBev, Heineken are focusing their investments on the key markets for this segment, USA, Mexico, and Brazil. One of the strategies practiced by Heineken in these vying markets was the expansion and mass investment of their primary brand, following the trend of shift towards low/non-alcoholic beer. Surprisingly, Heineken® 0.0, the brewery's non-alcoholic beer, had a superior growth of 30%, compared with the previous year. The company's flagship brand Heineken® exceeded the industry's expectations and achieved a nominal growth of 22.9% during 2021.

Regarding Latin America, Heineken's key market are Brazil and Mexico. The former is the largest beer market in Latin America (represents 42,28% of the market) and the 3rd largest in the world (represents 7,8% of the global market), while Mexico represents 24,93% of the market, both in term of volume sold. Heineken holds the 2nd position, but it has being reinforcing its presence, especially after the acquisition of Brazil Kirin in 2017. Heineken® 0.0 reinforced its leading position in Americas: in Mexico, it grew more than half; in Brazil double the volume. Furthermore, in order to expand Heineken's portfolio, the company began to commercialize one of their premium brands in two new markets for this region, Tiger brand in both Brazil and Peru. This recent investment was an immediate success and the brand rapidly gain market share among local competitors. The increase in disposable income and quality of life in Mexico and the growing trend towards premium segments in both countries provides a good opportunity for further expansion of flavored beers. Thus, given the growing attention towards the premium segment and Heineken's good performance, we predict the company will be able to increase its market share from 14,42%, in 2021, to 15,19% in 2031. We believe Latin America will register a strong growth in terms of volume sold in the short term, growing at a CAGR of 2,99% until FY2025, stabilizing at a CAGR of 1,12% from FY26 to FY31.

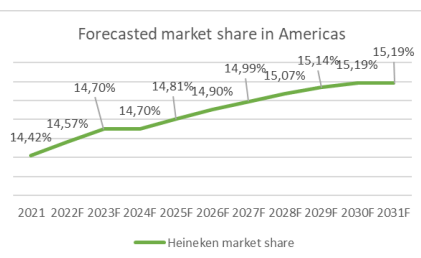


Fig.43: Forecasted Market share in Americas
Source: Heineken Annual Report, Personal Estimates

Regarding North America, the interest in hard seltzer segment and drinks with infusion of cannabis have been increasing, making North America the largest market regarding this premium segment. We believe that Heineken's entrance in the hard seltzer segment with the brand Carnijila in the U.S. will improve its performance of in this region. However, as stated previously, the North American market is highly competitive, and also saturated like the European market, meaning that is difficult to grow organically. Furthermore, big players in the market, like AB InBev and Constellation Brands have entered earlier in the hard seltzer segment, collecting a significant market share. Hence, we do not think Heineken will reach a large scale as its competitors, also due to its only 4,3% in the North American market. Although its smaller presence in North America compared to its rivals, Heineken is the leader in the non and low alcoholic segment, and it has been able to experience a double-digit growth of Heineken 0.0. Thus, we believe Heineken will continue the good performance of this segment despite the fierce competition of AB InBev, that continues to innovate its offer: recently it has launched the first non-alcoholic beer with vitamin D, addressing consumers' concerns about a healthier lifestyle. Hence, we predict volume will increase in North America at a low CAGR of 0,27% until FY31.

In the Americas market, the volume is expected to increase at a CAGR of 1,94% from 2021-25 and at a CAGR of 0,74% until FY31. The price per million hectolitres will be affected by the rise of inflation, especially in 2022, with an increase of 5,25%. Revenues are set to increase at a CAGR of 3,7% until FY31.

Africa, Middle East and Eastern Europe

AME accounts for 19,54% of total beer consumed worldwide in 2021 and 16,83% in Heineken's total volume. Currently, Heineken is present in 23 countries and several of regional and local brands have iconic status, such as Star in Nigeria and Primus, which is produced in 4 central African countries. In Eastern Europe, Russian market is the most important one.

Market Overview

AME can be divided in 2 sub-regions: Africa & Middle East and Eastern Europe. Both sub-regions grew volume wise until 2019 – Africa & Middle grew at a 3-year CAGR of 2,89% and Eastern Europe grew at a CAGR of 1,1%. In 2020, due to the Covid-19 global pandemic and consequently border closures and lockdowns imposed by Governments, the beer volume in AME dropped 6,58%. Africa &

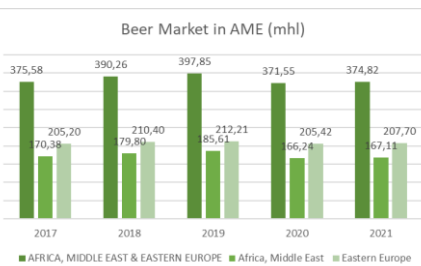


Fig.44: Beer Market in AME
Source: Euromonitor

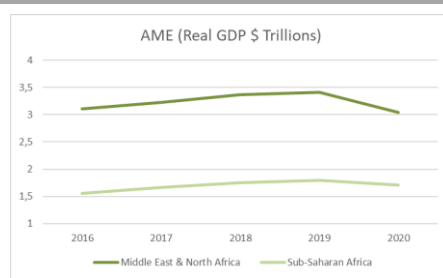


Fig.45: AME GDP
Source: World Bank

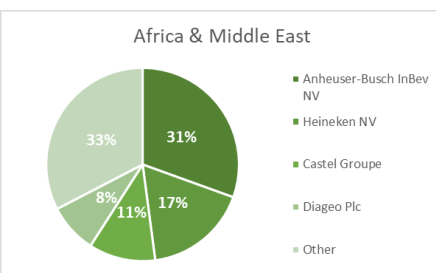


Fig.46: Company shares in Africa and Middle East beer market
Source: Euromonitor, Heineken Annual Report

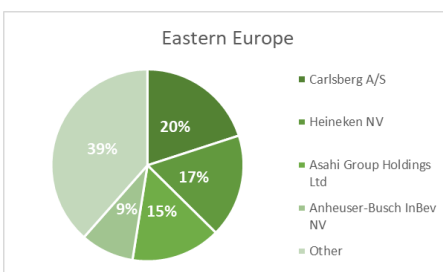


Fig.47: Company shares in Eastern Europe beer market
Source: Euromonitor, Heineken Annual Report

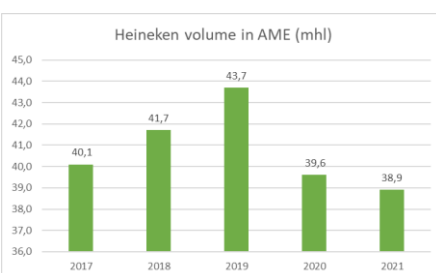


Fig.48: Heineken volume in AME
Source: Heineken Annual Report

Middle East was the most impacted sub-region with a decrease of 10,48% of beer volume. However, 2021 was a year of recovery for AME (+0,85%) even though the volume is still below the 2019 values. This rise was led mainly by Eastern Europe sub-region (+1,1%). The largest markets in Africa & Middle East are Nigeria and South Africa, representing 12% and 13% of the beer market, while in Eastern Europe the leading countries are Russia, Poland, and Ukraine, representing 38%, 17,5% and 8,6% of the beer market, respectively.

According to IMF, after a contraction of 3,99% and 2,01% in real GDP in Middle East & North Africa and Africa Sub-Saharan respectively, due to lockdowns imposed by Governments, the economy is expected grow 4,3% and 3,8% in each respective region. Despite this notable growth, real GDP in Africa Sub-Saharan has been low across the years and the constant conflicts in Africa and Middle East make the macro-environment in the region being challenging. In Eastern Europe is worthy to mention the above-trend rate of 2,7% of Russia real GDP, after the 4,5% registered in 2021. The spending from the National Wealth Fund on domestic infrastructure and higher commodity exports aid the growth. However, uncertainty surrounding the war in Eastern Europe, could shrink Russia real GDP by 7% in 2022, compared to previous previsions of 1,5% - 2% growth of IMF.

