

HEINEKEN N.V.*BREWERY INDUSTRY*

STUDENT: DUARTE LOPES PINTO

COMPANY REPORT

2 JANUARY 2018

27192@novasbe.pt

Global Premiumtization*Increasing footprint while increasing value*

- Heineken's strategy and positioning converge with the global trend of premiumtization and globalization. The consumption of premium beer increased 3%, while the general beer market decreased 0.4% in 2016.
- The company is well positioned to take advantage of the increasing trend for market consolidation (in 2015 top 10 players were accountable for 57.3% of the world's volume, while in 2016 67.3%), offering good growth perspectives for the coming years.
- Currency fluctuations, particularly in emerging markets, are a treat to revenue growth.
- Europe: A mature market with declining volumes, shows signs of a shift towards premium categories. Being Heineken the most sold beer in Western Europe.
- Africa: Beer consumer base is increasing, however in Heineken's main market, Nigeria, the company registered a loss in volume share. Nevertheless, the outlook is favourable (11% CAGR until 2023)
- Asia: Southeast Asia is an opportunity not only because consumer base is increasing but also because there is an increase of premiumtization. Nevertheless, there is risk resulting from increasing competition in the area.
- Americas: Mexican brands, cider and Lagunitas had, last year, a healthy performance in the US, but the market is showing signs of stagnation. In Mexico, the increase of competition leveraged by recent legislation, could result in a price decrease or a loss of volume share.

Company description

Heineken is the biggest brewing company in Europe and 2nd on a worldwide basis. It has local operations in more than 70 countries in all continents and sells to more than 170 countries.

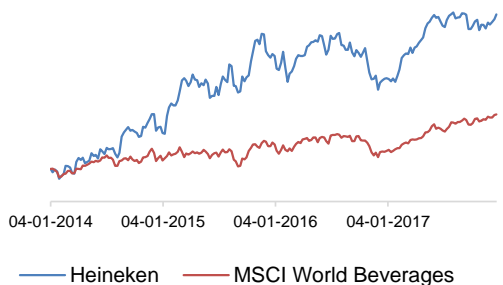
Recommendation: BUY**Price Target FY18: 99,85 €****Price (as of 3-Jan-18) 86.48 €**

Bloomberg: Heia

52-week range (€) 67.95-89.71

Market Cap (€m) 50515.43

Outstanding Shares (m) 576



Source: Bloomberg

(Values in € millions)	2016	2017E	2018F
Revenues	20792	22.717	24.065
Rev. Growth	1%	9%	6%
EBITDA	4.722	5.095	5.389
EBITDA Margin	23%	22%	22%
Net Profit	1.540	2.051	2.214
EPS(€)	2,67	3,60	3,87
ROIC	7%	8%	9%
EV / EBITDA	14,6x	13,7x	13,5x

Source: Company data, Bloomberg, Nova Research Team

THIS REPORT WAS PREPARED EXCLUSIVELY FOR ACADEMIC PURPOSES BY [INSERT STUDENT'S NAME], A MASTERS 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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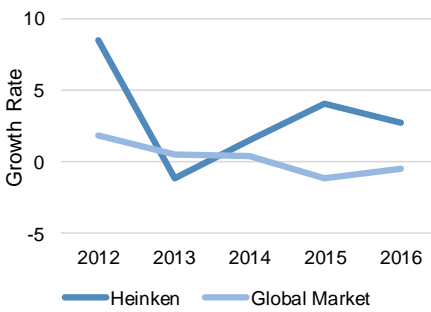
Company overview

Figure 1 : Top 10 Companies' Volume Share

Company	2015	2016
Anheuser-Busch InBev NV	21,2%	27,5%
Heineken NV	9,6%	9,9%
China Resources Holdings	6,0%	6,1%
Carlsberg A/S	5,9%	5,9%
Molson Coors Brewing Co	3,1%	4,9%
Tsingtao Brewery Co Ltd	4,4%	4,1%
Asahi Group Holdings Ltd	1,1%	3,4%
Beijing Yanjing Brewery Co	2,5%	2,2%
Kirin Holdings Co Ltd	2,3%	2,2%
Castel Groupe	1,2%	1,1%

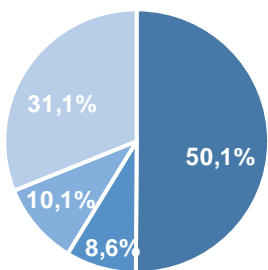
Source: Euromonitor

Figure 2: Heinken vs Global Market 2012-2016



Source: Euromonitor

Figure 3: Heineken's Shareholders



- Heineken Holding N.V.
- FEMSA
- CB Equity LLP
- Free Float

Source: Bloomberg

Figure 4: Net Debt to EBITDA in 2016

AB InBev NV	5.5x
Heineken NV	2.39x
Carlsberg A/S	1.96x

Source: 2016 Annual Report of AB InBev, Carlsberg A/S and Heineken N.V

Heineken N.V. is a public traded company in the Amsterdam Stock Exchange with the Ticker: HEIA. Heineken has a broad and diversified portfolio, spread in more than 170 countries. The company is the world's second largest brewer, with a turnover of 22 Billion euros, and has registered a solid and consistent compound annual growth of 2.4% since 2013. Heineken's volumes have been growing faster than the global market since 2014 (Figure 2). Having in account the recent trends in both mature and emerging markets, the company is in a strong position to grow due its focus on premium segments and market diversification. However, Heineken's challenges lie not only in the increase of competition of either international or local players but also in macroeconomic concerns. The market consolidation continued in 2016, with the top 10 players representing 67.3% of the overall volumes, while in 2015, 57.3% (Figure 1). Although Ab InBev is leading the market consolidation, Heineken has managed to not only resist to takeovers (Sab Miller in 2014) but also managed to acquire several companies in the past years to strengthen its presence in some regions, reinforcing the second place in the world's brewers rankings.

Shareholder structure

Heineken N.V. is a family controlled company being the shareholder's structure detained by Heineken Holding with 50.01%, CB Equity LLP 10.14%, FEMSA 8.63% and a free float of 31.13%, of which 3.76% are held by investors with positions higher than 1%¹. Heineken's shareholder structure registered modifications during 2017, as FEMSA is set to sell the remaining of its 12.5% stake to Heineken Holding N.V. in consequence of no longer being Heineken's distributor in Brazil. Both Heineken N.V. and Heineken Holding N.V. are public traded companies.

Family controlled companies, like Heineken N.V., where the free float is small, have both disadvantages and advantages. On one hand, it provides stability for long-term direction which usually large public traded companies lack, making Heineken chase long-term over short-term goals. As example, in 2014, SAB Miller tried to acquire Heineken in an attempt to protect herself from the acquisition by the world's largest brewer, AB InBev. The family and the company's management team promptly declined the offer because they believe the firm would endure providing value and growth. On the other hand, having the majority of the shares controlled by a family can result on a preference for investments with debt rather than with equity, so the family do not dilute their

¹ Bloomberg, Ownership Overview

share of the business. This fact can seriously struggle Heineken's ability to pursue new acquisition opportunities the market may offer in the future. Heineken has a Net Debt to EBITDA higher than Carlsberg and lower than AB InBev (Figure 4).

Business Structure

Heineken has become much more than an European company. In 2010, just 20% of its profits were from developing markets, while in 2016, it registered 61%. The company has, currently, more than 160 breweries in more than 70 countries². In addition, Heineken has some joint ventures and exports to several other countries, which increases even more its global footprint. Its business model is usually structured in four regions: Africa, Middle East and Eastern Europe, Americas, Asia Pacific and Europe. Heineken has presented a stable growth over the past six years mainly due to its market diversification efforts. Although this growth is in part organic, the biggest share came from acquisitions, such as FEMSA in 2010 (Latin America Markets) and Asia Pacific Breweries in 2012 (Asia Pacific). Heineken's strategy to grow and create value is based on three priorities: premium segments (including crafts), innovation (10.6% of 2016 revenue) and emerging markets (43.5% of volumes in 2016). Although, the company is the global market leader in cider/perry, 98% of its sales still come from beer.

The constant investment in emerging markets led to an increase of Latin America's revenue, which nowadays outperformed Eastern Europe as the second biggest region in revenue, with a share of 25%. Most of this revenue is due to Mexico, which alone represented 15% of Heineken sales. In Brazil, the company recently (in 2017) acquired Kirin Brazil, which reinforced its market share in this geography, the world's third biggest market. In the US, despite being a mature and developed market, Heineken managed to increase its sales over the past recent years. Europe, Heineken's largest regional market, is very mature, representing 39.3% of the company's beer volume (figure 5). The company's revenue slightly declined last year (-0.9%) in line with the overall market³. The company's investment in emerging markets is verified in Africa and Asia Pacific as well. In 2010, with the acquisition of Asia Pacific Breweries, the company reinforced its presence in South East Asia. These regions have been recording a fast growth not only due to the company's investment but also because of the enlargement of its consumer base.

Figure 5 : Regional Volume as % of Total Volumes

2016	Heineken	AB Inbev	Carlsberg	Market
Europe	39%	5%	64%	16%
Asia Pacific	12%	20%	35%	42%
AMEEA	19%	13%	1%	9%
Americas	29%	62%	0%	33%

Source : Euromonitor, Anheuser-Busch InBev, Carlsberg A/S and Heineken N.V Annual Report

² Heineken 2016 Annual Report

³ Heineken N.V. 2016 Annual Report

The company’s EBITDA has recorded a stable growth since 2011. Heineken’s EBITDA margin has been around 23%, although falling way behind its key competitor, AB InBev. The growth, in absolute values, is a consequence of the company’s market share increase and market diversification. In the next year, we expect a higher EBITDA margin due to the premium strategy and the synergies from Kirin’s acquisition in Brazil.

Regions

Africa, Middle East and Eastern Europe

Africa, Middle East and Eastern Europe, being a large region, cover a wide range of beer trends, demographics and attitudes. In general, most of the markets keep being very interesting to brewers due to the increase in disposable income, urbanization, improvement in the distribution networks and the changing in consumption trends. In addition, low per capita consumption rates combined with fast volume growth present a great opportunity.

South Africa, among other countries, show signs of shifting towards premium beer. The craft movement arrived to the country in some cities, however it still represents a minor share of the total beer consumption. In Muslim-majority markets, some brewers are positioning as soft drinks company in order to access a wider consumer pool when comparing to alcoholic beers. In 2016, Africa, Middle East and Eastern Europe was responsible for 39% of non/low alcohol beer global volumes.

