DANGOTE CEMENT PLC

COMPANY REPORT

BUILDING MATERIALS

8 JANUARY 2016

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Trying to keep margins…

..while expanding abroad

- **We start our coverage of Dangote Cement Plc with a SELL recommendation** based on a FY2016 Price Target of NGN 139.50 per share, corresponding to a total return of -11.52%, already accounting for a dividend yield of 5.76% in FY2016. Our PT was achieved trough and APV valuation performed for four different future scenarios.

- **Deterioration in Nigerian macroeconomic environment present a real challenge for cement producers in the near future.** An estimated decrease in cement consumption of -3.5% yoy in 2015 left the industry with more than 20 million tons of excess capacity, increasing competitive pressure in the country.

- **Operations outside Africa continue to increase its contribution to consolidated results.** We expect volumes outside Nigeria to reach 5.6mt in 2015 and grow at a CAGR of 13.2% until 2024. However, margins will tend to decrease over time, as operations are less cost-efficient.

- **We see as down side risks** the expansion strategy risks and a potential further decrease in global oil prices.

Company description

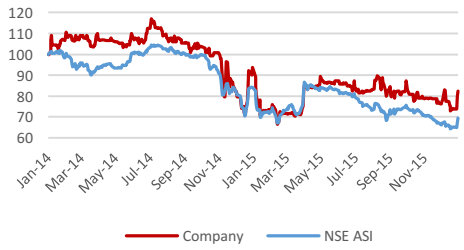
Dangote Cement Plc (DCP) is a cement manufacturer headquartered in Lagos, Nigeria and the largest company traded on the Nigerian Stock Exchange. Dangote Cement is a fully integrated quarry-to-depot producer and distributor of cement and related products in Nigeria, West and Central Africa and East and South Africa. Dangote Cement is currently Nigeria's largest cement manufacturer and operates in 7 other African countries.

Recommendation:	**SELL**
Price Target FY16:	**139.50 NGN**
Price (as of 8-Jan-16)	**170.00 NGN**

Reuters: DANGCEM.LG, Bloomberg: DANGCEM:NL

52-week range (NGN)	137.17-193.33
Market Cap (NGNm)	2,675,530
Outstanding Shares (m)	17,041
Free float shares (%)	8.91

Source:Bloomberg



Source: Bloomberg

(Values in NGN millions)	2014	2015E	2016F
Revenues	391,639	481,016	591,537
EBITDA	223,368	262,730	278,950
Net Profit	159,502	186,451	186,922
Profit Margin	41%	39%	32%
EPS	9,42	10,93	10,80
DPS	6,00	6,96	8,10
ROIC	22%	24%	21%
P/E (implicit)	12,54	11,8	13,2

Source: Analyst's estimates, company data

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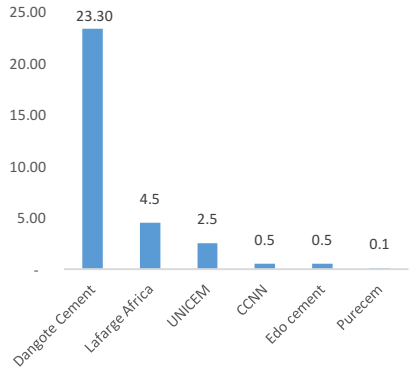
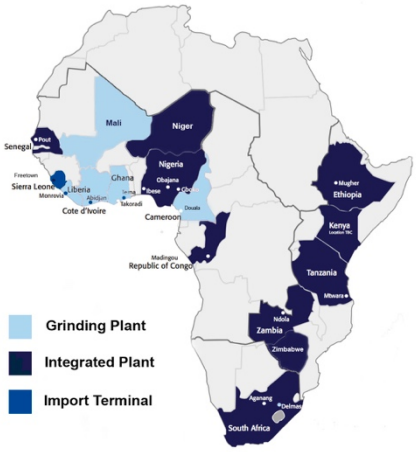
Figure 2-Installed capacity in Nigerian cement market by company in 2014 (mtpa)



Source: Companies data

Figure 3- Dangote Cement's expansion plan announced in Aug. 2015



Source: Company data

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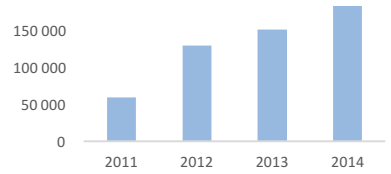
Company description

Dangote Cement is a subsidiary of Dangote Industries Limited, the largest industrial conglomerate in Africa, with interests in a wide range of industries, like cement manufacturing, salt and sugar refining, pasta manufacturing and real state, among others. Dangote Cement is however, the largest company of the group, accounting for more than 80% of the group's total market capitalization. The company was founded in 1992 by the current chairman, Aliko Dangote, the wealthiest individual in Africa according to *Forbes*, and was originally named Obajana Cement Plc, but it changed its name to Dangote Cement Plc in July 2010 before it was listed on the Nigerian Stock Exchange (NSE) later that year, in October. Today, the company is a major player in the African cement industry, employing more than 10 thousand people across 8 African countries, divided in three business segments: Nigeria, West and Central Africa and East and South Africa. Dangote Cement Plc is currently the largest company traded on the NSE, with a market capitalization of NGN 2.68tn (US$13.4bn), as of December 2015.

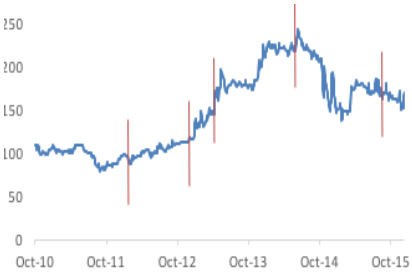
Until 2011, the company operated exclusively in Nigeria, through Obajana and Gboko plants, having a total production capacity of 8.2 million tons per annum (mtpa). Since then, Dangote Cement has incurred in an aggressive expansion project across Africa. This expansion plan comprises both green field and brown field investments, depending on the countries' specifications. Target countries are analyzed and selected according to local market characteristics (cement consumption, growth potential, competitors, neighboring countries demand), investment and political environment and raw materials reserves. In most cases, Dangote opted for the construction of brand new facilities, in other countries, like South Africa, it preferred a joint venture with a local, already established, cement operator.