Competitors

The competition landscape in the region is highly concentrated and is dominated by top breweries. In Africa & Middle East region, the market is dominated by AB InBev with 30,5% market share in 2020, followed by Heineken (17,4%). The acquisition of SAB Miller in 2016 reinforced AB InBev the main player in the region - in 2015, it only had 0,6% of market share. In Eastern Europe, Carlsberg assumes the leading position in 2020, with a market share of 20%, followed by Heineken (17,4%) and Asahi Group Holdings (15,1%). However, Carlsberg have been losing market share to its rivals. However, with the perspective of acquiring Distell and Namibia Breweries Limited in 2022, Heineken will have a wider access to this region and will be in a better position to compete against AB InBev, the leader in the region. We believe Heineken will be able to increase market share from 4,52% to 5,33%.

Heineken

In 2021, the consolidated beer volume was 38,9mhl and net revenue was €3,159M. Both revenues and volume grew until 2019 at a 3-year CARG of 3,62% and 2,91%, respectively, decreasing 17,66% and 9,38% respectively, in 2020 due to COVID-19 and consequently border closures and lockdowns in place.

AME was the only region that did not registered a positive volume growth in 2021. Even though the economy reopened in 2021, restrictions continue in some markets yet at low levels. Nonetheless, AME's premium segment has been outperforming the portfolio, having both local and international brands achieving good results, especially in Nigeria, South Africa, Russia, Ivory Coast and Rwanda. Heineken® growth was driven by the recovery in South Africa and Russia. Its flavored portfolio increased more than 60% reflecting the continuous success of Desperados brand. However, lager is expected to continue the main beer segment in Africa & Middle East, with a projected CAGR of 4% from FY20 to FY25.

Moreover, M&A strategies also plays an important role. In November 2021, Heineken announced its intention of acquiring the control of Distell and Namibia Breweries Limited, expected to be approved in Q3 2022. South Africa is an important market in Africa, expecting to deliver growth of 3,33% until 2025. With this acquisition, together with the Heineken South Africa, Heineken will be positioned to expand operations in 12 markets in Southern and Eastern Africa, capturing significant market share, and be better positioned to compete against AB InBev. All in all, with the rise of disposable income, increased consumption of alcohol by young adults and increasing urbanization, Africa & Middle East is expected to deliver a strong growth in terms of beer volume. We believe the region will grow 3,98% volume wise.

On the other hand, Eastern Europe is a more saturated market with lower opportunities to grow, alongside Western Europe. In addition, the recent conflict between Ukraine and Russia is hampering Heineken's operation. Firstly, both countries are large producers of cereals. Countries in Eastern Europe are significantly dependent on this raw material. It is extremely difficult for Ukraine to continue to provide the cereals for the beer production. Secondly, following the example of other western companies, Heineken will cease operations in Russia in 2022, the principal market in Eastern Europe. Heineken was the 3rd largest brewer in Russia, with 11,8% market share, behind Carlsberg (26,2%) and AB InBev (15,7%). The closure of operations will decrease the volume of beer sold in AME. With the loss of an important market in the region, western beer companies will focus more on the other existing markets, increasing even more the competition in order to compensate the loss revenues in Russia. Nonetheless, we do not expect Heineken loses the 2nd position in Eastern Europe.

All in all, we expect the beer volume to decrease in FY22 and FY23 in AME, driven by the current conflict in Eastern Europe. However, we think this will be a short-term impact in volume sold since Africa & Middle East are expected to deliver strong volume growth, as well potential market share gains with the

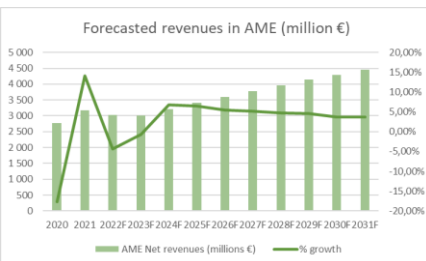


Fig.49: Forecasted Heineken revenue growth in AME
 Source: Heineken Annual Report, Personal Estimates

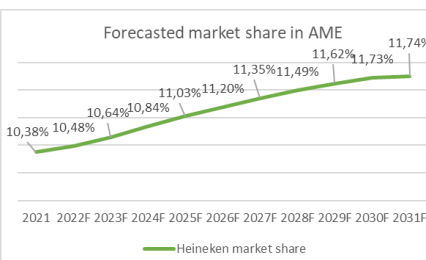


Fig.50: Forecasted Market share in AME
 Source: Heineken Annual Report, Personal Estimates

acquisition of Distell and Namibia Breweries Limited. Hence, we believe Heineken will increase beer volume from FY24 onwards, reaching the pre-pandemic values in FY26. Africa & Middle East will be the driver for the segment. AME's revenues are expected to increase at a CAGR of 3,47% until FY31.

Asia Pacific

Asia Pacific accounts for 33,88% of total beer consumed worldwide and 12,72% in Heineken's total volume. Heineken is present in 24 markets, being 3 under license and 5 Minority Joint Ventures. The region's key brands are Heineken®, Anchor, Bia Viet, Tiger and Bintang.

Market Overview

Emerging markets are expected to have a stronger growth than Advanced economies (6,3% vs 3,4%) in 2022, led by India with an expected growth of 8%. This growth is driven by the reopening of the economy, the acceleration of vaccination rates, the continue increasing trend for premium products and low and non-alcoholic beers and middle-class growth. According to McKinsey, Asian consumers are expected to represent half of worldwide consumption growth in the next decade and "one of two upper-middle-income and above households is expected to be in Asia".

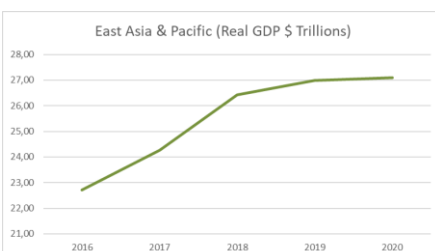


Fig.51: East Asia and Pacific GDP
Source: World Bank



Fig.52: Beer market volume in Asia Pacific
Source: Euromonitor

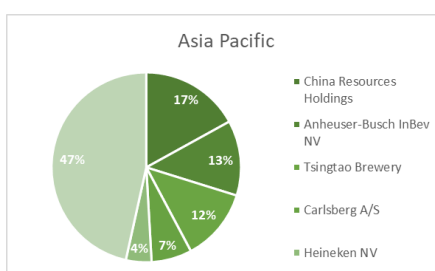


Fig.53: Company shares in Asia Pacific beer market
Source: Euromonitor, Heineken Annual Report

Beer market in Asia has increased at moderate growth rates until 2019. The pandemic had a strong impact in this region, decreasing 9,17% the beer volume. 2021 was a recovery year (+1,15%), amounting to 64 999 million liters. The largest beer market is China, representing 66,3% of beer consumed in Asia Pacific. It is followed by Japan and Vietnam, which represent 7,3% and 7% of the market, respectively. However, in Japan, beer consumed has been decreasing at a 5-year CAGR of 3,6% and is expected to continue to decrease. The beer volume in China and Japan have been declining over the years, due to ageing population. On the other hand, markets in Southeast Asia, especially Vietnam, Philippines and Cambodia are expected to continue to strongly grow due to the increase in disposable income and its young population who want to taste different flavors. In fact, according to Euromonitor, Vietnam is expected to overtake Japan as the 2nd largest beer market in Asia in 2023. Nonetheless, even in markets as Japan, there are growing opportunities in the dark beer and non and low alcoholic beers segment, that has been increasing due the increase of