Africa, Middle East and Eastern Europe is expected to continue to register strong volume growth until 2021. Nevertheless, this prediction is very

Figure 6 : Top 10 Companies by Sales Breakdown in % by Country in 2016

	AB Inbev	Heineken	Diageo Plc	Castel Group	Behnouth Iran	Carlsberg	Nambia Breweries L.	Société Frigorifique	Arpanoosh Co	Bitburger Braugruppe
South Africa	89%	12%	23%				100%			
Nigeria	8%	57%	33%			0%				
Cameroon	1%	20%	9%	66%		1%				
Kenya	0%		35%							
Iran		0%			100%	18%			100%	100%
Tunisia	1%	1%						100%		
Egypt		5%				3%				
Saudi Arabia	0%	0%				54%				
Algeria	0%	2%		12%		1%				
Marroco	0%	0%		23%		0%				
Israel	0%	1%	0%			15%				

Source: Euromitor, Beer in Middle East and Africa

vulnerable to a possible challenging macroeconomic and social environment that could have a major impact in key markets in the region. Although the region has the lowest per capita beer consumption globally, it recorded the highest CAGR between 2011 and 2016. Therefore, this region is requesting considerable attention among brewers. The world’s biggest brewer, AB InBev, reinforced its presence through the acquisition of Sab Miller. AB InBev is the region leader with most of its volumes coming from South Africa (Figure 6).

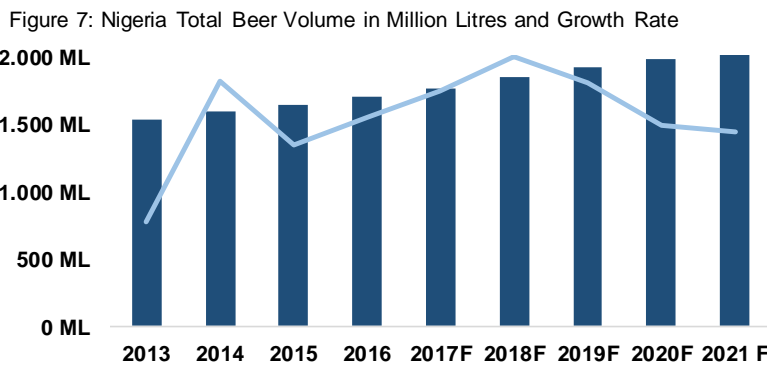
Heineken comes second, with the majority of its regional volumes coming from Nigeria where the company held a 66% beer volume share in 2016⁴.

Heineken has been mitigating the risk exposure in Africa by supplying its brewers with local raw materials (more than 50% of the raw materials are from the continent), which not only reduces costs and forex exposure but also encourages local production, and owns water and power supplies in most of its Breweries.

The company main markets in this area are: Nigeria, Russia and South Africa. In addition, Heineken is also present in: Algeria, Belarus, Burundi, Cameroon, Democratic Republic of Congo, Egypt, Ethiopia, Ivory Coast, La Réunion, Lebanon, Rwanda, Sierra Leone and Tunisia.

- Nigeria

Nigeria, the second largest regional market, is facing a substantial shift toward lower price beers. This movement, against the regional and world trend to premium beer, is the result of macroeconomic pressures as currency concerns and dropping of oil prices. Nevertheless, Nigeria registered the largest growth



Source: Euromitor, Beer Market Size

rate of the region between 2011 and 2016 with this strong performance expected to continue up to 2021 (Figure 6). The two larger beer companies, Nigerian Breweries (Heineken) and Guinness Nigeria, enlarged their focus on more economic brand as their mid-priced brands keep decreasing volumes. In 2016, Heineken held 66% of the beer market. The company has 50% market

share of economic-beer, but, in 2016, it lost market share to the country's second largest player: Sab Miller.

- Russia

During the past year, this industry has been affected by government legislation intended to decrease alcohol consumption. In addition, the political situation in Ukraine, led to the imposition of economic sanctions to the country. As result, Russia is facing high inflation rates and low consumer confidence. In 2016, beer declined 3% in total volume terms, falling to 7.7 billion litres⁵, as consequence of weaken consumer purchasing power that keeps limiting demand. Another relevant factor to the industry was the return of beer

⁴ Beer In Nigeria, Euromonitor, 2017

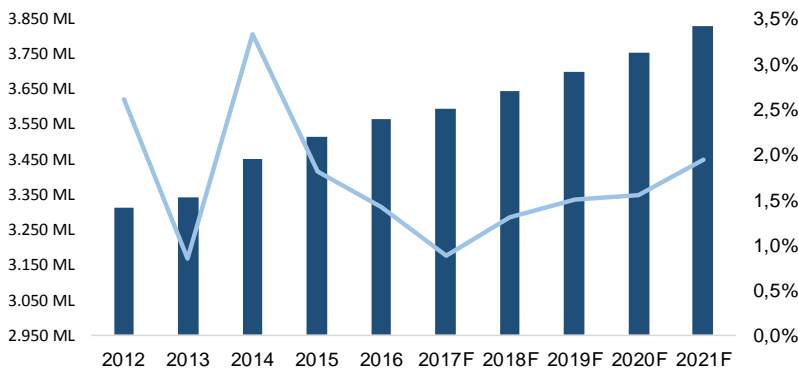
⁵ Beer in Russia, Euromonitor, 2017

advertising permit. Nevertheless, this is only allowed in sport events and programs (both in television and radio). This allowance was made predominantly to the FIFA World Cup, which takes part in Russia in 2018. This event will positively contribute to the country's beer consumption next year. All these factors combined have severely impacted Heineken's beer volumes, which declined by 11% in 2015 and 3% in 2016. Between 2011 and 2016, Heineken registered the higher CAGR among the top four brewers, nevertheless it reduced its volumes. In the third quarter of 2017, in contrast with the previous years, volume is up double digit due to strong Heineken (brand) performance and recent entry on the low-price segment. Russia is a very important market for Heineken, representing 4% of its global volumes.⁶

▪ South Africa:

Although Beer producers are under pressure, as consequence of the increase on duty fees and inflation, while the disposable income is lower, overall beer

Figure 8: South Africa's Total Beer Volume and Growth Rate



Source: Euromitor, Beer Market Size

volume was up by 1% in 2016. As consequence of the increase of middle-income consumers (and their disposable income), premium, craft and wheat beer are projected to increase. Until 2021, the total beer volumes is projected to have a 1.4% CAGR⁷. However, this growth could be affected by stricter legislation aimed to ease alcohol consumption. South African Breweries (SAB Miller) is set to continue leader in the country. AB InBev, by acquiring SAB Miller,

intend to enlarge the current portfolio by adding some of the holding company main brands. Nevertheless, its performance is threatened by Heineken, which is expected to expand its portfolio and distribution channels. In 2016, Heineken was the second biggest player with 10.9% share of the total beer volume. In 2017, Heineken continued to deliver strong growth with volume up double digit.

Americas

Latin America's beer market registered one of the highest growth between 2011 and 2016. The growth, in absolute values, was led by Mexico and Colombia. Nevertheless, the region growth was significantly offset by Venezuela and Brazil's volumes. As consequence of the region's hot climate, Lighter-lager have a strong position in Latin America. Recently, with the rise of domestic microbrewers and interest in imported beer, the scenery is

⁶ Heineken N.V. Q3 2017 Trading Update

⁷ Beer in South Africa, Euromonitor , 2017

Figure 9 : Top 3 Companies by Sales Breakdown in % by Country in 2016

	AB Inbev	Heineken	Cervejaria Petrópolis
Brazil	42%	30%	100%
Mexico	23%	66%	
Colombia	12%	0%	
Argentina	7%	2%	
Peru	7%		
Chile	1%	1%	
Ecuador	2%	0%	
Dominican R.	2%		
Guatemala	1%	0%	
Bolivia	2%		

Source: Euromitor, Beer in Latin America

progressively changing. The premium segment is forecasted to register the fastest growth in Latin America until 2021. However, the greater growth in absolute terms is set to be mid-priced lager, which has most of the volume share. Latin America is forecasted to register the second-highest volume growth until 2021, with a 2% CAGR, resulting in a 3.3 billion litre volume rise⁸.

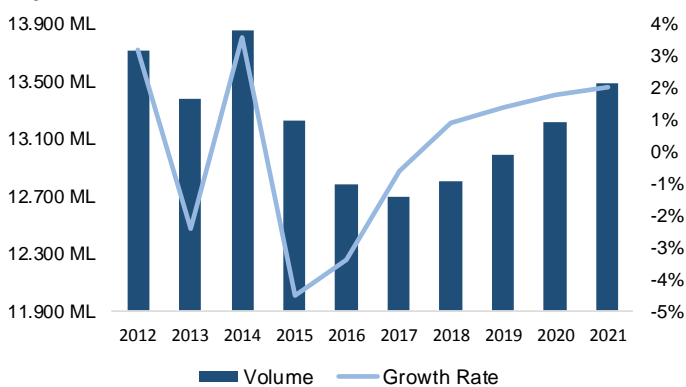
The market is highly consolidated with AB InBev and Heineken being responsible for 77% of the regional volumes. In some countries, this consolidation is even higher. Nowadays, with the SAB Miller Acquisition complete, AB InBev has over 55% volume share in nine countries and 95% in four of those. In the overall Latin American markets, AB InBev holds 63% of the market. In 2016, Heineken rose its market share to 15%, mostly due to Brazil and Mexico (Figure 9). Recently, in 2017, the company reinforced its position in Brazil by acquiring Brazil Kirin. Although Heineken recently acquired two companies in Latin America (FEMSA in 2010 and Kirin Brazil in 2017), the company volumes in this region are still very dependent of Mexico and Brazil. These two countries combined, represent 96% of the company volumes in Latin America.

In the North America (United States of America and Canada), Heineken as a small volume share of the market of 4.1%. AB InBev is the market leader being accountable for 44.2% of the total beer volumes. The beer market is expected to decline at a 0.2% CAGR until 2021. However, Heineken acquired, in 2017, the remaining shares of Lagunitas, a craft beer company, reinforcing its presence in the world's second biggest market, the United States of America.

▪ Brazil

In general, beer market continue to register a decline (3%) in total volumes in 2016 as result of the adverse economic and social situation, which resulted in a very high unemployment rate of 11% and reduction in disposable incomes.