Figure 4 - DCP's yearly CAPEX (NGN)



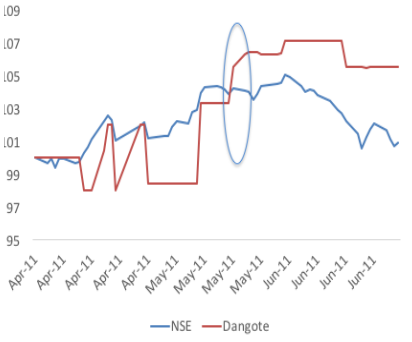
Source: Company data

Figure 5 - DCP's stock price and major investment announcements (NGN)



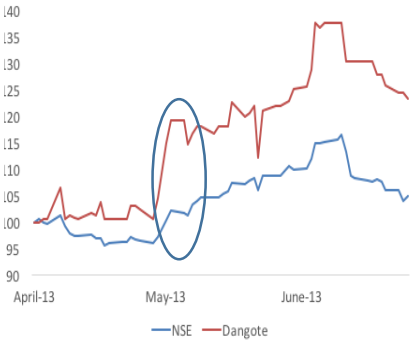
Source: Bloomberg, Company data

Figure 6 - DCP and NSE cumulative return from April to Jun 2011



Source: Bloomberg, Company data

Figure 7 - DCP and NSE cumulative return from April do June 2013



Source: Bloomberg, Company data

In August 2015, the company announced a reinforcement of its expansion plan and signed a US$ 4.34bn contract with the Chinese construction company Sinoma International Engineering Co. Ltd for the construction of 11 new cement facilities in Africa and Nepal!

The first step of the expansion project was the opening, in 2012, of the Ibese plant in South West Nigeria, with 6mtpa capacity, and the addition of a 5mtpa production line to Obajana, making it the largest in Sub-Saharan Africa with a total capacity of 10.25mtpa. Later, in 2014, Dangote built a new production line in Gboko and began manufacturing cement outside Nigeria, through a joint venture with Sephaku Cement Company in South Africa. 2015 was a year of massive expansion for the company, with new plants being commissioned in Senegal, Cameroon, Zambia, Ethiopia and Tanzania representing an increase of 58% of production capacity, from 27.25mtpa to 43.25mtpa.

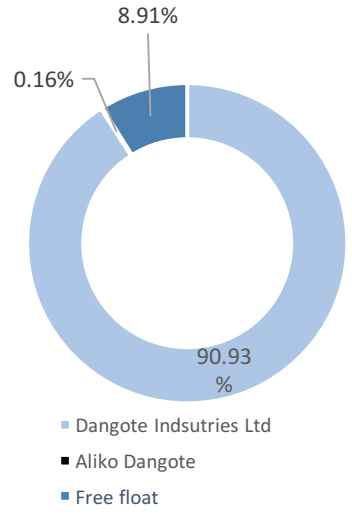
This expansion program led to a significant increase in Capital Expenditures from NGNm 59,362 in 2011 to NGNm 217,192 in 2014, corresponding to a CAGR of 54.1%. To finance these investments, Dangote has increased net debt (from NGNm 128,893 to NGNm 221,988, corresponding to a CAGR of 19.9%) and the reinvestment rate, that grew from 34.9% in 2011 to 113% in 2014. In the same way, payout ratio decline in 2011 from 29% in 2010 to 16% in 2011, increasing progressively afterwards.

Analysing the market reaction to Dangote's main investment announcements, we can see that from the six main announcements selected, only two seem to have triggered a response, with Dangote's stock returns increasing and deviating significantly from the NSE All Share Index. These announcements were: (1) the first in April 2011 when the company announced its first African expansion program, with stock prices increasing 4% in one week and 9% in the 4 weeks after the announcement (figure 6); and (2) in May 2013 when the beginning of the Tanzanian plant (which will believe will be a key market for Dangote) was announced, with stock price increasing 12.9% in the week that followed the declaration (figure 7). These results show that although the expansion program seems to have added value in the past, for now, the markets are not valuing the latest announcements.

Shareholder structure

Dangote Cement's shareholder structure has remained fairly constant over the last few years. Since the bonus share issue in 2011, when the company issued 1 bonus

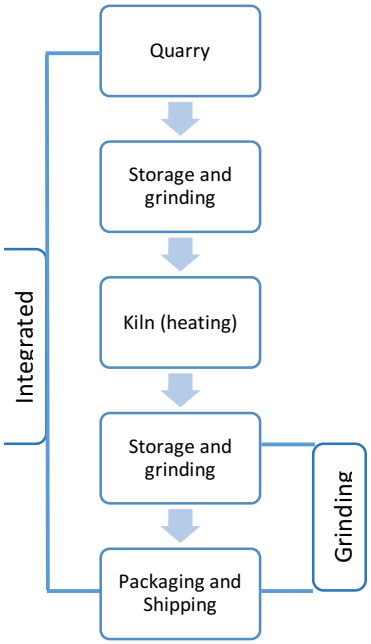
Figure 8 - DCP shareholder structure



Source: Company data

share against every 10 shares hold by the shareholders, Dangote has 17,040,507,404 outstanding shares with a NGN 0.5 face value. All shares are ordinary and of the same class, carrying the right to one vote at the Company's Annual General Meeting. There are currently around 40.000 shareholders, being the parent company, Dangote Industries Limited (DIL) the largest, holding 90.93% of ordinary shares. The chairman, Aliko Dangote, holds 0.16% of shares and is also the owner and CEO of DIL, thus having great control over Dangote Cement. All the remaining 8.91% of ordinary shares are free floating. The low percentage of free float shares, allied with a general low liquidity of the Nigerian Stock Exchange (NSE), give Dangote's stock a low liquidity for international standards, with a daily 6-months average volume of traded shares of 836.254, only 0.005% of total outstanding shares, well below global competitors like LafargeHolcim (0,31%), HeidelbergCement (0,36%) or even local peers like LafargeAfrica (0,03%) and CCNN (0,02%), companies with percentages of free float shares of 29,8% and 100%, respectively. However, if we look at the average value traded daily in the last 6 months, we see that in Nigeria, only Lafarge has a higher value than Dangote (USD 839,339 vs USD 703,415, respectively). The data highlights that, in spite of the low free float rate does in fact create liquidity issues, illiquidity is more a general problem in the NSE than a Dangote's stock specific issue.

Figure 9 - Cement manufacturing process



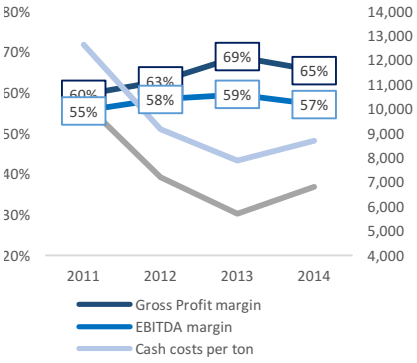
Business structure

Dangote Cement participates in all stages of the cement value chain, from the extraction of raw materials to packaging and shipping of cement. So, to fully understand Dangote's business, it's essential to have a complete knowledge of the manufacturing process of Portland cement, the most common type of cement in the world, and the only one produced by Dangote.

The company operates three different types of facilities: **Integrated plants, Grinding plants** and **Import terminals**. Integrated plants include all the manufacturing process, while the Grinding plants do not incorporate the extraction, grinding and heating of raw materials. These factories rely on the import of clinker (a sub product of the manufacturing process) from other plants, that is later grinded and mixed with gypsum. In import terminals, the imported cement is just packed in 50kg bags or poured in trucks to deliver to the final customer.