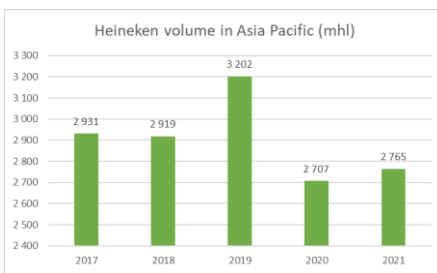


Fig.54: Heineken volume in Asia Pacific
 Source: Heineken Annual Report

Beer in Asia Pacific: Top 10 Companies by Sales and % Sales Breakdown by Country, 2018

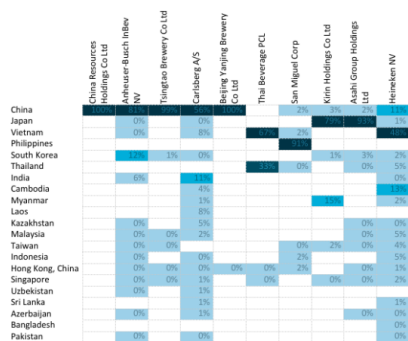


Fig.55: Top beer companies by % sales and by country in Asia Pacific
 Source: Euromonitor



Fig.56: Forecasted Heineken revenue growth in Asia Pacific
 Source: Heineken Annual Report, Personal Estimates

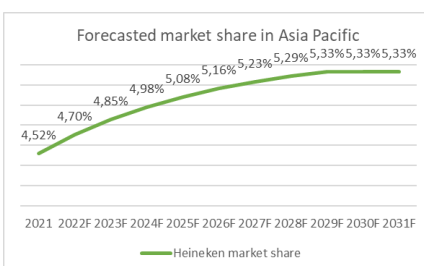


Fig.57: Forecasted Market share in Asia Pacific
 Source: Heineken Annual Report, Personal Estimates

the craft beer trend and rising attention to health. In Asia, the non and low alcoholic beer segment is expected to growth at a 5-year CAGR of 5,7%.

Competitors

The Asian market is highly fragmented and is composed by many small players. In 2020, the main players were China Resources Holdings with 16,7% market share, AB InBev (12,7%), and Tsingtao Brewery (12%), accounting together 41,4% market share. Heineken appears in the 6th position with 4,1% market share. Nonetheless, it has been gaining position in the Asian market, growing from 3,7% in 2017 to 4,1% in 2020.

Heineken

Asia Pacific is the smallest operating segment of Heineken, representing 12,72% of total volume. In 2021, the consolidated beer volume was 29,4mhl and net revenue was €2,765M. Both volume and revenues increased until 2019. However it was the most impacted segment in terms of volume sold in 2020, with a decrease of 9,65%. Although the economy started to slowly recover in 2021, during the 2nd half of the year most markets went back into restrictions and lockdowns, hampering a fully recovery. Moreover, the current Zero-covid policy in China is also impacting consumption, since people are not allowed to leave their houses, to prevent the spread of the virus, and food and beverages are provided by the Government. However, Asia Pacific still has good growth opportunities. Moreover, in July 2021 Heineken obtained control of United Breweries Limited (UBL), the market leader in India. Until now, Heineken had a residual presence in India (0,4%), but this acquisition will boost Heineken sales in the region. India accounts for 18% of world population but 1% of worldwide beer market. The young population and an emerging middle class in the country are good opportunities for long term growth. Furthermore, markets such as Vietnam and Cambodia are good opportunities to grow through volume. The former is the principal market of Heineken in the region (fig.63). The market is dominated by Thai Beverage PCL and Heineken, representing 36,9% and 36,3% of the market, respectively. The increasing disposable income, a young population with strong beer drinking culture and the fast expansion of the premium segment (in 2021 premium beer represented 30% of the total beer market and grew seven times faster than lagger), makes Vietnam the ideal market for Heineken to continue to expand its Tiger and Heineken Silver brand, for example.

Given Heineken's position to further penetrate Asia and gain market share, we believe market share will increase from 4,52% to 5,33 during the forecasted

period, volume and revenues will grow at a CAGR of 3,34% and 5,58%, respectively, until FY31.

Performance Analysis

Net Revenues

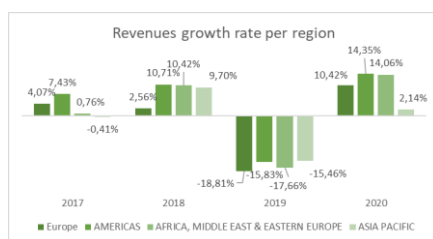


Fig.58: Heineken's revenue growth rate per region

Source: Heineken Annual Report

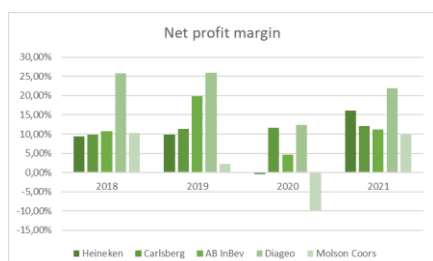


Fig.59: Heineken's net result margin between competitors

Source: Heineken Annual Report

(2021)	Gross margin	EBITDA margin	EBIT margin
Heineken	66,9%	29,4%	20,4%
Carlsberg	47,0%	23,2%	15,3%
AB InBev	57,5%	34,8%	15,6%
Diageo	60,4%	35,5%	29,1%
Molson Coors	39,4%	19,7%	12,1%
Average	57,4%	31,4%	13,8%

Fig.60: Industry companies' margins
Source: Heineken Annual Report

Heineken had a strong year in 2018 and 2019 on most of the regions it possesses operations, followed by a major downfall on all locations in the year 2020 caused by the Covid-19 pandemic. It is observable the negative impacts on the company's revenue, where Europe, a consolidated Heineken market had its proceeds fall by 18,8% (Fig.50), the most out of all major areas. Governments throughout the world enforced a global lockdown to prevent the spread of the virus; consequences to this action include, but not limited to, social encounters drastically being reduced and beer customers relocating their monthly budget to essential products. On the subsequent year, past the most critical moment of the pandemic, the authorities started slowly returning to the status pre Covid-19. The largest increase of 2021 was on the Americas, supported mostly the Heineken 0.0 on Brazil, Mexico and the USA, however none of the regions managed to recover to the previously achieved revenue of 2019. The Asia Pacific area had a mere 2,1% increase in revenue mainly due to a lengthy lockdown throughout the year on Vietnam, one of the main Asian markets for Heineken.

Margins Analysis

The gross profit margins practiced by Heineken have been above their competitors for the last four years (Fig.67) but has decreased by 0,7% every year since. On contrast the high EBITDA margin has always been AB InBev characteristic, with the company performing in line with the sector average on the past months and overcoming this value in the latest year (29,4% vs 25,5% according to CSI Market). It is noteworthy to mention that Diageo has a slightly higher EBITDA margin to AB InBev in 2021 (35,5% vs 34,8%), something which has never happened in the recent past; after removing depreciation and amortisation numbers, we can see a large gap between these two companies (29,1% vs 15,6%). Heineken locates itself in between them both, standing at 20,4% EBIT margin. In 2020, the year when the pandemic became a public health issue, Heineken had a negative net result margin of -0,4%, which is distinctive from three of its four peers, Carlsberg, AB InBev, and Diageo, all

having positive values from it. In 2021, Heineken improved this margin, outperforming Carlsberg, and AB InBev.