Figure 10: Brazil's Volumes and Growth Rate



Source: Euronomonitor, Market Sizes

Since beer is perceived as a non-essential product by most part of the population, consumption has been decreasing. The most affected category was domestic mid-priced lager, with a 4% volume decline, once these products are mostly consumed by middle-income consumers, who most aggressively felt the crisis impact. In contrast, domestic premium lager grew its volume 1% in 2016, a deceleration in comparison to previous years. The movement “Drink Less, Drink Better” had a big impact in Heineken, Stella Artois and Budweiser. Premium lager is set to be have the

⁸ Beer in Latin America, Euromonitor , 2017

strongest growth rate until 2021 with a 2.9% CAGR. The overall market is forecasted to grow 1% in the same period (Figure 10). As result of the premium segment potential, we project an amplification of competition in this segment.

In 2016, around 7% of Heineken global sales were from Brazil. Although the country is facing a challenging macroeconomic and social environment, the company keeps overtaking the premium market, registering a double digit growth. Despite having most of its volumes from mid-priced lager, Heineken's stronger position lays in premium lager with 14% volume share. In 2017, Heineken acquired Brazil Kirin, moving into the third place in the country's beer standing, with 18% volume share. Kirin's acquisition allowed the company not only to reinforce its position as a premium company, once most of its brands were premium as well, but also to gains ownership of a very improved distribution network, not depending on the partnership with Coca Cola (FEMSA).

▪ Mexico

Mexico, between 2011 and 2016, registered the top volume growth. In 2016, mid-priced lager was responsible for 96% of the overall beer volume. Although mid-priced lager is set to keep leading the Mexican beer market, premium lager is forecasted to grow at 8% CAGR until 2021. Mexico's macro-economic and social environment is becoming, as time goes by, more favourable to brewers as it registered not only rise in purchasing power and westernization of

Figure 11: Mexico's Volumes and Growth Rate



Source: Euronomonitor, Market Sizes

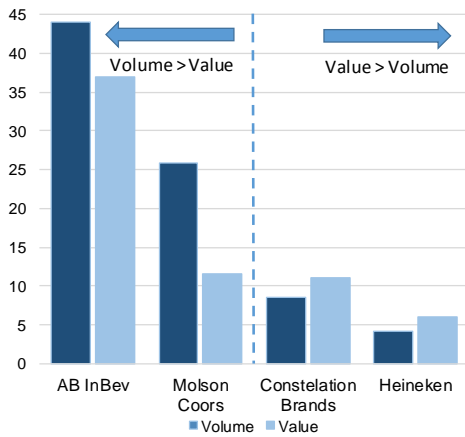
consumer habits but also a substantial improvement in distribution networks. However, as result of the very consolidated market (in 2016, AB InBev and Heineken were responsible for 97% of the beer market), Mexican Federal Competition Commission narrowed the clients under exclusive contract to 20% of its company clients. Despite being a treat to Heineken and AB InBev, this regulation stimulates the development of premium domestic brands. Consequently, Microbrewer's brands are becoming more popular and, as consequence, Craft category have

been growing, emphasizing the chances for higher value products. In 2016, Mexico, Heineken's biggest market, represented 15% of the company volumes. Moreover, last year, it reduced the gap to the market leader to 17pp, mainly due to Tecate and Dos Equis XX brand.

United States of America

In the US, Heineken’s primary focus is imported premium lager, which is in line with evolving demand trends. The company has 26% volume share in premium lager, ranking second in this category, behind AB InBev. In the overall beer market, Heineken remained the fourth largest in 2016. The two biggest players, AB InBev and Molson Coors, recorded higher market shares in volume than in value, while Heineken has 4% of beer volumes, but 6% share in value (Figure 12). In general, the beer market is forecasted to decline until 2021, yet, imported premium lager is set to grow at a 4% CAGR. In the US, there is a rare market opportunity. Heineken’s Mexican brands, ciders and crafts offer are thriving, while Heineken (as brand) saw its volume decline in 2016. On one hand, for long, craft beer was a driver in beer volumes. However, recently its performance underwent. In 2016, volume in the craft category registered a 2% increase, when in 2015 recorded 11%. In contrast, in 2017, Lagunitas Brewing Company kept to outperform the market, increasing its market share. In 2017, Heineken acquired the remaining shares of the company, controlling now 100%. The Company wants to internationalize the brand to other markets, using the exiting worldwide network. On the other hand, Heineken is well positioned to capitalize cider’s potential by being the only top five player in cider to see growth in 2016. The overall market is estimate to be 219 million litres and Heineken N.V. is accountable for 7.6%. Nevertheless, the market is expected to decline at a 7.8% CAGR.

Figure 12: Beer in the US - Volume and Value % Shares 2016



Source: Euromonitor

Asia & Pacific

Although Asia Pacific is the major region in beer’s volume sales, with 35% of the global volume, its consumption per capital is second lowest (17L). The consumerism increase combined with the continuous growth of the population within legal drinking age, presents an unmatched growth opportunity. China is responsible for 67% regional beer volumes. However, while China registered a decline in volumes in 2016, the remaining Asia Pacific markets verified a 4% volume increase in 2016. Having in account the ten biggest players in Asia Pacific, just three are not regional brewers and six originated, in 2016, at least 90% of its volumes from their native market (Figure 13).

Figure 13: Top 10 Companies by Sales Breakdown in % by Country in 2016

	China Resources Holding	AB InbeV	Tsingtao Brewery	Beijing Yanjing Brewery	Carlsberg	Kirin Holdings	Asahi Group Holdings	San Miguel Corp	Heineken	Saigon Alcohol Beer & Beverages
China	100%	80%	99%	100%	59%	4%	2%	2%	14%	
Japan		0%			0%	78%	97%		1%	
Vietnam		0%			7%			2%	51%	100%
Philippines								90%		
South Korea		12%	0%				1%		1%	
India		7%			9%					
Cambodia					11%				6%	
Myanmar						17%				
Laos					5%					
Taiwan		0%	0%			2%	0%	0%	4%	
Indonesia		0%			0%			3%	6%	
Malaysia		0%	0%		1%				6%	
Hong Kong		0%	0%	0%	0%			3%	1%	
Thailand								1%	5%	
Singapore		0%	0%		1%	0%	0%		3%	
Others		1%			7%	1%	0%	1%	2%	0%

Source: Euromitor, Beer in Asia Pacific

Although volumes, in China, are challenging, Southeast Asia is projected to growth 2.3 billion litres until 2021. This growth outperforms North America, Europe and Africa, Middle East and Eastern Europe. Southeast Asia have been recording a growth not only in the number of city residents but in its young population as well. These two factors combined with growing consumerism, middle class enlargement and rise of foodservice stores, are projected to increase beer demand. As consequence, by 2021, sales are forecasted to reach 11.7 billion litres.

In China, India and South Korea’s consumers are seeking better-quality beers, showing signs of premiumtization. Nevertheless, developing markets do not show signs of shifting because of the higher trading cost. In 2016, mid-priced lagers, in Vietnam, were responsible for 84% of the volume growth. The very same happened in Thailand, where 96% of the volume growth was from low-priced lagers. As most of these countries consumers are lower/middle income class, there is still resilience to shift towards premium larger.

In the region as a whole, Heineken is ranked the ninth biggest brewer (affected by its very low share in China), but in many of the other individual markets in which it operates it ranks first or second, having over a 35% market share in Malaysia, Indonesia, and Singapore. Most of this market’s volumes are controlled by mid-priced and premium lager, fitting well with Heineken’s global strategy: premium focus.

India and Vietnam are set to lead absolute volume growth in Asia Pacific between 2016 and 2021, with 1.5 billion and 1.1 billion litre rise expected, respectively. Heineken is positioned in both countries to acquire this growth either by its Join Venture in India or its Operating Company in Vietnam.

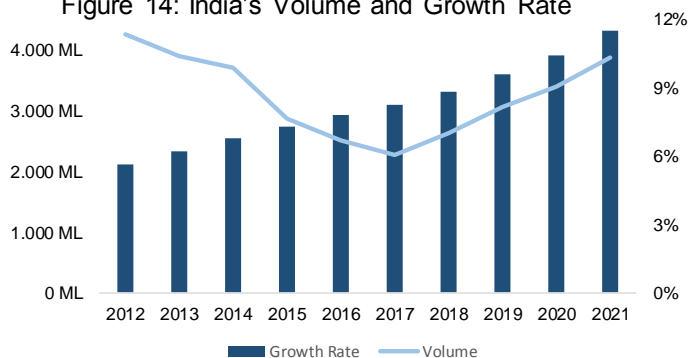
Heineken revenues had a CAGR of 17,7% between 2014 e 2016 in this region, whilst EBTIDA registered a CAGR of 26,5% and EBITDA margin increased 5pp during the same period.

▪ India

India is facing an increasing westernization, rising affluence and an ongoing urbanization. As result, there is an increasing demand for beer, being both mid-priced and premium lager set to grow.

In 2016, Heineken acquired an additional share of United Breweries, India’s largest brewer, increasing its stake to 43%. In addition, is reported to be considering acquiring more shares from indebted Vijay Mallya. In 2016, United

Figure 14: India’s Volume and Growth Rate



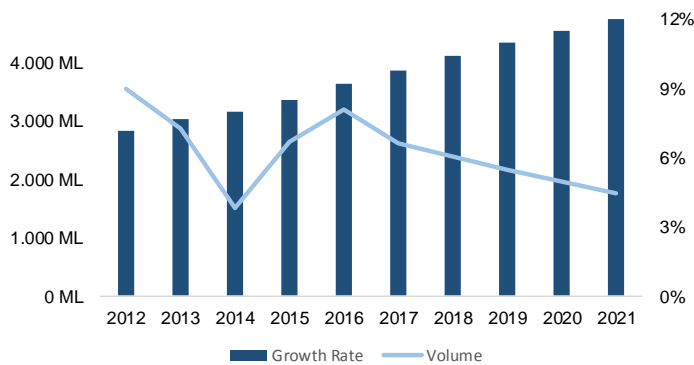
Source: Euromitor, Beer Market Size

Breweries was responsible for 46% of beer volumes. The competition is expected to intensify due to the market's favourable forecast perspectives (volumes are expected to grow almost 1.4 billion litres). Carlsberg is enlarging the investment in the market, with Tuborg registering, in 2016, the fast growing among top 10 brands. Ab InBev extend its network by acquiring SAB Miller, with Budweiser being the second brand that grew the most.