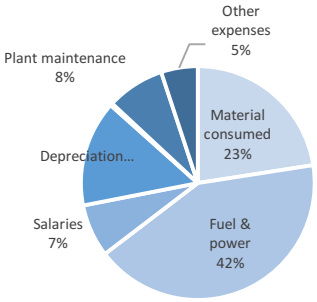
Dangote produces two different varieties of cement: 32.5R grade cement, the cheapest and most popular type, and 42.5R grade cement, sold under the brand "Dangote 3X Cement", a more resistant cement, used for multi-story buildings construction. Although the two types of cement have some differences, namely in

Figure 10 - DCP profitability measures and costs (NGN)



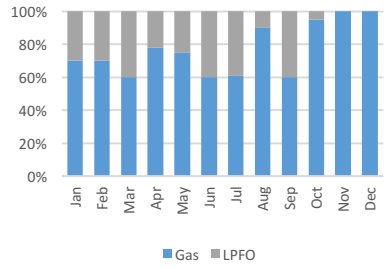
Source: Company data

Figure 11 - DCP cost of sales breakdown



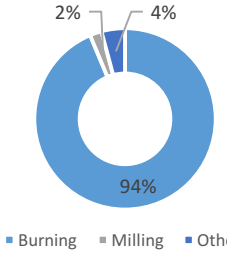
Source: Company data

Figure 12 – Fuel utilization in 2014 in Obajana plant



Source: Company data

Figure 13 - Fuel consumption by manufacturing stage

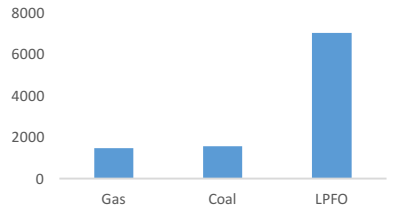


Source: BPI Capital Africa research

the clinker size, the production process is essentially the same for both 32.5 and 42.5 cement.

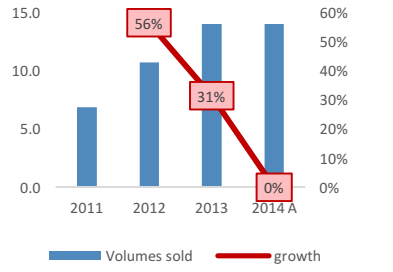
Portland Cement is composed by four basic elements: calcium, silicon, aluminium and iron. The latter three elements can be easily found in sand and clay, however, calcium must be obtained from limestone. Since large quantities of limestone are required for the manufacturing process, Dangote strategically builds its integrated factories near limestone quarries, to ensure a constant availability of the raw materials. These raw materials are then blended in the right proportion and grinded into powder that is then introduced in the kiln. The kiln is the heart of the cement making process and it's present only in **Integrated Plants**. It consists in a giant cylindrical steel oven that reaches temperatures as high as 1500ºC, transforming the raw materials into clinker. This stage is the most energy consuming of the whole manufacturing process, which, considering that fuel and power expenses accounted for more than 40% of total cost of sales in 2014, makes fuel price a key cost driver. Dangote Cement uses three different types of fuel in its plants: natural gas, coal and low pour fuel oil (LPFO). Natural Gas is the cheapest among the three and is the primary fuel used in the majority of Dangote's integrated plants, including Obajana and Ibese. Nevertheless, natural gas has some availability issues in Nigeria, and Africa in general, and so, the company relies on the other fuels as alternatives. Originally, Dangote's plants were built to use LPFO as the primary alternative, in fact, Gboko used exclusively LPFO until this year. However, since LPFO is about 4x more expensive than gas per ton of finished cement, production costs boosted every time there was a disruption in natural gas supply. This exposure to natural gas supply is particularly evident in years of very poor gas availability, like 2014. Disruptions in gas supply led Dangote and other companies to a massive fuel switching, depleting national reserves of LPFO and forcing Dangote to import even more expensive LPFO from abroad. Consequently, fuel & power costs rose by 29%, the first increase over the 2011-2014 period, impacting the company's profitability in 2014. In order to decrease its dependence on LPFO and the consequent production costs volatility, the company began in 2014, a modernization process, to switch its back-up fuel to coal that included the construction of coal mills in Obajana, Ibese and Gboko plants, increasing the use of coal from zero in 2014 to 9% in 9M 2015 and decreasing the use of LPFO to only 7%. The strategy has already started to pay off, reducing the fuel bill in Nigeria by 35.2% in the first nine months of 2015. According to our rough estimates, based on the Obajana gas contract established in 2011, the current international coal prices and data provided by BPI Capital Africa regarding energy consumption in Nigeria cement industry, we estimate that fuel costs per ton of cement in the Obajana plant should be around NGN 1,500 for both natural gas and coal, and

Figure 14 - Price of finished ton of cement by fuel type



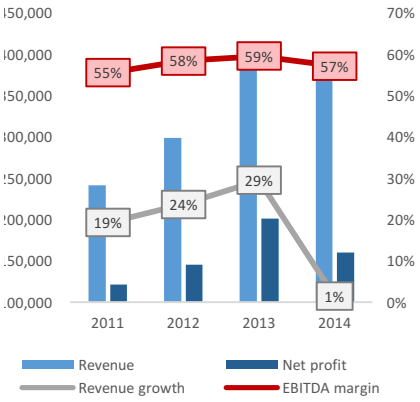
Source: Analyst estimates, BPI capital Africa researvh

Figure 15 - DCP volumes sold and volumes growth rate (mtpa)



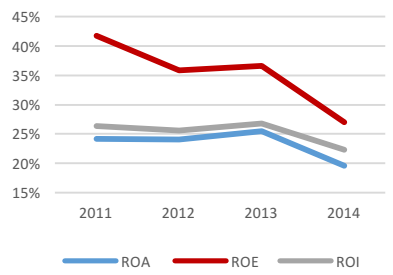
Source: Company datat

Figure 16 - DCP revenue, net profit and EBITDA margin (NGNm)



Source: Company data

Figure 17 - DCP return measures



Source: Company data

NGN 7000 for LPFO, 4.9x times higher. However, as the coal price continues to fall, it may be the cheapest fuel in the near future. Although these are rough estimates, the results are in line with the fuel and power costs per ton verified in the last years (NGN 3,644 and NGN 4,714), taking in consideration that Ibese gas contract is not so favourable and that until 2015 Gboko used exclusively LPFO.

Grinding plants cover only the last two steps of the cement manufacturing process. This kind of facilities are not so dependent on the fuel price, since they don't have a kiln incorporated. On the other hand, a low cost of imported clinker is critical for the profitability of these factories.