Returns Analysis

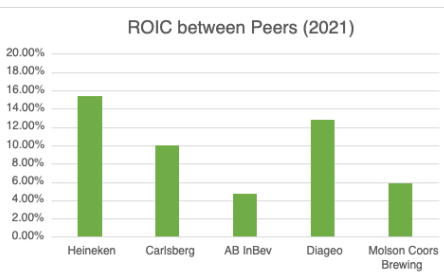


Fig.61: ROIC between peers
Source: Morningstar Operating Performances

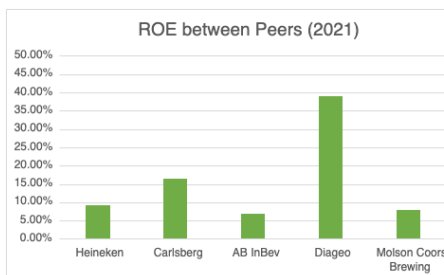


Fig.62: ROE between peers
Source: Morningstar Operating Performances

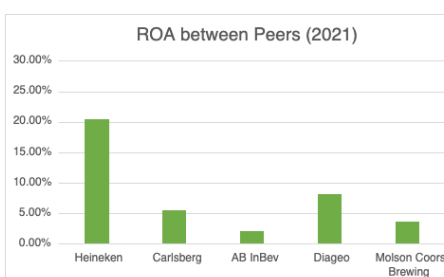


Fig.63: ROA between peers
Source: Morningstar Operating Performances

Heineken's ROIC, historically, has always been in line with the industry average, with a few outliers. In the past two years this has changed, in 2020, where the ROIC had a negative value (-5,92%), the reason can be explained due to the global complications caused by Covid-19, which harshly decreased the sector's performance. In 2021, the company's ROIC was above its competitors, showing signs of recovery and strength while returning to invest after a terrible year. The increase in the NOPLAT (by 4,0x) contributed to this significant change. In addition, Heineken is creating value since its ROIC (8,1%) is above the cost of capital (5,33%).

When considering the previous values of the ROE of Heineken, it has always maintained at a 15% level. In 2020, the pandemic year, it has dropped to a negative value, due to operating profits being negative; its peers had a similar behaviour during the same period, except for Diageo. In the latest year, it has increased to over 20%, mostly due to the "other income" section, which include a gain on equity on the United Breweries Limited (acquired in July 2021) and a change in taxation regarding the Brazilian legislation. Both, together with other minor changes, generated an increase of € 1,521 million on the operating profits of 2021. Excluding this value from the income statement, the ROE value is 10.2%, below the company's average. When analysing even more this value, it is possible to see that the main reason of this reduced value is due to an increase in equity; differently from the loss in 2020, in the latest year the company generated profit, a difference of € 3,372 million, making the equity value increase significantly in relation to the previous years. The average value of the ROE recorded on the alcoholic beverages industry was 14.85% during the last quarter of 2021, which indicates that Heineken has always been close to the sector average, apart from the past two years. Earlier in 2021, the Dutch company managed to efficiently generate more cash in relation to some of its peers such as Molson Coors and AB InBev, with the latter being three times larger in equity.

In 2021, it is possible to observe how Heineken has a high ROA (20,37%, Fig.54). Excluding the year of 2020, the ROA has always been above its main peers. When compared to Diageo, it represents almost 2,5x its value. AB InBev and Carlsberg managed to achieve higher NOPLAT results in 2021, however, their assets value is much higher than that of Heineken, resulting in this large percentile difference.

Forecasts

Revenues

Heineken Volume CAGR	2021-25	2025-31	2021-31
EUROPE	1.00%	0.22%	0.72%
AMERICAS	1.94%	0.74%	1.38%
Latin America	2.99%	1.12%	2.12%
North America	0.37%	0.13%	0.27%
AME	0.29%	2.08%	1.51%
Africa, Middle East	3.98%	3.03%	3.46%
Eastern Europe	0.93%	0.85%	0.94%
ASIA PACIFIC	2.39%	1.00%	3.64%

Fig.64: Heineken Volume CAGR
 Source: Heineken Annual Report, Personal Estimates

Heineken Revenue CAGR	2021-31
Europe	2.39%
Americas	3.77%
AME	3.47%
Asia Pacific	6.08%
Total Net Revenues	3.59%

Fig.65: Heineken Revenue CAGR
 Source: Heineken Annual Report, Personal Estimates

Revenues were estimated per region considering the company's operating segments: Europe; Americas; Africa, Middle East, and Eastern Europe; Asia Pacific. It was used a top-down approach, were firstly it was forecasted the total market of beer per region and Heineken's market share per region, in order to find Heineken's volume. Afterwards, revenues were obtained by multiplying the volume by the price per million hectolitres. Heineken is already taking advantage of market premiumization, consumers' preference shifting towards low and non-alcoholic beers and craft beers. Considering Heineken decreases its ability to grow in the long run, we applied a decreasing factor when estimating the future market share. Regarding the volume estimation, we took a more conservative position than the market due to the current macro scenario - high inflation and the conflict in Eastern Europe - that will have impact in consumers' disposable income and consequently their consumption. Prices were estimated considering the local real growth and the expected inflation of the reporting currency (euro). In FY22, inflation is expected to be 5,1%, decreasing to 2,2% in FY23, and stabilizing in 1,9% from FY24 onwards.

Asia Pacific and Africa & Middle East are the markets expected to grow more volume wise: 3,64% and 3,46%, respectively, during the forecasted period. Asia is expected to be the fastest growing market in terms of revenues (6,08% until FY31), growing from 12,6% of net revenues in FY21 to 15,97% in FY 31. Although Europe has been decreasing its weight on revenues (it represented 43% of net revenues in FY21 and is expected to represent 39% in FY31), it will continue to be the principal market of Heineken. All in all, Heineken's revenues are expected to grow 3,59% until FY31.

Operating expenses

Heineken's most representative operating expenses are cost of goods sold, representing 38,3% of operating expenses in 2021. COGS are expected to continue its upward trend, experiencing a significant increase in 2022 and 2023. Alongside with the higher rising demand for premium products, which requires using more expensive ingredients in the production of beer, the rise of inflation, and the energy crises have been strongly affecting the price of raw materials, namely barley – a key ingredient for beer production. Furthermore, as stated previously, Russia and Ukraine are important exporters of cereals. With the current conflict, crops might be in danger, reducing the production of barley,

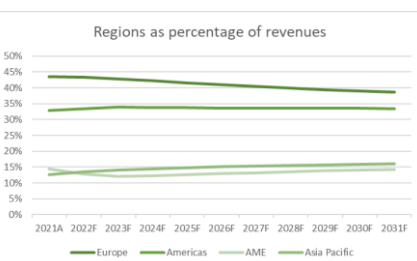


Fig.66: Regions' weights on net revenues
 Source: Heineken Annual Report, Personal Estimates

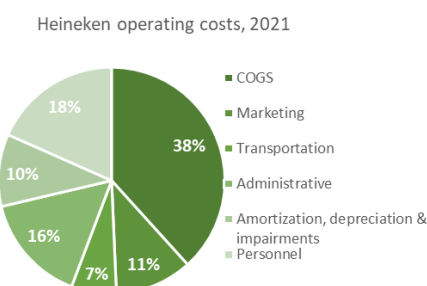


Fig.67: Operating costs, 2021
 Source: Heineken Annual Report

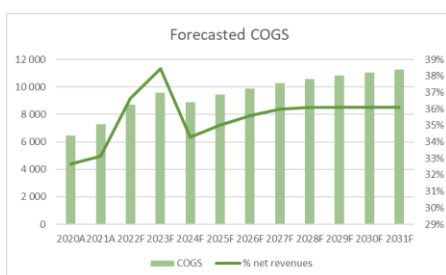


Fig.68: Forecasted COGS

Source: Heineken Annual Report, Personal Estimates

which increases prices even more, and consequently the costs of raw materials for Heineken. In fact, Heineken's CEO announced that is expected a 15% increase in costs. Hence, Gross Margin will decrease in the short term due to Heineken's inefficiencies in its cost structure. Even though it is uncertain how long the conflict will last and its impacts in the financial market, inflation is expected to decrease in FY24 below the ECB's target of 2%, hence we believe the price of raw materials will decrease to accommodate the stabilization of prices. From 2025 onwards, COGS are expected to continue to increase as Heineken's portfolio changes more towards premium brands, but at a more moderate rate, stabilizing at 36,10% of net revenues. As revenues continue to increase, Gross Margin is expected to recover from FY24 onwards at similar rates as sales (although never reaching the FY21 value due to the increase in COGS), stabilizing at 63,9% in the long term.