▪ Vietnam

The country is forecasted to grow its overall beer volume at a 6% CAGR until 2021⁹. Vietnam is predicted to be, in absolute volumes growth, one of the leading market in all Southeast Asia. As result, it will be the next key

Figure 15: Vietnam's Total Beer Volume and Growth Rate



Source: Euromitor, Beer Market Size

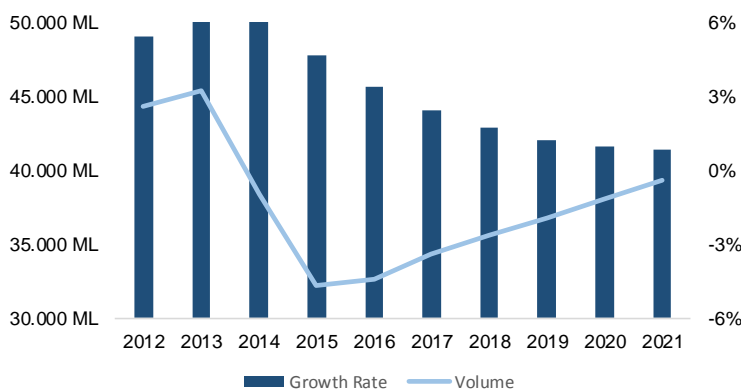
battleground for brewers. In 2014, Carlsberg reinforced its presence by acquiring the remaining shares of South-East Asia Brewery and Hanoi-VungTau Beer. In 2015, Ab InBev opened its first brewery in the country, placing Vietnam as the place to grow in Southeast Asia. Last year, in 2016, Heineken reinforced its production capacity by acquiring a brewery. Moreover, Sabeco and Habeco, government brewer companies, are planned to be privatised, becoming an opportunity for international companies to expand and reinforce their market shares in

this region. Heineken is the second biggest brewer in the country with 23% volume share. In the premium market, the companies lead with 64% share.

▪ China

Although beer volumes continue to decline in 2016, the decreasing rate was slightly smaller when compared with the previous year. China's volume keep declining due to the rising health awareness among Chinese consumers, in

Figure 16: China's Total Beer Volume and Growth Rate



Source: Euromitor, Beer Market Size

combination with the slowing of the economic growth. Even though, the volumes are forecasted to decline, market value is forecasted to increase with the rise of trends like "Drink less but better".

Heineken's primary focus, in China, is premium lager, which contributed with 81% of its beer volumes in that very same market in 2016. This position on the market, revealed to be a competitive advantage once while the low priced segment declined in 2016, the premium segment kept registering a double-digit

⁹ Beer in Vietnam, Euromonitor, 2017

growth. As consequence, Heineken recorded the greatest rise among the top 10 brewers in 2016, with its volumes increasing 5%. The total beer volumes are expected to continue to drop until 2021, while the premium segment is forecasted to rise 4 billion litres. This growth is the result of increase of urbanisation and the influence of Western culture, specifically on younger groups. However, with the fast growth towards premium segments, competition is expected to intensify in this segment.

Europe

Although Heineken has, nowadays, a more balanced geographic profile (thanks to some acquisitions in the past years), Europe endured as its largest regional market in 2016, with 39% of its total beer volumes. Heineken is presence in more than 20 countries, being the market leader in Austria, France, Greece, Italy, the Netherlands, Portugal and Spain in 2016.

In addition, the company is well placed to profit from today's trends, with the increase demand for premium lager and flavoured/mixed lager in the company's key markets. However, Heineken's main competitor in Europe, Carlsberg, has a very similar strategy in the old continent. As result, in most of the European markets, Heineken and Carlsberg dispute the market leadership.

In the UK and France, flavoured/mixed lager is projected to demonstrate robust growth until 2021, being Heineken leader in the category in both countries. In Italy, Portugal and Spain the company benefits from the expansion of premium lager.

Although beer is challenging in most part of Easter Europe, cider/perry is performing healthy. Heineken is the world leader in cider/perry being accountable for 17.3% of its volumes. In 2016, Eastern Europe verified the solidest growth among all regions, 29%. The region was responsible for 7% of global cider volumes in 2016, being forecasted to reach 12% by 2021. This growth is resulting of the absolute forecast growth until 2021, 131million litres at a 13% CAGR. Heineken's key markets for cider are United Kingdom, Czech Republic, Poland and Romania. Despite macroeconomic and regulatory issues, cider/perry's market is projected to verify an increase in competition.

▪ United Kingdom

In 2016, volumes sales stayed flat with a marginal increase of 0.1%. Consumer confidence is rising and combined with craft segment growing, beer has seen

Figure 17: Top 10 Cider Companies by Volume Share

Company	2015	2016
Heineken	17%	17%
Distell Group	15%	14%
C&C Group	8%	7%
Boston Beer Co	6%	5%
Carlsberg	4%	5%
Anheuser-Busch InBev	3%	4%
Kopparbergs Bryggeri	3%	4%
Aston Manor Brewery Co	3%	3%
Åbro Bryggeri	2%	2%
Thatchers Cider Co	2%	2%

Source: Euromonitor, Cider/Perry

increase consumer interest. Therefore, overall beer volumes are forecasted to slightly grow until 2021, reaching 4858 million litres¹⁰.

The UK beer market is forecasted to slightly growth until 2021, primarily supported by premium and flavoured/mixed lager, where Heineken is the principal player. Nevertheless, the company's flavoured/mixed lager market share has substantially diminished over the past years, as some of competitors (Carlsberg, AB InBev and Molson Coors), joined the category. In general, Heineken's position is less premium oriented in comparison to other markets. In 2016, Foster's, a mid-priced lager brand, was responsible for 61% of the company's beer volumes in the UK. Although Heineken attempted to close in premium trend with the development of Foster's Gold, the premium potential in the UK lies in Heineken brand, which registered a 4% growth in 2016.

Figure 18

Lager	2016 Volume (Million)		%CAGR (until 2021)	% CAGR (2011-2016)
Flavoured/Mixed Lager	77	L	15,1	94,4
Standard Lager	3.330	L	-0,2	-1,1
Premium Lager	1.641	L	1	0,8
Mid-Priced Lager	1.639	L	-1,4	-2,5
Economy Lager	51	L	-1,8	-6,4
Lager by Origin	3.330	L	-0,2	-1,1
Domestic Lager	2.569	L	-0,6	-1,7
Imported Lager	762	L	1,1	1,5
Lager	3.408	L	0,3	-0,6

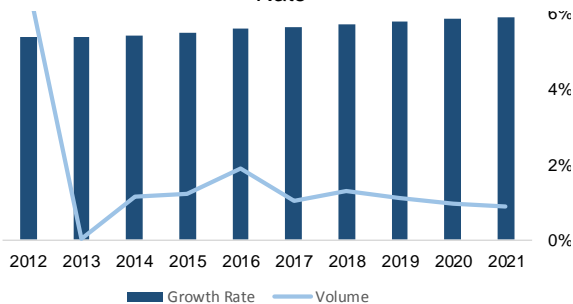
Source: Euromonitor, Beer in The United Kingdom

▪ Poland

Although Poland already has one of the world's highest beer per capita consumption (ranked third in the world), the total beer market registered a 2% volume growth. This country, is projected to have the highest absolute beer growth in volume until 2021. In 2016, Poland represented 6% of Heineken total

beer volumes. Last year, domestic premium lager beer recorded a 3% volume increase, while imported premium lager registered 4%. Domestic low price lager verified a slight growth (1%) in volume. Heineken's premium lager volumes increased 2%. Furthermore, this category is set to be the only to record a positive performance until 2021¹¹. The company has a successful country-specific strategy, targeting the premium category as well as the middle price category since it's the biggest, representing 61% of total beer consumption.

Figure 19: Poland's Total Beer Volume and Growth Rate



Source: Euromitor, Beer Market Size

Figure 20:

Lager	2016 Volume (Million)		% CAGR (2011-2016)	%CAGR (until 2021)
Flavoured/Mixed Lager	235	L	-0,4	4,1
Standard Lager	2.860	L	1	2,5
Premium Lager	845	L	-0,4	5,5
Mid-Priced Lager	1.670	L	1,8	1,3
Economy Lager	345	L	0,7	0
Lager by Origin	2.860	L	1	2,5
Domestic Lager	2.591	L	1,1	1,9
Imported Lager	269	L	-0,1	7,4
Lager	3.095	L	0,9	2,6

▪ Spain

During the recent crises (2008-2013), premium lager volumes registered a hit. However, sales have stabilized in 2014 and reassumed growth until 2016. In 2016, Beer as a category profited from the increase in consumer confidence and the economy recovery. Consumers are progressively shifting towards higher-end beers, in line developed market trends. Furthermore, younger consumers are gradually willing to try new premium products.

¹⁰ Beer in United Kingdom, 2017

¹¹ Beer in Poland, Euromonitor, 2017

Therefore, Heineken must make sure its already established brand along with its innovations, continue to fit with domestic trends. Consequently, premium lager beer is forecasted to have the largest CAGR among beer categories. In Spain, Heineken is the leader in premium lager, being responsible for 47% of its volumes.

The overall beer market is forecasted to grow at a 3% CAGR, reaching, in 2021, 4 078 million litres. Heineken, being the number one brewer in Spain, has 32% share in value.

Valuation

Revenue Estimation

Before calculating the DCF Model, we estimate Heineken's revenue by each area having in to account the main market trends, brand performance for the key markets.

Europe

Since Europe is a very mature market, in what beer is concerned, we assume Heineken will maintain the same market share in their core countries: United Kingdom, Poland, Spain, and France. In the remaining countries, we assumed the same absolute value as 2016, once we do not forecast significant changes in both market share and dimension. In addition, we assumed prices will follow the IMF Consumer Prices Growth.