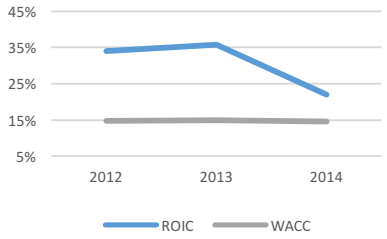
Sea transportation of cement is the cheapest way to trade cement world-wide. So, Dangote is building bulk cement **import terminals** near ports**,** in countries with a shortfall of cement supply, but where there aren't adequate limestone reserves or the investment policies are not favourable for the construction of manufacturing plants. At the terminals, the cement that was previously shipped from another Dangote's plant, can be directly extracted from the ships and bagged or poured into trucks. The only terminal that is currently operating is located in Tema, Ghana, due to delays in the construction of terminals in Sierra Leone and Liberia that were caused by the Ebola crisis in the region.

Historical performance

Dangote Cement was particularly successful from 2011 to 2013, experiencing significant growth in revenue and profitability. During this period, revenue, EBITDA and net profit grew at a CAGR of 26%, 31% and 29%, respectively. This was caused by an organic growth in volumes sold in Nigeria. Operations outside Nigeria had little to no impact on DCP's performance, representing only 4% of revenues and having a negative EBITDA. Start-up costs in Senegal and Cameroon and the devaluation of the Ghanaian Cedi were the main causes of this poor performance. Volumes sold in Nigeria increased at a CAGR of 43% more than doubling, rising from 6.83 mtpa in 2011 to 14.01 mtpa in 2013.

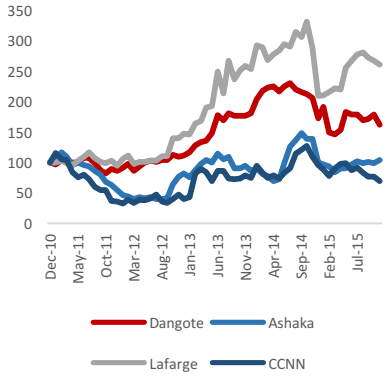
2014 was a year of stagnation for DCP after 3 years of impressive growth. The company recorded a marginal increase in revenues of 1.41%, from NGN 386,17bn to NGN 391,64bn, still above its competitors, that experienced revenue drops between 3% and 0.1% Dangote's poor performance was mainly due to the zero growth in revenue from Nigeria, caused by a sharp decrease in prices combined with a 11% increase in cost of sales, consequence of several disruptions in natural gas supply. In addition, the end of tax holidays in some of Dangote's production lines in Nigeria, led to an income tax of NGN 25.19bn, when in 2013, the company benefited from a tax credit of NGN10.44bn. All these factors

Figure 18 - DCP return on invested capital and average cost of capital



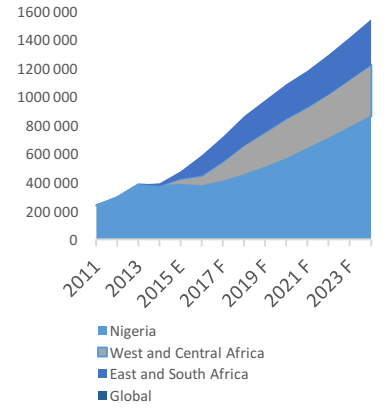
Source: Company data, analyst estimates

Figure 19 - Stock cumulative returns



Source: Bloomberg

Figure 20 - DCP revenue forecasts by region



Source: Analyst estimates

contributed to a depression in DCP's net earnings in 2014, that decreased by 21%, from NGN 201.20bn to NGN 159.50bn. Cash flows were also affected, dropping to negative ground for the first time in the 2011-14 period, reaching a low of NGN -41,121m in 2014 from NGN 151,066m in 2013.

Returns on Assets, Equity and Investment all significantly in 2014 to 20%, 27% and 22% respectively, the lowest values in the 2011-14 period. In the same way, ROIC decreased in 2014 to 22% from 36% in the previous year. Despite this, Dangote was able to maintain a ROIC superior to its average cost of capital (14.6% in 2014).

In terms of stock's performance, Dangote cement presented a cumulative return of 55% from beginning of 2011 to end of 2015, the second best performing stock among its three competitors. However, Lafarge presented a much impressive cumulative return of 142% over the same period.

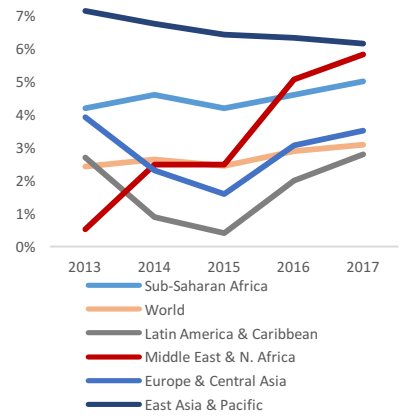
Segment analysis

Dangote Cement Plc is currently divided in three distinct business units: (1) Nigeria, (2) West & Central Africa and (3) East & South Africa.

In 2014, Nigeria represented more than 90% of total revenues and 88% of the Dangote's production capacity, but this situation has already started to change in the first 9 months of 2015, with Nigeria revenue weighting "just" 81% on group's total. We predict that this trend will continue as the company continues to pursue its ambitious expansion plan across Africa, with Nigeria weight reaching a low of 51% in 2019.

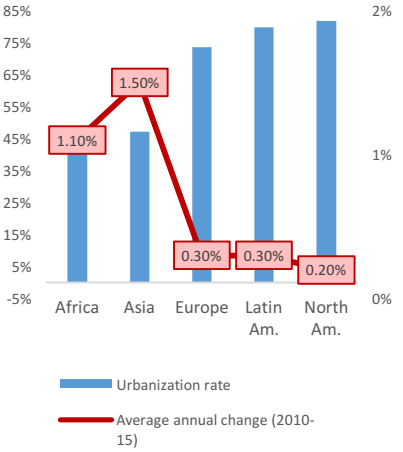
Dangote's expansion in the continent aims to exploit the favourable macroeconomic environment in Sub-Saharan Africa while relying on economies of scale and state of the art production plants to succeed in the new markets. The region is one of the fastest growing in the planet with forecasted average real GDP growth of 4.50%pa, only behind Asia-Pacific (6.31%pa). Moreover, and although Africa has the lowest urbanisation rate in the world (40%), urban population has registered an average annual growth of 1.1% between 2010-15, a rate only lower than in Asia (1.5%) is expected to grow more than 190% until 2050, more than any other continent! In addition, a fast-growing population and the increase in public investments in several countries make Africa, and the Sub-Saharan region in particular, particularly attractive for cement manufacturers.