Given the uncertainty of the crude oil and energy in financial markets, transportation expenses are expected to increase 25% and 15% in FY22 and FY23, respectively. We believe that from FY24 onwards, as the conflict in Eastern Europe eases and financial market stabilizes, crude oil and energy prices will start to fall, decreasing the weight of transportation expenses in net revenues.

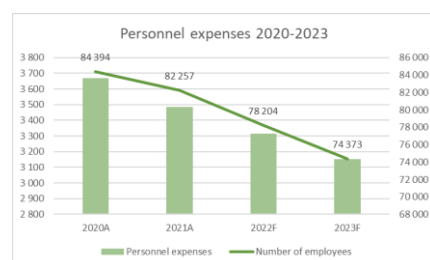


Fig.69: Forecasted Personnel Expenses

Source: Heineken Annual Report, Personal Estimates

Although the high regulation in the alcoholic beverages industry, Heineken is planning to continue to increase the investment in marketing, mainly in the short term in order to increase sales to the pre-pandemic values. For this, Heineken is using more often data analytics tools to reach the target market and increase the returns of its campaigns more easily. From FY24 onwards, marketing expenses will continue to increase but in line with the percentage registered before the pandemic. Lastly, through the program EverGreen, Heineken since 2020 has been reducing the workforce globally, with the aim of reducing 8000 employees until 2023. Furthermore, with the expected closure of operations in Russia due to the decision of leaving the country, in FY23 the workforce will decline 1800, adding to the pre-determined number of employees to lay off. Nonetheless, as sales are expected to increase at a CAGR of 2,48% from FY25 to FY31, we expect the number of employees to increase in order to sustain sales growth.

CAPEX

Capital Expenditures is related to PP&E and Intangible Assets. Since PP&E depends on the volume produced, this caption was estimated as a % of net revenues. Heineken is being very active in M&A activities, acquiring important brands in each geographic segment and investing in the expansion of its principal brand. The PP&E in 2022 was estimated mainly taking into consideration the

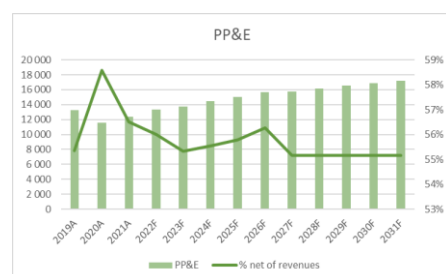


Fig.70: Forecasted Heineken PP&E

Source: Heineken Annual Report, Personal Estimates

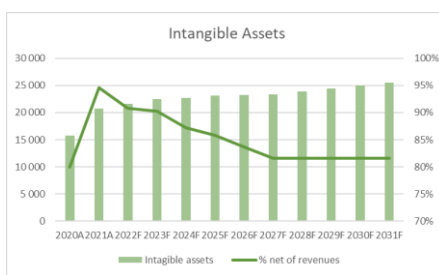


Fig.71: Forecasted Heineken Intangible Assets
 Source: Heineken Annual Report, Personal Estimates

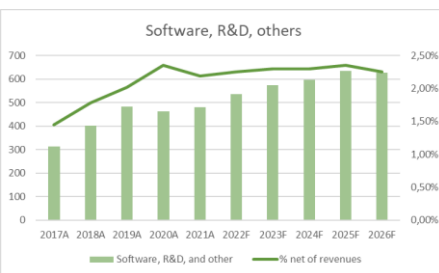


Fig.72: Forecasted Heineken Software, R&D and others
 Source: Heineken Annual Report, Personal Estimates

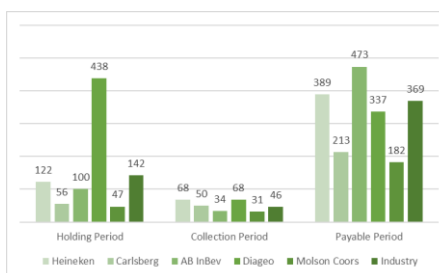


Fig.73: Industry Average Holding, Collection and Payable Period
 Source: Heineken Annual Report

expansion in Africa with the acquisition of Distell and Namibia Breweries Limited. However, due to the closure of operations in Russia until the end of FY22, following the example of other western companies, we were more conservative in the projection of PE&E expansion in FY22. In the long term, we expect PP&E will involve in line with the past.

Regarding the Intangible Assets, considering the evolution of the E-Commerce, we expect Heineken will continue to invest in its online platform and in data analytical tools to support their target-oriented marketing, since, as stated previously, this online alcoholic market is expected to grow 66%. Heineken's competitors are also investing heavily in the digital, so we believe Heineken will follow this trend in order to sustain its market position.

From FY27 onwards, as the company is stabilizing, we estimate the Intangible Assets as the average of 5 last historical years.

Net Working Capital

Firstly, operating cash was considered to represent 2% of net revenues, hence since net revenues are expected to increase during the forecasted period, operating cash will follow that trend. Heineken's continuous negative and decreasing Working Capital indicates that the company has been able to efficiently manage its Cash Conversion Cycle (CCC), being above the industry average only behind AB InBev, in 2021. Hence, we believe this trend will continue. We expected a longer inventory holding period due to portfolio shifts towards premium products that requires longer period of maturation. Heineken's holding period lies between the AB InBev and Diageo holding periods. Regarding the collection period, Heineken is above the industry, holding the second longest receivable period, only behind Diageo. Since its peers have been decreasing the collection period, we think reasonable to assume that Heineken will follow this trend, however without reaching the values of its rivals. On payables, the industry has been taking more time to pay to the suppliers, which reveals the strong bargaining power of these big companies over their suppliers. Heineken is above the industry average and holds the 2nd position, only behind AB InBev. We believe Heineken's payable period will continue to increase but still below AB InBev's payable period.

Valuation

Discount Rates

The weighted average cost of capital (WACC) was obtained from the estimation of cost of equity (Re), cost of debt (Rd), and the target Debt-to-Equity ratio (D/E).