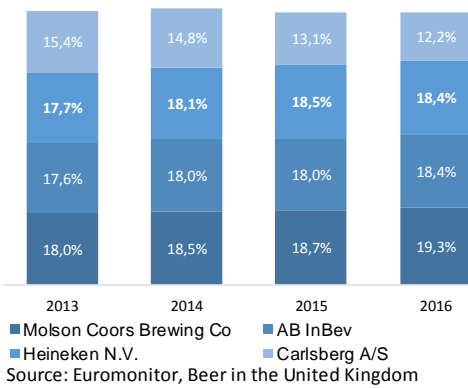
Figure 21:

Europe	2016 H	2017 E	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	CAGR
Values in millions									
Volume	7.841 L	7.969 L	8.030 L	8.088 L	8.145 L	8.201 L	8.262 L	8.324 L	0,9%
Uk	853 L	856 L	860 L	864 L	869 L	874 L	879 L	883 L	0,5%
Poland	1.141 L	1.153 L	1.167 L	1.180 L	1.192 L	1.202 L	1.215 L	1.228 L	1,1%
Spain	1.107 L	1.208 L	1.240 L	1.273 L	1.307 L	1.342 L	1.377 L	1.413 L	3,6%
France	649 L	662 L	671 L	679 L	686 L	692 L	701 L	709 L	1,3%
Others	4.091 L	4.091 L	4.091 L	4.091 L	4.091 L	4.091 L	4.091 L	4.091 L	0,0%
Volume Growth	2%	2%	1%	1%	1%	1%	1%	1%	-
Average Price per Liter	1,20 €	1,20 €	1,22 €	1,25 €	1,27 €	1,29 €	1,32 €	1,35 €	1,7%
Price Growth	-3,4%	0,3%	1,8%	1,8%	1,8%	1,9%	2,0%	2,0%	-
Uk		0,70%	2,60%	2,60%	2,50%	2,40%	2,20%	2,00%	-
Poland		-0,60%	1,90%	2,30%	2,35%	2,40%	2,45%	2,50%	-
Spain		-0,20%	2,00%	1,50%	1,60%	1,70%	1,80%	1,90%	-
France		3,00%	1,20%	1,30%	1,45%	1,60%	1,70%	1,80%	-
Others		0,20%	1,70%	1,70%	1,70%	1,80%	1,90%	2,00%	-
Revenue	9.422 €	9.583 €	9.832 €	10.084 €	10.342 €	10.613 €	10.904 €	11.210 €	2,5%

▪ United Kingdom

Heineken is second biggest player in the country, with the same market share as Ab InBev, 18.4%. Molson Coors is the market leader with 19,3% share in volume. Although this is a very mature market, it is predicted to grow, mainly driven by flavoured/mixed lager, where Heineken is the main player. However, due to the recent entrance of a range of competitors, Heineken has been losing

Figure 22: U.K.'s Top 4 Players



market share in this category. Therefore, we assume Heineken will maintain its overall market share despite the intense competition in the market. In order to do so, the company might have to increase its marketing costs to outcome the entrance of new players.

▪ Poland

Poland has one of the highest per capita consumptions. Poland is a very consolidated market, where Heineken has 28.6% volume share, while Asahi Group Holdings and Carlsberg have 35.9% and 17.3% respectively. The premium category is set to be the only to record a positive performance until 2021. In Poland, the company has as successful country-specific strategy, applying the premiumtization but targeting as well the middle category since it's the biggest representing 61% of total. Therefore, we expect the company to maintain its market share.

▪ Spain

The Spanish market is projected to increase at a 3% CAGR until 2021. Heineken is the market leader with 30.9% volume share. Grupo Mahou-San Miguel and Damm have 29.6% and 12.6%, respectively. As the premium segment is forecasted to grow more than the overall beer market and Heineken leads the premium segment with a 47% share of its volumes, we estimate Heineken to reinforce its overall market share by 2pp.

▪ France

Heineken is the main player, being responsible of 32.4% of the beer market, 2.2pp ahead of Carlsberg. Although the market is set to keep growing, it should slowdown. The main driver of this 1% CAGR until 2021 is the widening of the beer consumer base. Therefore, we forecast the same market share for the following years.

Americas

Americas includes both North America and Latin Markets. We forecasted separately the growth for the US, Mexico and Brazil, since they are the company's biggest markets in this region. Then we grouped the outstanding markets and forecasted they would grow in line with the market at a 1.8% CAGR. Although in past we did not verify a price growth aligned to inflation rates, we assumed prices will follow the IMF Consumer Prices Growth.

Figure 23: Polands's Top 3 Players

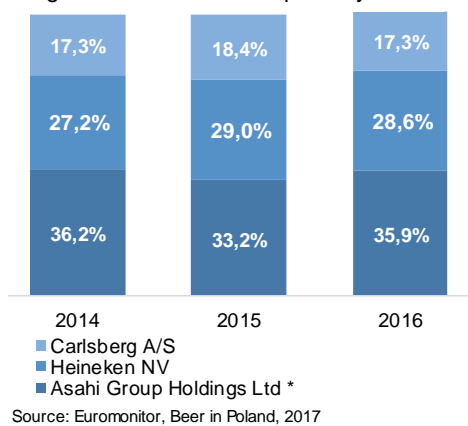


Figure 24: Spain's Top 3 Players

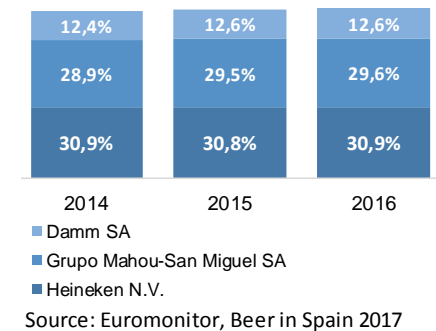
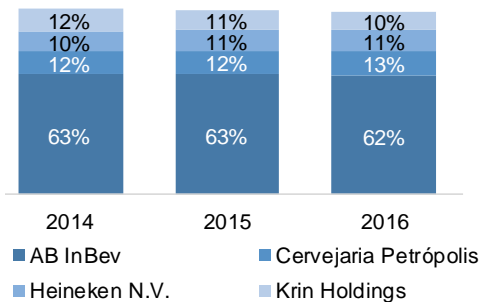


Figure 25

Americas	2016 H	2017 E	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	CAGR
Values in millions									
Volume	5.870 L	6.856 L	7.153 L	7.412 L	7.602 L	7.854 L	7.986 L	8.145 L	4,8%
Brasil	1.393 L	2.260 L	2.408 L	2.506 L	2.616 L	2.777 L	2.807 L	2.837 L	10,7%
US	1.015 L	1.011 L	1.077 L	1.167 L	1.180 L	1.205 L	1.220 L	1.258 L	3,1%
Mexico	3.018 L	3.138 L	3.220 L	3.288 L	3.353 L	3.416 L	3.501 L	3.589 L	2,5%
Others	445 L	447 L	449 L	451 L	454 L	456 L	458 L	460 L	0,5%
Volume Growth	5%	17%	4%	4%	3%	3%	2%	2%	-
Average Price per Liter	0,89 €	0,90 €	0,92 €	0,94 €	0,95 €	0,97 €	0,99 €	1,01 €	1,9%
Price Growth	-3,7%	1,8%	1,8%	1,8%	1,9%	2,0%	2,0%	2,0%	-
Brasil		1,22%	1,35%	1,35%	1,38%	1,41%	1,41%	1,39%	-
US		0,25%	0,26%	0,28%	0,29%	0,31%	0,32%	0,32%	-
Mexico		2,70%	1,71%	1,60%	1,50%	1,39%	1,32%	1,32%	-
Others		0,27%	0,23%	0,22%	0,21%	0,20%	0,20%	0,19%	-
Revenue	5.200 €	6.184 €	6.570 €	6.933 €	7.248 €	7.636 €	7.923 €	8.245 €	6,8%

Figure 26: Brazil's Top 4 Players



Source: Euromonitor, Company Shares

▪ Brazil

By buying Kirin Brazil, Heineken became the second biggest player in the Brazilian market. Although, the combined market share for both companies' is 20.8%, we assumed the company will have a 18% market share. The overall beer market is forecasted to grow 1%, while premium lager is set to have a stronger growth rate (3%). Therefore, we forecast competition to intensify in premium segment. As result, we assume Heineken will keep 18% market share in 2017 and gradually reach 20.6% in 2021 due to the increase of the premium market value.

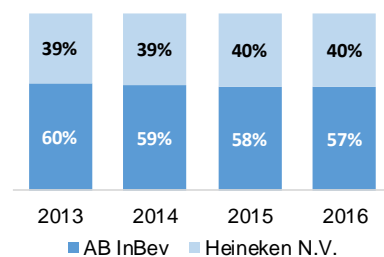
▪ Mexico

In Mexico, mid-priced beer is responsible for 96% of the overall beer market. Having in account the past years (figure 27), Heineken N.V. has been reducing the gap to the market leader, AB InBev, mainly due to Tecate and Dos Equis XX brands. In addition, premium lager beer is forecasted to grow at 8% CAGR, while the overall category is project to grow at a 2.5% rate. However, the recent legislation, which limits exclusive clients to 20%, will increase competition. Consequently, we assume Heineken will maintain its market share until 2023, being the growth in Heineken's strongest segments in part offset by the increase of competition.

▪ United States of America

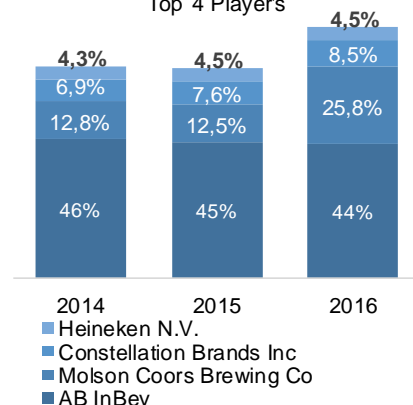
Although the overall beer market is expected to decline, the premium lager is expected to grow at a 4% CAGR. In addition, Crafts growth is slowing down, even though Lagunitas continues to outperform the market, being responsible for 0.3% of the overall market. Moreover, Heineken was the only top 5 players

Figure 27: Mexico's Top 2 Players



Source: Euromonitor, Company Shares

Figure 28: Volume Share of U.S.A.'s Top 4 Player's



Source: Euromonitor, Company Shares

to post growth in cider volumes in 2016, which may translate in a market opportunity to the company. However, with Trump's administration, there is a risk of restrictions/higher taxes on imported products. As the company's sales, with the exception of Lagunitas, are imported products, this risk will severely affect the volumes. Therefore, we estimate Heineken to overtake the market, growing share from 4.10% in 2016 to 5.29% of the overall market by 2023.

Asia Pacific

Asia Pacific, among other countries, includes China the world's largest market. We forecasted separately the growth for the Vietnam, China and India, since they are the company's biggest markets in this region. Then we grouped the remaining and estimated they would grow as fast as the market, at a 7% CAGR. Although in past we did not verify a price growth aligned with inflation rates, we assumed price will follow the IMF Consumer Prices Growth.