Figure 21 - Real GDP growth by region



Source: World Bank

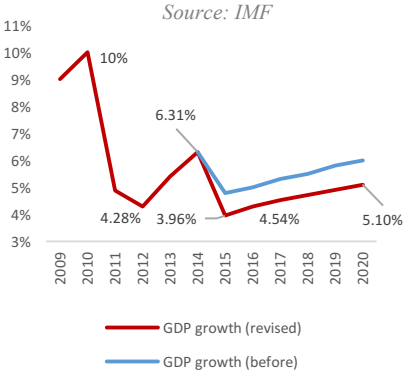
Figure 22 - Urbanization rate and annual growth in urban population in 2014 by region



Source: United Nations

Figure 23 - real GDP growth forecasts in Nigeria

Source: IMF



There are however significant risks associated with Dangote's strategy. First, the widespread expansion may create significant managerial problems for the company. Second, the company's competitive advantage in Nigeria may not be easy to replicate in other countries. This can occur not only because non-Nigerian operations are not so cost-effective but also because Dangote, given its importance in the country, has been able to influence government policies in Nigeria, which may not happen in other markets. However, to minimize this risk, Dangote's aims to be industry leaders, in terms of market share, in all markets in order to increase its influence in policies. Finally, and although every country has its specific characteristics, there are some issues common to several nations in the continent. High inflation, currency devaluation, terrorism, corruption and the impact in commodities exporting countries of price drops and decrease in demand from China, are some of most common risks in Africa. All these risks, as well as potential market opportunities, will be analysed in this section for Nigeria and other key markets for Dangote.

Nigeria

Even though the importance of Nigeria within the group is expected to diminish over time, it represented around 80% and, according to our estimates, it will still represent 56% in 2024. Thus, it's critical to analyze in-depth the cement market in the country and the macroeconomic prospects for the future.

Dangote currently operates three integrated plants in the country, (1) Obajana, (2) Ibese and (3) Gboko, with a combined production capacity of 29,25 mtpa. The plants are near limestone reserves expected to last 44, 77 and 29 years, respectively. According to management, a new 6 mtpa plant is planned to open in 2018.

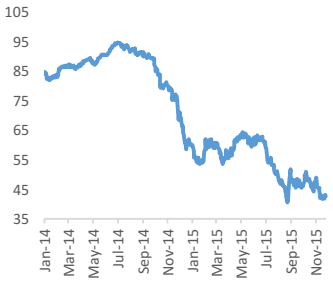
▪ Macroeconomic and political scenario[1]

Being a country significantly dependent on the oil industry (accounting historically for around 70% of fiscal revenue) it is critical to have a complete understanding of the recent trends in the oil industry as well as future expectations:

The economic slowdown in China and a stagnated Europe have negatively impacted oil demand in 2014. However, Saudi Arabia, that has the largest and cheapest reserves in the world, in order to protect its market share continued its production leading to a drop in WTI crude prices from a peak of $94.58/bbl in July 2014 to $40.37/bbl in August 2015. In the short to medium term, oil prices are

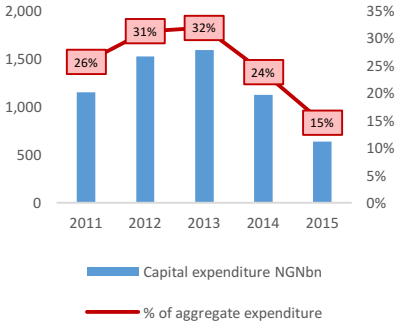
[1] IMF, World Economic Outlook, October 2015
NKC African Economics, Nigeria quarterly update September 2015

Figure 24 - WTI Crude Oil Prices (USD)



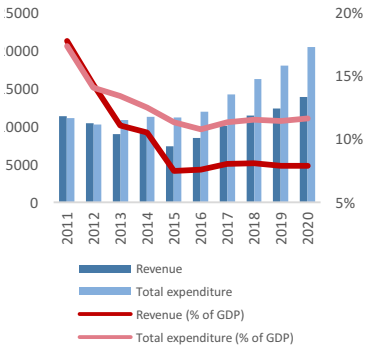
Source: Bloomberg

Figure 25 - Capital expenditure in Nigeria



Source: National Bureau of Statistics

Figure 26 - Nigerian government revenue and expenditures



Source: IMF

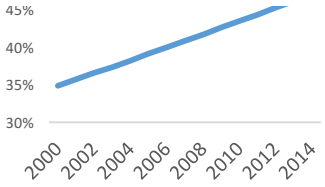
expected to remain at the recent low level or even to drop further. In December, the IMF updated the probability of WTI crude barrel price falling below $30 in the next 12 months to 24% from 7%, and the probability of Brent price falling below $30 to 19% from 6%. The fund forecasts an average per barrel price of $42.0 for 2016, $48.2 for 2017 and $52.5 for 2018. These projections are in line with other institutions' estimates like the World Bank or the US Energy Information Agency. Besides the already discussed causes for low oil prices, Iran may play a crucial role in the industry in the near future. If Iran respects the nuclear agreement with UN, the exports ban imposed to the country may be suspend already in 2016. In this way, Iran (that has 9.3% of global reserves) can immediately export its 40 million barrels of floating storage reserves and in the medium to long-term can reach its 2011 production levels of 3.6 million barrels per day, 4% of global oil consumption. In addition, the rising tension between Iran and its political rival Saudi Arabia can decrease oil prices even further. Saudi Arabia has the incentive to drive prices down in order to not only protect its market share but also to decrease Iran's oil revenues. However, it is worth mentioning that if this tension in the Middle East escalates for a armed conflict, then the effect on oil prices will be the opposite, with prices increasing, given the importance of Saudi Arabia (and Iran) in global oil supply.

The oil price plunge has had a negative impact on the Nigerian economy, that is now facing some challenges in the **short to medium term**. The country has experienced in 2015 a **slowdown in economic growth**, that was particularly evident in 2015 1Q, due to a nationwide anxiety around the general elections that were held in May. Although there was some recovery in the periods that followed, in October, the IMF has revised downward its GDP growth outlook for Nigeria. Real GDP growth projections lowered from 4.8% for 2015 and a CAGR of 5.49% until 2020, to 4.0% and 4.71%, respectively. A significant slowdown, considering that from 2009 to 2014, real GDP grew at a CAGR of 6.15%. These new estimates already account for the negative impact of the widely expected low oil prices in the medium term, both in the private and public sectors of the economy. The sharp decrease in revenue from the oil sector has seriously **weaken government fiscal position**. In 2015, total government revenue should drop 22.5% yoy to NGN 7,351bn (7% of GDP, compared to 11% in 2014 and an average of 13% since 2011), and altough it's expected to increase at a CAGR of 13.43% until 2020, it should only achieve 2011's level in 2018 and should not represent more than 8% of GDP until the end of the decade. In consequence of this revenue decline, the fiscal deficit should reach 3.4% in 2015, from 2.3% in 2014, and consequently increasing public debt, in spite of the government spending adjustment. Budgeted government capital expenditure, that has a direct impact on the cement industry,