Re	6,09%
β_e	0,85
Adjusted β_e to future D/EV	1,02
Risk-free rate (10Y Dutch Government Bond)	1,013%
Market Risk Premium	5%
Rd	3,38%
β_d	0,474
Recovery Rate	51%
Actual Rating (Moody's)	Baa1
Probability of default	0,24%
Default rate	2,93%
Yield to Maturity (YTM)	3,50%
Tax Rate	25%
Market Cap (million €)	56 900
Net Debt in 2021	16 501
D/EV	0,22
D/E target	0,27
E/(D+E)	0,79
D/(D+E)	0,21
β_u	0,90
WACC	5,33%
Unlevered cost of capital	5,51%

Fig.74: Discount Rates
 Source: Heineken Annual Report, Personal Estimates

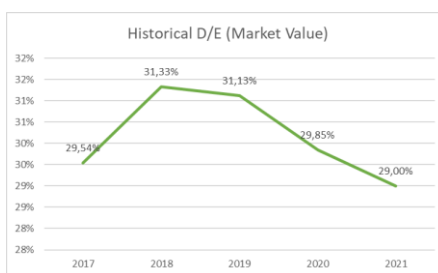


Fig.75: Historical D/E
 Source: Heineken Annual Reports

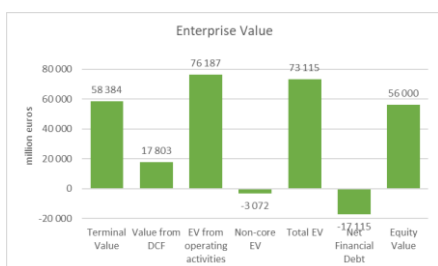


Fig.76: Heineken Enterprise Value
 Source: Heineken Annual Report, Personal Estimates

The cost of equity of 6,09% was estimated based the CAPM model. The 10-year Dutch Government Bond was used as proxy for the risk-free rate and the Market Risk Premium was based on the KPMG Netherlands Research published in December 2021. Regarding the levered Beta, we regressed Heineken's monthly historical returns against the STXE 600, a well-diversified index as a proxy of the European market. It was obtained a beta of 0,85 with a 95% confidence interval from 0,7 to 1 meaning that the company is less cyclical than the market. Afterwards, the Beta was unlevered, and it was compared to its peers, reaching to an industry average value of 0,8. However, we assumed a value of 0,9 due to the great exposition of Heineken to the current conflict in Eastern Europe. The beta was then relevered assuming a D/E of 27%.

The cost of debt (3,38%) was computed by subtracting Heineken's probability of default (PD) times the loss given default (LGD) from the company's outstanding bonds (with 12 years to maturity and a face value of €500M). Heineken was assigned a credit rating Baa1 by Moody's. By basing in Moody's "Annual default study: After a sharp decline in 2021, defaults will rise modestly this year", we estimated the PD and LGD assuming the bonds were senior unsecured.

The capital structure was based on the debt and equity market values, using the book value of Heineken's net financial assets and on the market capitalization from the Annual Reports, respectively. D/E has been decreasing, so it was assumed it would continue to decline, assuming a value of 27%.

DCF Analysis

The Enterprise value was obtained through the Discounted Cash Flow Model at a WACC of 5,33%. In FY22, ROIC has a value of 7,2%, which is higher than the WACC, meaning that the company is managing its resources efficiently and is creating value. ROIC is projected to slightly decrease in FY22 and FY23 compared to FY21, due to higher capital intensity. From FY 24 onwards, ROIC is expected to increase, stabilizing at 9,5% in FY31. The company reaches to the steady state in FY30-31, year at which core result stabilizes at 2,4%, under a 25% reinvestment rate. From FY31 onwards it was used a perpetuity with a perpetual growth of 2,4%. Beer market will be more saturated in the long term, meaning it will be difficult to outperform the market. Hence, we believe a perpetual growth of 2,4% is reasonable given the nominal growth GDP in 2030 is projected to be 4,2%. The Core Enterprise Value was obtained by summing the discounted free-cash flow during the forecasted period and the terminal value, reaching to a value of €76 465 million. The Equity Value (€56 278 million) was reached by adding the Non-Core Value (€3 072 million) and subtracting the Net Financial Assets (€17 115 million). Dividing the Equity Value by the number of

Target stock price @ Dec 2022	97,29 €
Current stock price @ May 2022	92,60 €
Capital Gain	5,06%
Dividend	0,57 €
Return	5,68%
Recommendation	HOLD
Trigger price to BUY	101,29 €
Trigger price to SELL	92,03 €

Fig.77: Heineken Recommendation
 Source: Personal Estimates

Price	Market Risk Premium					
	97,29	4,8%	5%	5,50%	6,0%	6,50%
Rf	0,996%	106,73	98,05	80,42	66,93	56,28
	0,967%	108,24	99,38	81,41	67,70	56,90
	1,011%	105,97	97,38	79,91	66,53	55,96
	1,013%	105,86	97,29	79,84	66,48	55,92
	1,038%	104,61	96,18	79,01	65,83	55,40

Fig.78: Market Risk Premium
 Source: Personal Estimates

Price	g					
	97,29	2,0%	2,2%	2,4%	2,6%	2,8%
W	4,7%	117,77	123,87	131,01	139,50	149,74
A	5,0%	102,57	107,06	112,23	118,25	125,36
C	5,3%	90,11	93,47	97,29	101,67	106,74
C	5,6%	79,71	82,26	85,12	88,36	92,06
	5,9%	70,90	72,84	75,01	77,44	80,18

Fig.79: WACC
 Source: Personal Estimates

Company	EV/EBITDA	P/E	EV/Revenue	EV/EBIT
Heineken	13,8x	16,3x	3,0x	18,6x
AB InBev	11,0x	24,9	3,6x	13,6x
Carlsberg	11,6x	21,2x	2,5x	15,7x
Diageo	21,2x	28,3x	6,9x	22,3x
Molson Coors Brewing	7,8x	10,9x	1,8x	10,6x
Asahi Group Holdings	11,9x	15,4x	1,8x	18,8x
The Boston Beer Company	36,2x	319,8x	2,3x	84,3x
Average	12,1x	19,5x	2,9x	16,6x
Median	11,8x	18,8x	2,8x	17,2x

Fig.80: Heineken and Peers Multiples Valuation
 Source: Bloomberg

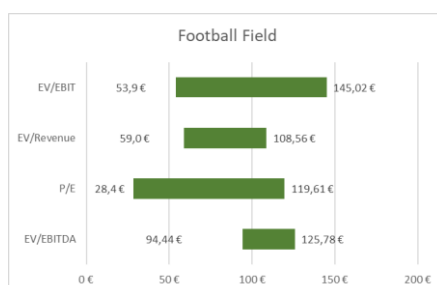


Fig.81: Heineken Football Field
 Source: Personal Estimates

outstanding shares in 2021 (576 million), we obtain a target price per share of €97,29. The recommendation on Heineken is to "HOLD", given that holding the stock only provides a capital gain of 5,68%.

Sensitivity Analysis

We performed a sensitivity analysis in order to assess the impact of small changes in the parameters used to estimate the WACC, since they will influence the company's share price.

Firstly, we analysed the impact of the Market Risk Premium and the Risk-Free rate. MRP is a highly sensitive input. A MRP higher than the current 5% would change our recommendation from a HOLD to a SELL (since the share price would be lower than the current share price), while if MRP is lower than 5%, we would recommend a BUY, regardless the risk-free used. On the other hand, if consider as proxy for the risk-free rate a Dutch bond with 15, 20, 25 or 30 years to maturity instead of 10 years and keep the current MPR, our recommendation would be still a HOLD, since the share price would be above the current share price but below the trigger price to change the recommendation. Thus, what impacts the most the value of the company is the MRP.

Afterwards, we performed a sensitivity analysis on the WACC and on the perpetual growth rate. Our terminal value represents 77% of the Enterprise Value, meaning that most of the company's value comes from the perpetual growth. If we only change the perpetuity growth rate, the share price ranges from €90,54 to €107,29 which would change our recommendation to a SELL if the perpetuity growth rate were 2% and to a BUY if the perpetuity growth rate is above 2,4%. If we change the WACC and keep the perpetuity growth rate at 2,4%, the share price can assume a wider range. This means that the cost of capital has a stronger impact on the share price. An increase in the WACC would imply a SELL, regardless of the perpetuity growth rate.

Multiples Valuation

We performed a relative valuation as an auxiliary tool for Heineken's valuation. The multiples used were EV/EBITDA, EV/EBIT and EV/ Revenues. The peer group considered were chosen based on the companies' sizes (if they have a significant market share in the beer industry) and if they are present in the same geographical regions as Heineken. We analyzed the peer group minimum, maximum and average multiples, excluding the outliers of the sample. Relying on the EV-multiples, the target share price, using the average, is €96,15 reinforcing our recommendation: HOLD.