Figure 29:

Asia Pacific	2016 H	2017 E	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	CAGR
Values in millions									
Volume	2.432 L	2.598 L	2.758 L	2.932 L	3.119 L	3.323 L	3.536 L	3.764 L	6,4%
Vietnam	836 L	910 L	967 L	1.023 L	1.077 L	1.128 L	1.193 L	1.263 L	6,1%
China	228 L	229 L	231 L	232 L	233 L	235 L	237 L	238 L	0,6%
India	565 L	600 L	641 L	693 L	756 L	834 L	902 L	974 L	8,1%
Others	803 L	859 L	919 L	983 L	1.052 L	1.126 L	1.204 L	1.289 L	7,0%
Volume Growth	23%	7%	6%	6%	6%	7%	6%	6%	-
Average Price per Liter	1,18 €	1,22 €	1,27 €	1,32 €	1,37 €	1,42 €	1,47 €	1,52 €	3,6%
Price Growth	-5,4%	3,3%	3,7%	3,7%	3,7%	3,8%	3,8%	3,2%	
Vietnam		4,40%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%	-
China		1,80%	2,40%	2,40%	2,50%	2,50%	2,60%	2,60%	-
India		3,80%	4,90%	4,90%	4,90%	4,90%	5,00%	5,00%	-
Others		2,60%	3,20%	3,20%	3,25%	3,30%	3,40%	3,40%	-
Revenue	2.882 €	3.181 €	3.502 €	3.861 €	4.260 €	4.709 €	5.203 €	5.718 €	10%

China

Figure 30:

Top 10 Players in China	2015	2016
China Resources Holdings Co	24,4%	25,6%
Tsingtao Brewery Co Ltd	17,6%	17,2%
AB InBev	15,6%	16,2%
Beijing Yanjing Brewery Co	10,1%	9,3%
Carlsberg A/S	5,1%	5,0%
Henan Jinxing Brewery Group	2,7%	2,8%
Guangzhou Zhujiang Brewery Co	2,4%	2,5%
Suntory Holdings Ltd	1,3%	1,1%
Blue Ribbon Intermediate Holdings	0,7%	0,7%
Heineken N.V.	0,5%	0,5%

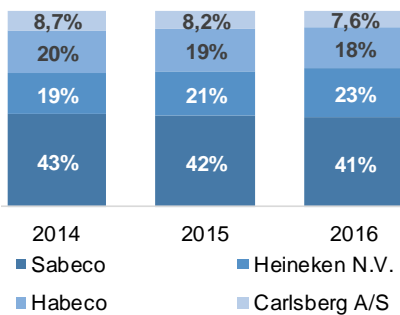
Source: Euromonitor, Beer in China 2017

Heineken has a super-premium position in the market. During the recent past years, low priced beer segment has been declining, while the premium segment has been growing at a double-digit rate. Premium is forecasted to grow 4 billion litres up to 2021. As result, we assume Heineken will growth its premium volumes, by grabbing 1% of those new volumes, reaching a share in volume of 0.7% in 2023.

Vietnam

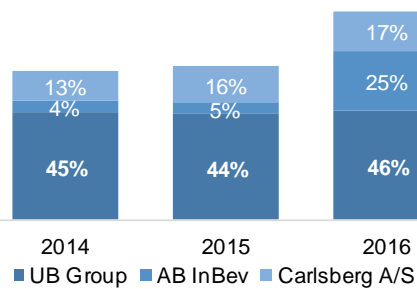
Vietnam is forecasted to grow its overall volumes at a 5.5% CAGR. However, we forecast Heineken to grow at a 6.1% CAGR until 2023. Although competition is expected to increase, Heineken is the second biggest brewer in the country with 23% volume share (Figure 31) and the premium market

Figure 31: Vietnam's Top 4 Players



Source: Euromonitor, Company Shares

Figure 32: India's Top 3 Players



Source: Euromonitor, Company Shares

leader, being responsible for 64% of its volumes. Moreover, Heineken's brands are performing healthy, particularly TIGER which was responsible for 13.6% of the market in 2016. In addition, Sabeco and Habeco are estate owned firms which the government intends to sell. This must be seen as an opportunity if Heineken acquires any of this companies, but as a threat if any other player acquires them. Therefore, we expect Heineken to grow more than the overall market, reaching a 23.88% market share in 2023.

India

Mid-priced and premium lager are set to grow in the future years, the same segments UB Group is present. In recent years, competition has been intensifying. However, in 2016, the top 3 players were responsible for 87.2% of the beer market, with all of them reinforcing their share when comparing with 2015. Consequently, we expect volumes to follow the market, remaining with a similar market share. Heineken has 43% of the UB Group but there is the opportunity to increase its stake even more.

Africa, Middle East and Eastern Europe

We forecasted separately the growth for the Cameroon, Nigeria, Russia and South Africa, since these are the company's largest markets in the region. Then we grouped the remaining and forecast they would grow in line with the market, at a 3% CAGR. Even though, in past, price did not grow in line with the inflation rates, we assumed price will follow the IMF Consumer Prices Growth.

Figure 33:

Africa, Middle East & Eastern Europe	2016 H	2017 E	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	CAGR
Values in millions									
Volume	3.840 L	3.978 L	4.057 L	4.162 L	4.262 L	4.367 L	4.479 L	4.596 L	3%
Russia	861 L	893 L	853 L	834 L	817 L	800 L	783 L	766 L	-2%
South Africa	389 L	407 L	429 L	453 L	473 L	496 L	515 L	536 L	5%
Nigeria	1.126 L	1.159 L	1.199 L	1.237 L	1.270 L	1.302 L	1.342 L	1.382 L	3%
Cameroon	388 L	409 L	434 L	460 L	490 L	522 L	553 L	587 L	6%
Others	1.077 L	1.109 L	1.142 L	1.177 L	1.212 L	1.248 L	1.286 L	1.324 L	3%
Volume Growth	7%	4%	2%	3%	2%	2%	3%	3%	-
Average Price per Liter	0,83 €	0,90 €	0,98 €	1,05 €	1,14 €	1,22 €	1,31 €	1,41 €	8%
Price Growth	-8,2%	8,3%	8,2%	8,0%	7,8%	7,5%	7,4%	7,4%	-
Russia		4,20%	3,90%	4,00%	4,20%	4,40%	4,60%	4,60%	-
South Africa		5,40%	5,30%	5,35%	5,40%	5,45%	5,50%	5,50%	-
Nigeria		16,30%	14,80%	14,70%	14,60%	14,55%	14,50%	14,50%	-
Cameroon		0,70%	1,10%	1,40%	1,60%	1,80%	2,00%	2,00%	-
Others		7,10%	8,10%	7,50%	6,50%	5,50%	4,80%	4,80%	-
Revenue	3.200 €	3.590 €	3.960 €	4.389 €	4.844 €	5.338 €	5.880 €	6.481 €	11%

▪ Cameroon

The overall beer market is projected to grow at a 6% CAGR until 2021, mainly in mid-priced and economics segments due to the negative effect of higher duties. Moreover, once Heineken just exports to the country, loses some control to impose its strategy. Therefore, we expect volumes to grow as fast as the overall market.

▪ Nigeria

Nigeria is facing a significant shift toward more low-priced beers. The market is forecasted to grow at 4% CAGR until 2021. Consequently, we estimate this growth is mainly in low priced beers. In 2016, Heineken held a 66% share of the overall market and 50% of low-priced beers volumes. As present in Figure 33, the market is highly consolidated with the top 3 players accounting for 98.6% of the total volume. As result, we forecast Heineken to capture half of the volume increase, growing at a 2.98% CAGR until 2023.

▪ Russia

Although, the overall beer market has been declining and the forecast is to maintain this trend, we believe the company will increase its sales in the future as consequence of the World Cup event, the permit to advertise and the recent launch of a new low price category. Therefore, we assume the company will growth its volumes and market share in 2017 and in the first half of 2018. However, until 2023 will reduce its volumes at a 1.7% CAGR while the market is forecasted to decrease at a 2.1% CAGR due to the recent launch of a economy brand.

▪ South Africa

Until 2021, the total beer volumes is projected to post a 1% CAGR. The increase in middle-income consumer is forecasted to rise the demand for premium, craft and wheat beer. However, this growth could be affected by stricter legislation aimed to reduce alcohol consumption in the country. In 2016, Heineken was the second biggest player with 10.9% share of the total beer volume. In 2017, Heineken continued to deliver strong growth with volume up double digit. As result, we forecast Heineken to gain market share, particularly in premium segment and by enlarging its portfolio, reaching 13.6% in 2023.

Figure 34: Nigeria's Top 3 Players

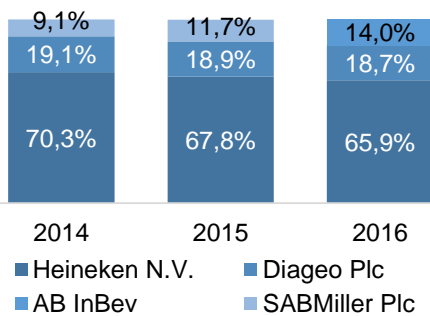
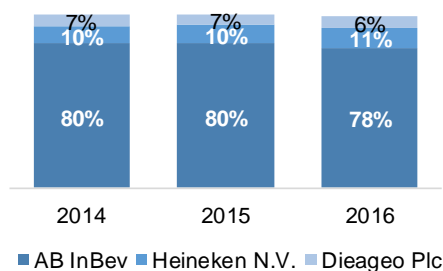


Figure 35: South Africa's Top 3 Players



Source: Euromonitor, Company Shares

DCF Model

We have opted for a Discounted-Cash flow model. We forecasted the Free Cash Flow to the firm for a 5-year period ending in 2023. On the 5th year, we computed a 5-year annuity and then the terminal value. After all these steps,

we discounted all those values at a WACC (Weighted average Cost of Capital). By adding the discounted cash flows and the terminal value and deducting the net debt, we got the equity value.

As Heineken's brewers and workers are spread all over the world, we assumed Raw Materials, Consumables and Services and Personnel Expenses to be a fixed percentage of sales: 62.5% and 15.7% respectively (2016 levels). Furthermore, we forecast depreciation and amortization remain at a constant ratio of assets. In the Base Scenario, we assume Noncontrolling interests to remain constant at 2016 level (7% of Nonconsolidated Investments).

Figure 36

WACC Estimation	
HEIANA 2 14/25 04/19/33	2,56%
Bond's Bid price	105 €
(Bid) Yield to Maturity	2,12%
Moody's Long-term Debt Ratings	Baa1
Probability of Default	0,20%
Recovery Rate	82,80%
Cost of Debt	2,1%
Risk Free (10y Forward)	1,67%
Market Risk Premium	6%
Marginal Tax Rate	25,0%
Beta Levered	0,88
Market Cap (Millions)	50.515,43 €
Historical D/V	19,4%
Beta Unlevered	0,69
Target D/V	20%
Beta Relevered	0,82
Cost of Equity	6,6%
Long-Term WACC	5,61%

In Heineken's consolidated Free Cash Flow, we assumed Operating Working capital in days as percentage of sales. Furthermore, we expect Property, Plant and Equipment to remain 44.4% of sales. Operating intangibles, Operating Differed Tax Liabilities and Other Operating Noncurrent Assets we project to keep as 1.3%, 2.2% and 1.3% of sales, respectively. In addition, we assume Goodwill to keep its value of 11.432 million euro and amortization on acquired will remain at 5% of the existing intangibles.