Figure 27 - Political Risk by country

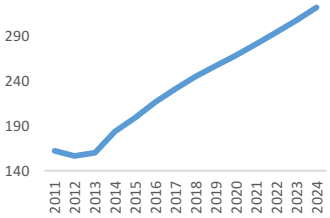
Source: NKC African Research

gure 28- Percentage of urban pulation in Nigeria



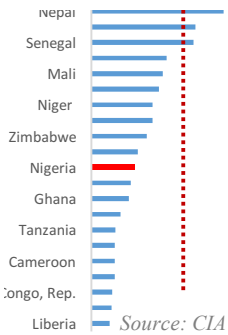
Source: World Bank

igure 29 – US dollar/ Nigerian Naira xchange rate



Source: Bloomberg

igure 30 - Percentage of paved roads by ountry



Source: CIA World Factbook

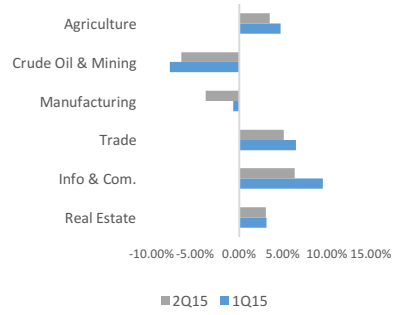
has dropped 43% yoy in 2015, representing now only 15% of the annual budget, against a four-year average of 28%. Total expenditure is also expected to contract by 1% to NGN 11,136bn, representing 11% of GDP, against an average of 14% during 2011-2014 and should keep around 11% or 12% until 2020.

All three tiers of Nigerian government (local, statal and federal) have been afected, causing delays or even the cancelation of several public construction projects, an important source of revenue for the cement industry. The financial situation is so fragile, that in some states, the state is owing salaries to public servants for more than 6 months. To worsen the scenario, JPMorgan has recently ejected Nigeria from its government bond index due to inexistence of a fully functional forex market and limited transparency. This decision can not only cause significant portfolio outflows, but it can also increase government borrowing costs, adding extra pressure on the fiscus.

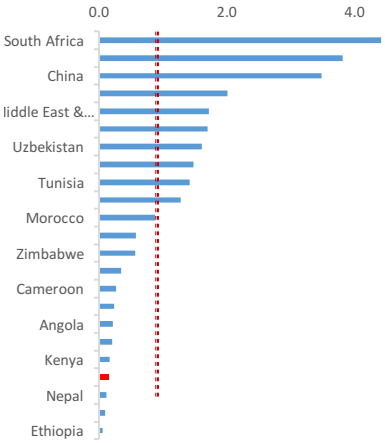
Another factor that contributed to the economic growth slowdon in Nigeria is the **erratic energy supply,** that affects the supply of electric energy**,** with population connected to the electric grid experiencing some type of problem 60% of the times, according to Aliyu, Ramli & Saleh, (2013), and the natural gas supply. Although 2015 was not as problematic as the previous year, disruptions in gas supply should continue to affect the country over the next few years, given the deficiencies of the production and supply infrastructures. The cement industry is particularly sensitive to this issue, considering the significantly higher costs of gas alternatives. Furthermore, gas contracts are linked to US dollar, leaving cement companies vulnerable to naira devaluation.

Security risk is also a threat to development and investment in Nigeria with the terrorist group Boko Haram continuing to strike terror in the country, specially in the north-east region. Furthermore, there are some growing concerns about a potential instability in the Niger Delta, caused by a resurgence in Igbo nationalism, a movement that tried to split Nigeira in the 60s. Although there is not a clear problem in the Delta yet, a potential conflict represents a more serious economic threat than Boko Haram, given the oil fields and other natural resources that can be found in the region. For all these considerable security issues, Nigerian political risk is classified as Moderate by NKC African Economics, an intermediate classification in a five level (low, low to moderate, moderate, moderate to high and high) political risk index of african countries.

In the long-term, Nigeria's success will depend on the growth of non-oil sectors, that have been presenting encouraging growth, and the country's ability to become less dependent on the oil industry. In spite of all these challenges, the **long-term** macroeconomic outlook is still robust and fairly positive for cement producers like



igure 32 - Power consumption per capita Kwh'000)

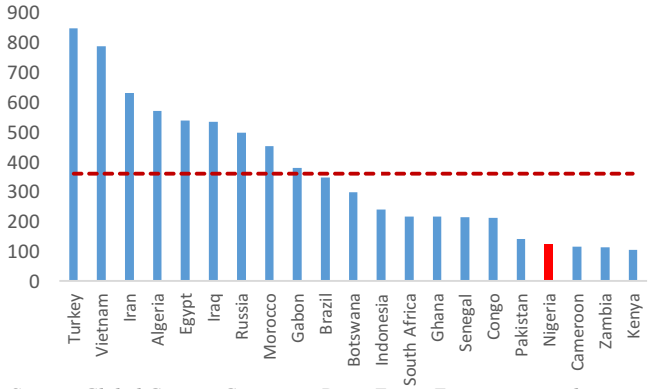


Source: US Energy Information Administration

Dangote Cement. It's true that the recent IMF estimates are more pessimist than before, however, a projected CAGR of 4.71% until 2020 for GDP growth is still positive and, allied with a fast-growing population, should increase the demand for not only public investments but als o for particular homes, as households income increases. This relationship between GDP growth and cement consumption is particularly evident in emerging markets with very low initial GDP and cement consumption levels, like Nigeria. The data suggests that in initial development phases, there is a exponential increase in demand for cement, that slows down as GDP continues to increase to higher levels. In addition to expected economic growth, political will to increase public investment should drive cement consumption upwards. The current government was elected on the promise to increase investment in infrasctucture where Nigeria has a clear deficit, that becomes particularly evident when analyzing infrastructure indicators like energy consumption per capita or percentage of paved roads in the country, where Nigeria falls behind other comparable countries. In line with this indicators is per capita cement consumption in Nigeria, that according to the Global Cement Report[2], was around 122kg in 2014, well below the global average (without China) of 450kg and other fast-developing african economies like Morocco (449kg), Algeria (568kg) or even Ghana (214kg).