Appendix

Financial Statements

Forecasted Income Statement (million €)	2020A	2021A	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
CORE ACTIVITIES												
Net Operatig Revenues	19 715	21 941	23 778	24 897	25 968	26 961	27 827	28 596	29 300	29 992	30 607	31 234
Europe Net Revenues	8 631	9 530	10 306	10 670	10 971	11 202	11 405	11 553	11 681	11 809	11 939	12 071
Americas Net Revenues	6 319	7 226	7 954	8 454	8 776	9 100	9 365	9 611	9 839	10 057	10 255	10 457
AME Net Revenues	2 774	3 164	3 024	3 001	3 205	3 412	3 599	3 783	3 962	4 140	4 294	4 452
ASIA PACIFIC Net Revenues	2 707	2 765	3 226	3 505	3 749	3 980	4 191	4 382	4 552	4 719	4 851	4 987
Head office & others	-716	-744	-733	-733	-733	-733	-733	-733	-733	-733	-733	-733
COGS	-6 439	-7 269	-8 710	-9 576	-8 907	-9 436	-9 907	-10 295	-10 577	-10 827	-11 049	-11 275
Gross Profit	13 276	14 672	15 068	15 321	17 061	17 524	17 921	18 302	18 723	19 165	19 558	19 958
Selling, general and administrative expenses	-6 011	-6 266	-7 025	-7 910	-8 353	-8 349	-8 348	-8 569	-8 786	-9 009	-9 193	-9 381
Marketing and selling expenses	-2 044	-2 091	-2 561	-2 991	-2 986	-2 966	-3 019	-3 071	-3 146	-3 221	-3 287	-3 354
Transport expenses	-1 080	-1 222	-1 523	-1 754	-1 740	-1 699	-1 539	-1 581	-1 620	-1 659	-1 693	-1 727
Energy and Water	-476	-529	-659	-759	-753	-701	-710	-752	-776	-810	-826	-843
Repair and maintenance	-474	-503	-550	-576	-600	-623	-643	-661	-677	-693	-708	-722
Other expenses	-1 937	-1 921	-1 732	-1 830	-2 274	-2 360	-2 436	-2 504	-2 565	-2 626	-2 680	-2 735
Personnel expenses	-3 669	-3 485	-3 313	-3 151	-3 189	-3 237	-3 289	-3 351	-3 409	-3 467	-3 526	-3 586
Amortisation, depreciation and imparments	-2 874	-1 959	-1 467	-1 518	-1 589	-1 657	-1 725	-1 738	-1 780	-1 822	-1 860	-1 898
Core Result Before Taxes (EBIT)	722	2 962	3 262	2 742	3 929	4 282	4 559	4 644	4 748	4 868	4 979	5 094
Statutory Taxes	181	741	816	686	982	1 070	1 140	1 161	1 187	1 217	1 245	1 273
Nominal weighted tax rate	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%
Tax Adjustments	242	109	170	170	170	170	170	170	170	170	170	170
Core result	300	2 113	2 277	1 887	2 778	3 042	3 250	3 313	3 391	3 481	3 565	3 651
Non-core activities												
Other Income	56	1 521	378	378	378	378	378	378	378	378	378	378
Interest income	50	49	63	63	63	63	63	63	63	63	63	63
Other net finance expenses	-143	14	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
Non-Core Result Before Taxes	-37	1 584	366	366	366	366	366	366	366	366	366	366
Statutory Taxes	-9	396	92	92	92	92	92	92	92	92	92	92
Nominal weighted tax rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Tax Adjustments	-44	-331	0	0	0	0	0	0	0	0	0	0
Other Comprehensive Income	-2 016	1 340	-342	-342	-342	-342	-342	-342	-342	-342	-342	-342
Share of profit/loss of associates and joint ventures	-31	250	134	134	134	134	134	134	134	134	134	134
Non-core result	-2 031	3 109	66	66	66	66	66	66	66	66	66	66
Financial Operations												
Interest expense	-497	-462	-514	-450	-445	-441	-412	-370	-310	-279	-239	-204
% Borrowings from previous year	-2,91%	-2,54%	-3,05%	-3,05%	-3,05%	-3,05%	-3,05%	-3,05%	-3,05%	-3,05%	-3,05%	-3,05%
Financial Result Before Taxes	-497	-462	-514	-450	-445	-441	-412	-370	-310	-279	-239	-204
Statutory Taxes	-124	-116	-128	-112	-111	-110	-103	-92	-77	-70	-60	-51
Nominal weighted tax rate	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%	25,00%
Non-controlling interests	23	313	313	313	313	313	313	313	313	313	313	313
% non-controlling interests	2,30%	13,35%	13,35%	13,35%	13,35%	13,35%	13,35%	13,35%	13,35%	13,35%	13,35%	13,35%
Financial result	-396	-660	-698	-650	-647	-643	-622	-590	-545	-523	-492	-466
Total Comprehensive income/(loss)	-2 127	4 562	1 645	1 303	2 197	2 464	2 694	2 789	2 912	3 025	3 139	3 251

Cash Flow Map (million €)	2020A	2021A	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Core Result	300	2 113	2 277	1 887	2 778	3 042	3 250	3 313	3 391	3 481	3 565	3 651
Core Invested Capital	26 086	31 607	32 715	33 486	34 896	35 632	36 107	35 972	36 893	37 489	38 257	39 040
Change in Core Invested Capital	-3 890	5 520	1 108	771	1 410	736	475	-134	921	596	768	784
Core Free Cash Flow	4 190	-3 408	1 169	1 116	1 367	2 306	2 775	3 447	2 471	2 886	2 797	2 867
Non Core Result	-2 031	3 109	66	66	66	66	66	66	66	66	66	66
Non Core Invested Capital	2 977	2 250	3 072	3 124	3 209	3 267	3 235	3 207	3 182	3 157	3 135	3 113
Change in Non Core Invested Capital	-159	-727	822	52	85	58	-32	-28	-25	-25	-22	-22
Non Core Free Cash Flow	-1 872	3 836	-756	14	-19	8	98	95	91	91	88	89
Total Free Cash Flow	2 318	428	413	1 130	1 348	2 314	2 873	3 542	2 562	2 976	2 885	2 955
Financial Result	-396	-660	-698	-650	-647	-643	-622	-590	-545	-523	-492	-466
Change in net debt/other claims	-1 294	829	614	-154	-152	-931	-1 389	-1 975	-997	-1 335	-1 138	-1 189
Change in equity	-2 755	3 964	1 316	977	1 648	1 725	1 832	1 813	1 893	1 906	1 883	1 950
Comprehensive income	-2 127	4 562	1 645	1 303	2 197	2 464	2 694	2 789	2 912	3 025	3 139	3 251
Financing Free Cash Flow	-2 318	-428	-413	-1 130	-1 348	-2 314	-2 873	-3 542	-2 562	-2 976	-2 885	-2 955