The terminal value agglomerates all future cash-flows after 2023 and was calculated using the formula: $\text{Free Cash Flow After Goodwill } t-1 \times (1 + g) / \text{WACC} - g$. For the nominal long-term growth rate, we have assumed 1.5% in line the GDP growth rate, weighted by Heineken's regional sales, since just a limited number of companies is able to register a higher growth rate than the overall economy for extended time. In addition, we used WACC, supposing a fixed Debt to Equity ratio of 25%. In 2016, the company had a 0.24 D/E ratio. The cost of equity (R_e) of 6.6% was obtained using the $R_e = r_f + \text{MRP} \times \text{Beta}$. We used a 10y forward of a ten year German Bond (1.67%) as risk free rate, 6% as market risk premium and Heineken's levered beta of 0,88, which was attained by carrying out a regression with Heineken N.V. Stock and MSCI World Index for the past three years with weekly prices. The unlevered beta of 0.7 was obtained using its historical D/V ratio of 20,4% (market values). As present in figure 35, we utilized Heineken's public traded long-term bond, for cost of debt as present in figure. Since, Moody's long term debt rating for Heineken is "Baa1", it has a probability of default (P_d) around 0,202% and a recovery rate of 82.8%. Furthermore, we used, as proxy of the true cost of debt, the market Yield to Maturity (YTM) of the long term. We have chosen the "HEIANA 2 14/25 04/19/33", being a long term bond in euros with a

2.56% annual fixed coupon. Having a current bid price of 105.257€¹², this bond has a 2.12% YTM. This way, $R_d = \text{Yield} - \text{Probability of Default} \times (1 - \text{Recovery Rate})$. Having in account, equity and debt weight of 80% and 20%, we reached a WACC of 5.61%. As this value represents the company's cost of capital, we used it to discount all operating segments.

Multiples

Having in account the market multiples of Heineken's main competitors (World's Top 10 brewers) we can understand if the stock is over or undervalued. Although this valuation method is simpler, it implies significant assumptions. In order to fully compare two or more firms by multiples, they must have the similar structure and composition, which is highly unlikely. However, in order to have a more complete valuation, we completed the subsequent multiples analysis based on last year information (figures 36).

Figure 37

Company	Market Cap (M€)	EV / Revenue	EV / EBITDA	P / E	Forward P / E	ROIC	EBITDA MARGIN
Anheuser-Busch InBev NV	82.978,06 €	6,97	16,28	35,87	23,61	25,5%	43%
Heineken NV	48.902,62 €	3,02	12,43	26,49	19,95	7,8%	24%
China Resources Holdings	7.427,73 €	1,96	14,95	48,88	26,59	7,0%	13%
Carlsberg A/S	14.847,04 €	2,17	10,74	22,64	20,89	6,1%	20%
Molson Coors Brewing Co	14.336,61 €	5,41	17,70	17,43	16,84	4,1%	31%
Tsingtao Brewery Co Ltd	4.963,90 €	1,18	11,91	38,73	26,81	4,8%	10%
Asahi Group Holdings Ltd	20.506,12 €	2,14	17,14	20,03	18,52	5,0%	12%
Beijing Yanjing Brewery Co Ltd	2.149,83 €	1,52	12,63	55,51	31,47	1,4%	12%
Kirin Holdings Co Ltd	18.079,99 €	1,34	11,49	14,98	22,74	5,5%	12%
Industry Average	23.799,10 €	2,86	13,92	31,17	23,05	7,5%	19,7%

Source: Bloomberg

We have chosen some of the world's top nine brewers. If we compare Heineken EV/Revenue with the average of the industry, we verify the company is overvalued. However, if we compare the remaining multiples, Heineken is trading under the average of the industry.

Heineken's undervaluation could be explained by the high amount of debt when compared with its peers. Moreover, by just being the 9th largest player in the world biggest region (Asia Pacific), might be penalizing the company's share price. Lastly, in this industry, where consolidation have been intensifying in the past recent years, smaller players tend to have a premium price associated with the possibility of being an acquisition target.

¹² As of December 29th, 2017 in Bloomberg

Scenarios Analysis

Having in account the uncertainty of Heineken's cash flows, we believe is very important to consider multiples scenarios to reach the company's target price. For our valuation, we considered three different scenarios, "Blue sky", "Bad", both with likely probability of occurrence, and "base", which was developed above.

During the Base Scenario, we forecast no major shocks in the industry. We assumed Heineken remains growing gradually at a modest rate and its capital efficiency and margins keep 2016 levels. We forecast no major shocks in the industry.

▪ Blue sky Scenario

In the Blue Sky Scenario, we project Heineken will improve operations, translating in an increase in its margins. We assumed revenues equal to the base scenario. However, cost of goods sold and personnel cost decrease as percentage of sales. We believe Heineken has potential to increase its margins, not only because they are lower than its main competitor (AB InBev) but also because its global presence and network allows some cost savings. Consequently, we consider personnel cost and raw materials would reduce until in 2023, reaching a 25% EBITDA margin and a 19% EBIT margin. Having in account those assumptions, we reached a target price of 120.06 euros. (Figure 37).

▪ Bad Scenario

In this Scenario, we mainly forecasted a decrease of market share in countries where competition has been increasing. In Nigeria, we verified SAB Miller (nowadays AB InBev) has been growing. As result, we project the Heineken's market share to be 55.4% in 2023, instead of 66% as in 2016. This decrease was calculate having in account the expected decrease of the premium segment as a whole. In addition, although Heineken presence in China is in the super-premium segment, we forecast sales to decline at 1.9% CAGR in line with the overall market due to the increase of competition in this segment. Furthermore, in Mexico, as result of the recent legislation which limits exclusive clients to 20% of the overall clients, we forecast a smaller CAGR of 0.98%. Additionally, due to the increase competition, marketing and sales costs might increase. Therefore, we assume a cost increases of 0.5%. Including all those assumptions, we forecast the price to be 87.74 euros per share in the end of 2018 (Figure 37).

Figure 38

Scenarios	Weight	Target Price
Blue Sky	10%	€ 120,06
Base	80%	€ 98,84
Bad	10%	€ 87,74
Overall Valuation		€ 99,85

Financials

Income Statement

Income Statement										
	2014 H	2015 H	2016 H	2017 E	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F
For the year ended 31 December										
In millions of EUR										
Revenues	19.257	20.511	20.792	22.538	23.864	25.266	26.693	28.296	29.910	31.654
Growth Rate	0%	6,5%	1%	8%	6%	6%	6%	6%	6%	6%
Other Income	93	411	46	-	-	-	-	-	-	-
Total Revenue	19.350	20.922	20.838	22.538	23.864	25.266	26.693	28.296	29.910	31.654
Raw materials, consumables & services -	12.053	12.931	13.003	14.095	14.924	15.801	16.693	17.696	18.705	19.796
% of Revenues	-62,6%	-63,0%	-62,5%	-62,5%	-62,5%	-62,5%	-62,5%	-62,5%	-62,5%	-62,5%
Share of profit of associates and joint ventures and impairments thereof	148	172	150	150	150	150	150	150	150	150
Personnel expenses	- 3.080	- 3.322	- 3.263	- 3.537	- 3.745	- 3.965	- 4.189	- 4.441	- 4.694	- 4.968
EBITDA	4.365	4.841	4.722	5.056	5.345	5.650	5.960	6.310	6.661	7.040
EBITDA Margin	23%	24%	23%	22%	22%	22%	22%	22%	22%	22%
Amortisation, Depreciation and Imp.	- 1.437	- 1.594	- 1.817	- 1.531	- 1.617	- 1.679	- 1.746	- 1.816	- 1.896	- 1.978
Amortisation of Acquired Intangibles	- 288	- 317	- 310	- 310	- 293	- 277	- 262	- 248	- 235	- 222
Amortization Operating Intangibles	- 43	- 51	- 58	- 58	- 63	- 67	- 70	- 74	- 79	- 83
Depreciation of Property, Plant and Equip.	- 1.080	- 1.151	- 1.163	- 1.163	- 1.261	- 1.335	- 1.413	- 1.493	- 1.583	- 1.673
Impairments PPE	- 8	- 71	- 274	-	-	-	-	-	-	-
Impairments Goodwill	- 16	- 4	- 12	-	-	-	-	-	-	-
Impairments of toher Intangibles	- 2	-	-	-	-	-	-	-	-	-
EBIT	2.928	3.247	2.905	3.525	3.728	3.971	4.214	4.494	4.764	5.062
Operational Margin	15%	16%	14%	16%	16%	16%	16%	16%	16%	16%
Interest income	48	60	60	64	88	130	175	221	269	320
Interest expenses	- 457	- 412	- 419	- 398	- 386	- 397	- 408	- 418	- 429	- 440
Other net finance income/(expenses)	- 79	- 57	- 134	- 131	- 128	- 128	- 128	- 128	- 128	- 128
Net finance expenses	- 488	- 409	- 493	- 465	- 426	- 395	- 361	- 326	- 288	- 248
EBT	2.440	2.838	2.412	3.060	3.302	3.576	3.853	4.168	4.476	4.814
Income tax expenses	- 732	- 697	- 673	- 756	- 815	- 883	- 952	- 1.030	- 1.106	- 1.189
Non-controlling interests	- 192	- 249	- 199	- 252	- 272	- 295	- 318	- 344	- 369	- 397
Net Profit	1.516	1.892	1.540	2.051	2.214	2.398	2.583	2.795	3.001	3.228