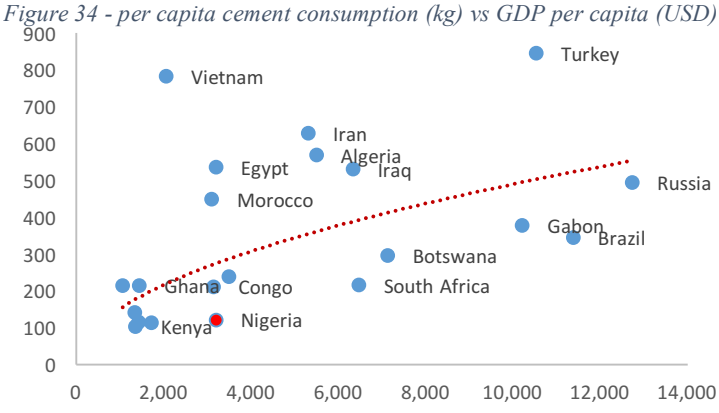
All these factors indicate that although in the short-term, the macroeconomic situation is challenging for cement manufacturers, in the long-term, the market has potential to continue its growth path that has been doing for the last decade, in which it grew at an aproximate CAGR of 10%. Dangote's management and some industry analysts believe that the market can achieve these growth rate levels again in the medium to long-term, once the current macroeconomic challenges are overcome.

Figure 33 - Per capita cement consumption in 2014 (kg)



Source: Global Cement, Comopany Data, Exotix Equities research

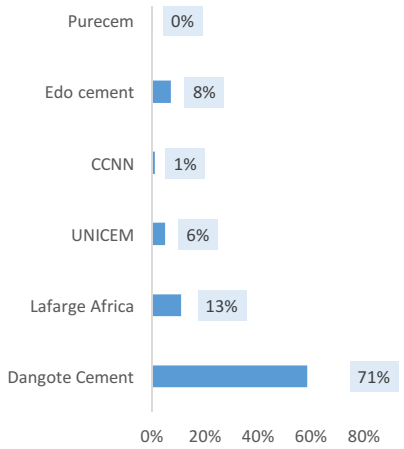
Figure 34 - per capita cement consumption (kg) vs GDP per capita (USD)



Source: Global Cement, Comopany Data, Exotix Equities research

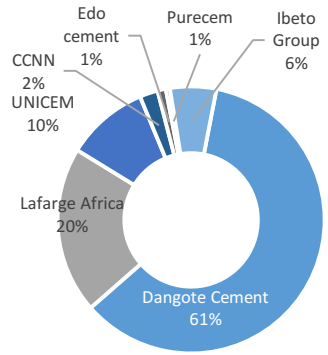
[2] Global Cement Report, *11th Edition*

Figure 35 - Share of installed capacity in Nigeria by company



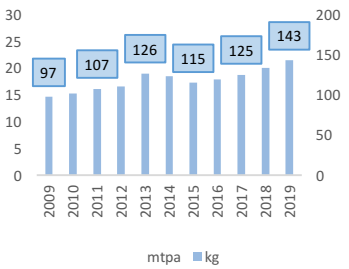
Source: Companies data

Figure 36 - Market share in Nigerian cement industry



Source: Companies data

Figure 37 - Nigerian cement market volume (mtpa) and per capita cement consumption (kg)



Source: Companies data, Analyst estimates

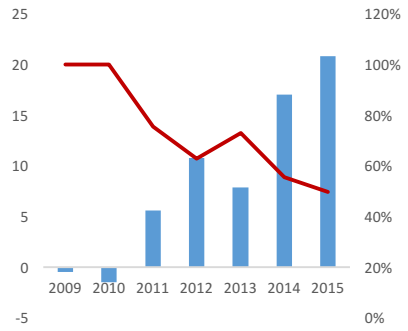
- Market & Competition

The Nigerian cement industry is highly concentrated. In 2014 the two major producers, Dangote Cement Plc and Lafarge Africa Plc (a subsidiary of Lafarge Holcim), accounted for 81% of total cement production and 91% of the 38.4mtpa of installed capacity in the country. Between the two competitors, Dangote is the largest player, having achieved in 2014 a market share of 60.5%, against 20.2% of Lafarge Africa, already considering the integration of Ashaka Cement, which used to be the fourth largest producer in Nigeria and was recently acquired by Lafarge. In the first 9 months of 2015, and according to DCP's management, the company has been able to increase even further its market share, to around 64%, although it is not possible yet to confirm this data as the other competitors didn't disclosure such information. The other significant players in the Nigerian cement industry are: (1) United Cement Company of Nigeria Limited (UNICEM), an associate company of Lafarge that registered a market share of 10% in 2014; (2) Cement Company of Northern Nigeria (CCNN), a subsidiary of the BUA Group, with 2.2% market share; (3) Edo Cement that reached a share of 1% and is another subsidiary of BUA Group and (4) Ibeto Group, that despite not having any production plant, recorded a share of 5.6% market share, due to a waiver to import cement that was granted by court.

Although the cement industry can be analysed at a national level, it is, in fact, more of a sum of smaller regional markets. The considerable size of Nigeria, allied with a poor road network and the specifications of transporting cement, drive the transportation costs up, promoting regional markets around the locations of cement plants. For example, Dangote, with the Obajana plant located in Kogi State, has been especially dominant in the north central region of Nigeria. More recently, with the expansion of the Ibese plant it is also challenging Lafarge's historical dominance in the south west, where it has 3 plants. However, with the recent acquisition of AshakaCem and the participation in UNICEM, Lafarge has extended its operating range to the north-east, south-east and south-south. In the north-west, the lack of competition and the remoteness of the region, make CCNN the dominant player.

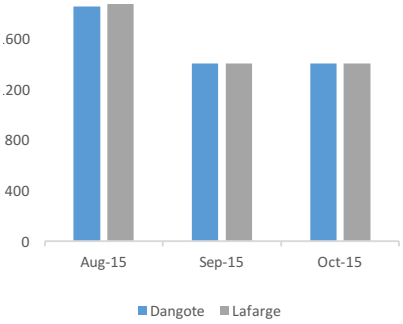
As already mentioned, the Nigerian cement market has been facing some challenges, consequence of the current macroeconomic situation in the country. After a year of stagnation, in 2014, in the first 9 months of 2015, the market has declined by 3.09% yoy, based on the data reported by local companies, a decline even more accentuated than in previous quarters (1Q15: -1.8%; 1H15: -2.7%).

Figure 38 - Excess installed capacity and utilization rate in Nigeria (mtpa)



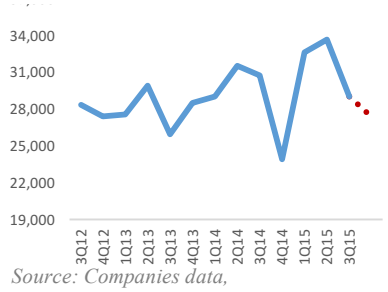
Source: Companies data, Analyst estimates

Figure 39 –Price of a 50kg cement bag in Nigeria



Source: BPI Capital Africa research

Figure 40 - Revenue per ton in Nigeria



Source: Companies data, Analyst estimates

Having these indicators in consideration, we estimate that total cement volumes in 2015 will decline around 3.5% to 20.6 million tonnes, corresponding to a per capita cement consumption of 115 kg. After this period of contraction, the general expectation of companies and industry analysts is that the market will start to recover in 2016. We estimate that in an initial phase, growth will be slower, with CAGR of 7% until 2017 and 10% between 2017-2020, corresponding to a growth rate of 8,8% pa for the entire period (2015-2020). Although this growth may seem excessive given the current situation, these rates are actually in line with the growth observed in the past in Nigeria (2010-14: 8% pa; 2004-2014: 10% pa), and in fact, we estimate that per capita consumption of cement (PCC) will only get back to 2013 levels in 2018! In this way, we believe that Nigeria has macroeconomic fundamentals in the medium to long-term to support this growth.