Forecasted Balance Sheet (million €)	2020A	2021A	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Core Activities												
Operating Cash	475	532	476	498	519	539	557	572	586	600	612	625
Inventories	1 958	2 438	2 864	3 096	2 904	3 076	3 284	3 413	3 564	3 649	3 723	3 800
Trade and Other Receivables	2 807	3 662	4 300	4 502	4 624	4 727	4 727	4 779	4 897	4 766	4 864	4 963
Trade and Other Payables	-6 107	-7 750	-9 283	-10 284	-9 639	-10 264	-10 775	-11 254	-11 563	-11 865	-12 109	-12 357
PP&E	11 551	12 401	13 313	13 775	14 425	15 038	15 660	15 771	16 159	16 541	16 880	17 226
Land and buildings	4 456	4 775	5 374	5 477	5 666	5 931	6 150	6 240	6 393	6 544	6 678	6 815
Plant and machinery	3 850	4 051	4 161	4 432	4 778	4 934	5 148	5 290	5 421	5 549	5 662	5 778
Other equipment, fixtures and fittings	1 700	1 687	1 829	2 066	2 207	2 346	2 477	2 304	2 360	2 416	2 465	2 516
Under construction	600	1 005	1 094	1 145	1 091	1 118	1 154	1 186	1 215	1 243	1 269	1 295
Right of use assets	945	883	856	655	683	709	732	752	771	789	805	822
Loans and advances to customers	194	209	226	237	247	257	265	272	279	286	292	298
Returnable packaging deposits	-454	-476	-579	-606	-632	-656	-677	-696	-713	-730	-745	-760
Intangible assets	15 767	20 762	21 587	22 466	22 654	23 129	23 288	23 343	23 917	24 482	24 984	25 495
Goodwill	10 678	11 810	11 889	12 199	12 335	12 672	13 079	-	-	-	-	-
Brands	3 143	7 004	7 609	8 091	8 050	8 088	7 792	-	-	-	-	-
Customer related intangibles	869	820	888,65	930,46	970,49	1007,60	1039,99	-	-	-	-	-
Contract Based intangibles	614	648	665,78	672,21	701,13	727,94	751,34	-	-	-	-	-
Software, R&D, and other	463	480	535,00	572,62	597,26	633,58	626,12	-	-	-	-	-
Current tax liabilities	-105	-171	(190)	(198)	(207)	(215)	(222)	(228)	(234)	(239)	(244)	(249)
Core Invested Capital	26 086	31 607	32 715	33 486	34 896	35 632	36 107	35 972	36 893	37 489	38 257	39 040
Non Core Activities												
Post-retirement obligations	-938	-668	-635	-635	-605	-607	-609	-612	-613	-614	-616	-617
Provisions	-1 104	-937	-937	-937	-937	-937	-937	-937	-937	-937	-937	-937
Investments in associates and joint ventures	4 437	4 148	4 484	4 574	4 666	4 759	4 759	4 759	4 759	4 759	4 759	4 759
Derivative assets	25	50	39	39	39	39	39	39	39	39	39	39
Deferred tax liabilities	-220	-1 289	(804)	(842)	(878)	(912)	(941)	(967)	(991)	(1 015)	(1 035)	(1 057)
Other non-current assets	753	929	925	925	925	925	925	925	925	925	925	925
Assets classified as held for sale	24	17	0	0	0	0	0	0	0	0	0	0
Non Core Invested Capital	2 977	2 250	3 072	3 124	3 209	3 267	3 235	3 207	3 182	3 157	3 135	3 113
Financial Activities												
Excess cash	3 525	2 716	0	0	0	0	0	0	0	0	0	0
Borrowings	18 196	16 873	14 771	14 617	14 464	13 533	12 145	10 169	9 172	7 838	6 700	5 511
Non-controlling interests	1 000	2 344	2 344	2 344	2 344	2 344	2 344	2 344	2 344	2 344	2 344	2 344
Net Financial Assets	-15 671	-16 501	-17 115	-16 961	-16 808	-15 877	-14 489	-12 513	-11 516	-10 182	-9 044	-7 855
Equity	13 392	17 356	18 672	19 649	21 296	23 022	24 853	26 666	28 559	30 464	32 348	34 298

Revenues (In millions of €)	2020A	2021A	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
EUROPE												
Industry beer volume (million hl)	267	278	286	290	293	295	297	298	298	298	299	299
Competitors market share	71,94%	72,15%	72,15%	72,15%	72,15%	72,15%	72,15%	72,15%	72,15%	72,15%	72,15%	72,15%
Heineken market share	28,06%	27,85%	27,85%	27,85%	27,85%	27,85%	27,85%	27,85%	27,85%	27,85%	27,85%	27,85%
Heineken volume	75	78	80	81	82	82	83	83	83	83	83	83
Average selling price per hl (€)	115	123	129	132	134	136	138	139	141	142	143	145
Europe Net Revenues	8 631	9 530	10 306	10 670	10 971	11 202	11 405	11 553	11 681	11 809	11 939	12 071
% of total	43,8%	43,4%	43,3%	42,9%	42,2%	41,6%	41,0%	40,4%	39,9%	39,4%	39,0%	38,6%
AMERICAS												
Industry beer volume (million hl)	572	592	613	632	643	649	656	661	666	670	674	679
Competitors market share	86,17%	85,58%	85,43%	85,30%	85,30%	85,19%	85,10%	85,01%	84,93%	84,86%	84,81%	84,81%
Heineken market share	13,83%	14,42%	14,57%	14,70%	14,70%	14,81%	14,90%	14,99%	15,07%	15,14%	15,19%	15,19%
Heineken volume	79	85	89	93	95	96	98	99	100	101	102	103
Average selling price per hl (€)	80	85	89	91	93	95	96	97	98	99	100	101
Americas Net Revenues	6 319	7 226	7 954	8 454	8 776	9 100	9 365	9 611	9 839	10 057	10 255	10 457
% of total	32,1%	32,9%	33,5%	34,0%	33,8%	33,8%	33,7%	33,6%	33,6%	33,5%	33,5%	33,5%
AFRICA, MIDDLE EAST & EASTERN EUROPE												
Industry beer volume (million hl)	372	375	337	322	332	340	349	356	363	370	378	385
Competitors market share	89,34%	89,62%	89,52%	89,36%	89,16%	88,97%	88,80%	88,65%	88,51%	88,38%	88,27%	88,26%
Heineken market share	10,66%	10,38%	10,48%	10,64%	10,84%	11,03%	11,20%	11,35%	11,49%	11,62%	11,73%	11,74%
Heineken volume	40	39	35	34	36	38	39	40	42	43	44	45
Average selling price per hl (€)	70	81	86	87	89	91	92	94	95	96	97	98
AME Net Revenues	2 774	3 164	3 024	3 001	3 205	3 412	3 599	3 783	3 962	4 140	4 294	4 452
% of total	14,1%	14,4%	12,7%	12,1%	12,3%	12,7%	12,9%	13,2%	13,5%	13,8%	14,0%	14,3%
ASIA PACIFIC												
Industry beer volume (million hl)	643	650	692	712	728	743	755	764	770	776	782	789
Competitors market share	95,63%	95,48%	95,30%	95,15%	95,02%	94,92%	94,84%	94,77%	94,71%	94,67%	94,67%	94,67%
Heineken market share	4,37%	4,52%	4,70%	4,85%	4,98%	5,08%	5,16%	5,23%	5,29%	5,33%	5,33%	5,33%
Heineken volume	28	29	33	35	36	38	39	40	41	41	42	42
Average selling price per hl (€)	96	94	99	101	103	105	108	110	112	114	116	119
ASIA PACIFIC Net Revenues	2 707	2 765	3 226	3 505	3 749	3 980	4 191	4 382	4 552	4 719	4 851	4 987
% of total	13,7%	12,6%	13,6%	14,1%	14,4%	14,8%	15,1%	15,3%	15,5%	15,7%	15,8%	16,0%
Head office & others												
	-716	-744	-733	-733	-733	-733	-733	-733	-733	-733	-733	-733
	-3,6%	-3,4%	-3,1%	-2,9%	-2,8%	-2,7%	-2,6%	-2,6%	-2,5%	-2,4%	-2,4%	-2,3%
Total Net Revenues	19 715	21 941	23 778	24 897	25 968	26 961	27 827	28 596	29 300	29 992	30 607	31 234

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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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