Balance Sheet

	2014	2015	2016	2017E	2018F	2019F	2020F	2021F	2022F	2023F
For the year ended 31 December										
In millions of EUR										
Assets										
Inventories	1.634	1.702	1.618	1.754	1.857	1.966	2.077	2.202	2.328	2.463
Trade receivables	2.621	2.821	3.004	3.256	3.448	3.650	3.857	4.088	4.321	4.573
Prepayments and accrued income	317	343	328	356	376	399	421	446	472	499
Working cash	385	410	415,8	450	476	504	533	565	597	632
Excess cash	283	2.822	2.619	2.937	4.755	6.628	8.624	10.678	12.843	15.112
Total Current Assets	5.240	8.098	7.985	8.752	10.912	13.147	15.511	17.980	20.561	23.280
Property, plant, and equipment	8.718	9.552	9.232	10.007	10.596	11.219	11.852	12.564	13.280	14.055
Operating intangibles	181	235	267	289	306	324	343	363	384	406
Goodwill and Acquired intangibles	16.160	17.948	17.157	16.847	16.554	16.276	16.014	15.766	15.531	15.309
Goodwill	11.069	12.814	11.432	11.432	11.432	11.432	11.432	11.432	11.432	11.432
Acquired Intangibles	5.091	5.134	5.725	5.415	5.122	4.844	4.582	4.334	4.099	3.877
Reversal of intangibles value adjustment	- 1.257	- 1.429	- 1.346	- 1.423	- 1.495	- 1.563	- 1.628	- 1.690	- 1.748	- 1.802
Cumulative amort. and unrecorded goodwill	4.420	4.741	5.063	5.373	5.666	5.944	6.206	6.454	6.689	6.911
Other Operating Non current assets	254	266	274	297	314	333	352	373	394	417
Non consolidated investments	2.033	1.985	2.166	2.166	2.166	2.166	2.166	2.166	2.166	2.166
Other financial assets	1.298	957	1.134	1.087	1.087	1.087	1.087	1.087	1.087	1.087
Tax loss carry-forwards	177	364	391	391	391	391	391	391	391	391
Total Noncurrent Assets	31.984	34.619	34.338	35.035	35.586	36.177	36.782	37.475	38.175	38.940
Total Assets	37.224	42.717	42.323	43.787	46.498	49.324	52.293	55.454	58.736	62.220
Equity										
Equity attributable to equity holders	12.409	13.535	13.238	14.893	16.332	17.891	19.570	21.387	23.338	25.436
Non-controlling interests	1.043	1.535	1.335	1.385	1.440	1.499	1.563	1.631	1.705	1.785
Cumulative amort. and unrecorded goodwill	4.420	4.741	5.063	5.373	5.666	5.944	6.206	6.454	6.689	6.911
Total Equity	17.872	19.811	19.636	21.652	23.439	25.333	27.339	29.472	31.732	34.131
Liabilities										
Short-term debt	2.266	4.347	3.650	3.650	3.650	3.650	3.650	3.650	3.650	3.650
Trade payables	2.339	2.797	2.934	3.180	3.368	3.565	3.767	3.993	4.221	4.467
Dividends payable	45	46	45	41	44	48	52	56	60	65
Interest payable	132	131	129	118	122	125	145	164	168	188
Accruals and deferred income	1.211	1.270	1.263	1.369	1.450	1.535	1.621	1.719	1.817	1.923
Other current operating liabilities	2.092	2.059	2.130	2.309	2.445	2.588	2.734	2.899	3.064	3.243
Total current liabilities	8.085	10.650	10.151	10.667	11.078	11.512	11.970	12.480	12.980	13.535
Long-term debt	9.499	10.658	10.954	9.729	10.123	10.495	10.873	11.245	11.623	11.995
Retirement-related liabilities	1.443	1.289	1.420	1.539	1.630	1.726	1.823	1.933	2.043	2.162
Nonoperating provisions	401	342	357	357	357	357	357	357	357	357
Restructuring Provisions	162	132	99	99	99	99	99	99	99	99
Nonoperating deferred tax liabilities (assets)	- 746	- 692	- 744	- 744	- 744	- 744	- 744	- 744	- 744	- 744
Operating deferred tax liabilities	508	527	450	488	516	547	578	612	647	685
Total Noncurrent Liabilities	11.267	12.256	12.536	11.468	11.982	12.479	12.985	13.502	14.025	14.554
Total Liabilities	19.352	22.906	22.687	22.135	23.060	23.990	24.955	25.982	27.004	28.089
Total Liabilities and Equity	37.224	42.717	42.323	43.787	46.498	49.324	52.293	55.454	58.736	62.220

Consolidated Free Cash Flows

Consolidated Free Cash Flow	2014H	2015H	2016H	2017E	2018F	2019F	2020F	2021F	2022F	2023F
For the year ended 31 December										
In millions of EUR										
NOPLAT	2.039	2.103	2.120	2.531	2.684	2.866	3.048	3.258	3.461	3.684
Depreciation and Amort. of Operating Intangibles	1.581	1.437	1.594	1.817	1.531	1.617	1.679	1.746	1.816	1.896
Gross Cash Flow	3.620	3.540	3.714	4.348	4.215	4.483	4.727	5.004	5.276	5.580
Δ Operating working capital	106	165	111	82	61	65	66	74	75	81
Δ Net property, plant, and equipment	(1.353)	(1.922)	(902)	(2.212)	(1.752)	(1.883)	(1.968)	(2.125)	(2.209)	(2.357)
Δ Operating intangibles	0	(97)	(83)	(80)	(75)	(81)	(85)	(91)	(95)	(101)
Δ Operating deferred tax liabilities	(9)	19	(77)	38	29	30	31	35	35	38
Δ Other Operating noncurrent assets	47	(12)	(8)	(23)	(17)	(18)	(19)	(21)	(21)	(23)
Gross Investment	(1.209)	(1.847)	(959)	(2.196)	(1.754)	(1.887)	(1.975)	(2.129)	(2.216)	(2.363)
Free Cash Flow Before Goodwill	2.410	1.693	2.755	2.152	2.460	2.595	2.752	2.875	3.060	3.217
Δ Goodwill and acquired intangibles	(899)	(2.094)	470	(12)	(17)	(16)	(15)	(14)	(13)	(13)
Δ Cumulative amort. and unrecorded goodwill	304	321	322	310	293	277	262	248	235	222
Δ Reversal of intangibles value adjustment	23	172	(83)	77	72	69	65	61	58	55
Free Cash Flow After Goodwill	1.838	92	3.464	2.527	2.809	2.925	3.064	3.171	3.339	3.481
Non-Operating Profit After Tax	(24)	302	(111)	23	26	27	28	29	30	31
-Δ Excess cash	623	(2.539)	203	(317)	(1.818)	(1.873)	(1.996)	(2.055)	(2.165)	(2.269)
-Δ Nonconsolidated investments	(150)	48	(181)	0	0	0	0	0	0	0
Δ Other financial assets	(715)	341	(177)	47	0	0	0	0	0	0
Δ Tax loss carry-forwards	43	(187)	(27)	0	0	0	0	0	0	0
Δ Nonoperating deferred tax liabilities	(151)	54	(52)	0	0	0	0	0	0	0
Δ Postretirement Benefit liabilities	241	(154)	131	119	91	96	97	110	110	119
Δ Other nonoperating provisions	27	(59)	15	0	0	0	0	0	0	0
Δ Restructuring Provisions	(2)	(30)	(33)	0	0	0	0	0	0	0
Non-Operating Cashflow	(108)	(2.224)	(233)	(128)	(1.701)	(1.751)	(1.871)	(1.917)	(2.025)	(2.119)
FCF to the firm	1.731	(2.132)	3.231	2.399	1.108	1.175	1.194	1.254	1.314	1.362
Δ Debt Interest After Tax	(307)	(264)	(269)	(251)	(224)	(200)	(175)	(148)	(120)	(90)
Δ Short-term debt	(107)	2.081	(697)	0	0	0	0	0	0	0
Δ Long-term debt	(354)	1.159	296	(1.225)	395	371	378	372	378	373
Δ Interest Payable	(56)	(1)	(2)	(11)	3	3	20	19	4	20
Δ Dividends payable	9	1	(1)	(4)	3	4	4	4	4	5
Cashflow to Debtholders	(815)	2.976	(673)	(1.491)	178	178	227	247	266	307
Dividends	(512)	(676)	(786)	(718)	(775)	(839)	(904)	(978)	(1.051)	(1.130)
Net Change in Equity (in Cash)	(189)	(339)	(1.250)	70	(272)	(295)	(318)	(344)	(369)	(397)
Noncontrolling Interest	89	492	(200)	50	54	59	64	69	74	79
-Δ Cumulative amort. and unrecorded goodwill	(304)	(321)	(322)	(310)	(293)	(277)	(262)	(248)	(235)	(222)
Cashflow for equity holders	(916)	(844)	(2.558)	(908)	(1.286)	(1.353)	(1.421)	(1.501)	(1.581)	(1.669)
Cashflow available to investors	(1.731)	2.132	(3.231)	(2.399)	(1.108)	(1.175)	(1.194)	(1.254)	(1.314)	(1.362)

Valuation

Valuation	2016	2017 E	2018F	2019F	2020F	2021F	2022F	2023F	2024-2028	Terminal Value
For the year ended 31 December										
In millions of EUR										
Value of Operations	62.847	62.909	63.912	64.689	65.394	65.999	66.531	66.925	67.198	85.958
Excess Cash	2.619	2.937	4.755	6.628	8.624	10.678	12.843	15.112	15.112	15.112
Nonconsolidated investments	2.166	2.166	2.166	2.166	2.166	2.166	2.166	2.166	2.166	2.166
Other financial assets	1.134	1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087	1.087
Tax loss carryforwards	391	391	391	391	391	391	391	391	391	391
Total Enterprise Value	69.157	69.490	72.311	74.961	77.661	80.321	83.018	85.681	85.955	104.714
Short-term debt	3.650	3.650	3.650	3.650	3.650	3.650	3.650	3.650	3.650	3.650
Long-term debt	10.954	9.729	10.123	10.495	10.873	11.245	11.623	11.995	11.995	11.995
Interest Payable	129	118	122	125	145	164	168	188	188	188
Dividends payable	45	41	44	48	52	56	60	65	65	65
Debt and Equivalents	14.778	13.538	13.940	14.318	14.720	15.115	15.501	15.898	15.898	15.898
Noncontrolling interests	1.335	1.385	1.440	1.499	1.563	1.631	1.705	1.785		0
Equity (@Market)	53.044	54.567	56.931	59.145	61.379	63.575	65.812	67.999	70.057	88.816
Outstanding Shares		576	576	576	576	576	576	576	576	576
Current Share Price		€ 87,70								
Expected Share Price		€ 94,73	€ 98,84	€ 102,68	€ 106,56	€ 110,37	€ 114,26	€ 118,05	€ 121,63	€ 154,19
Expected Capital Gain (%)			13%							
Expected Capital Gain (Euro)			11,14 €							
Shareholders' Cash in/out (% per share)			1,4%							
Shareholders' Cash in/out (euro)			€ 1,25							
Total Shareholders Expected Return (Euro)			12,38 €							
Total Shareholders Expected Return			14%							
"True" Recommendation			BUY							
Recommendation (Research Notes)			BUY							

Disclosures and Disclaimers

Report Recommendations

Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
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