The cement market contraction since 2013 allied with continuous capacity expansions by all players in the industry, especially Dangote, over the last few years, created a significant gap between consumption and installed capacity in Nigeria. According to our estimates, in 2015, **excess cement production capacity** will amount to 20.75mtpa, corresponding to a utilization rate in the industry of just 50%. Even if we do not consider new investments that are already underway, our estimates for market growth point to a utilization rate of 58% in 2017. The utilization falls to 53% if a 2.5mt expansion by UNICEM is taken in consideration. To have an idea, to achieve a utilization rate of 70% in 2017, the market would have to grow at a CAGR of 19%, an impossible scenario given the current macro situation. Excess installed capacity is particularly problematic to Dangote, that has more than 70% of industry's production capacity and recorded in 2014, a utilization rate of just 44%, below industry's average.

A natural consequence of excess installed capacity in the industry is the **increase in competition**. The first sign of a more aggressive competition in the industry was given by Dangote in September 2015 when it announced a 18% cut in cement prices, dropping the price of a 50kg bag from NGN 1,666 to NGN 1,366. Being a price-maker in the industry, DCP forced is competitors to follow its price cut, with Lafarge decreasing its prices by 17%. With this strategy Dangote is trying to increase its volumes and market share in Nigeria and also to stimulate cement consumption. Although DCP's management expects that this strategy will already significantly impact volumes in 4Q15, we have doubts that a price incentive will boost consumption, as a regression analysis conducted by SBG securities[3] in the Nigerian market supports. The study found a very week relation between cement price and demand, with a Rsquared of just 1,3%. In this way, we believe that

[3] SBG Secutirites, *Macro fundamentals still supportive,* August 2014

although prices will remain low, they will not decrease in the following years. Moreover, being Dangote the industry leader in market share, and the most cost-efficient company in Nigeria, and having the higher profitability margins, other players don't have the incentive to decrease prices further. Considering the experience of other countries, like Pakistan, where a price war than began in 2009 ended up being prejudicial for all companies in the industry, and only ended when all cement manufacturers agreed to decrease production, we don't believe that Dangote will reduce its prices further, hurting its margins. Instead we believe that companies will try to increase its exports to neighbouring countries with a cement shortfall. This was the case of Turkey, when in 2009 the cement market achieved a utilization rate of just 45%, increasing competitive pressure and pushing local price down. In response, companies betted on exports rather than competing in prices. As a result, and although local prices remained low, Turkey ended up as the largest cement exporter in the planet.

During this period of price volatility, it will be imperative an **efficient cost management** in order to protect margins. As already mentioned, the cement industry's operating expenses are highly dependent on energy costs. In this way, and since disruptions in natural gas supply are likely to continue, the right choice of alternative fuels will be critical. Industry players, especially Dangote and Lafarge, have been adapting their factories to run on coal instead of the much pricier LPFO in case of gas failure. This energy source is particularly advantageous to AshakaCem (now owned by Lafarge), given its proximity to coal quarries. The company was able to reduce its costs per tonne around 20% over the last couple of years. Even so, in terms of costs, Dangote Cement is clearly the most efficient player in the market, taking advantage of cheaper gas contracts and newer facilities and technologies. This gives a decisive advantage against Lafarge, that currently has production costs per ton 70% higher than DCP.

Another consequence of tougher competition in the industry will be the increasing pressure for **innovation and branding**. Although the cement industry is almost commoditised, with no substantial quality differences between competitors, some recent news after a controversy in Nigeria about the standard cement, suggest that consumers (that are mainly artisans) prefer Lafarge brand. This preference is due solely to the longer history of Lafarge in the global cement industry and in Nigeria in particular, since there is no scientific evidence that Lafarge's cement is in fact of higher quality. However, in order to differentiate from competition and improve brand perception, Dangote offers mainly its 42.5 grade cement, unlike Lafarge that sells primarily its 32.5 grade cement. At the same time, DCP is investing in marketing the 42.5 cement, under the brand "Dangote Cement 3X: Xtra strong,

xtra life, xtra yield", and as recently hired a marketing executive from Coca-Cola to lead the company's marketing strategy. Contrary to Dangote, that is only offering 32.5 and 42.5 grade cement, Lafarge is investing in innovative products, designed for industry-specific uses. If this strategy is well implemented and proves to be successful it will be a major differentiator between Lafarge and Dangote, that is years behind in terms of R&D.

Dangote and Lafarge also have opposite strategies in terms of **distribution**. DCP has opted to concentrate all its production in central and south-west Nigeria, from where it plans to transport cement not only to other regions in Nigeria but also to other countries like Ghana, taking advantage of its fleet of more than 6,000 trucks. On the other hand, Lafarge, mainly through acquisitions, now operates smaller plants over a wider area, from south-west to north Nigeria, in regions where it had low penetration before. Again, if this strategy is well implemented and Lafarge continues its expansion to other areas, it may difficult Dangote's distribution given the high transportation costs of cement. Cost efficiency of DCP's distribution and of Lafarge's plants will be critical for the strategies' success.

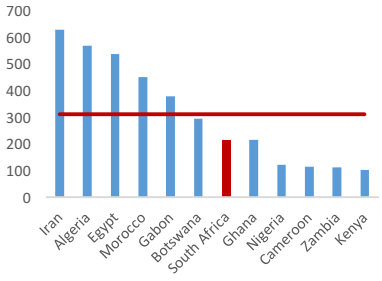
Finally, one key aspect that has stimulated companies to invest in new capacity and that may impact future investments if reverted is the **tax holiday** conceded to new cement capacity. This incentive was initially created to boost Nigeria's cement production when it was a cement importer. Today, with the excess installed capacity in the industry and the fiscal pressure, there is the risk that the new government may review this law, which would have implications for future investments in the country. Nevertheless, companies' administrations appear to be confident that the tax incentive will continue, although the new government has not taken a clear position yet.

- Value drivers & Forecasts

Having in consideration the macroeconomic scenario in Nigeria and our expectations for the cement industry, we have adapted our forecasts for Dangote's performance in the country. In our view, the main value drivers in the region will be: (1) market share, (2) cement price, (3) cash costs per ton, (4) share of direct deliveries and (5) advertising expenses. It is worth mentioning that for now, we're not taking into account the management announcement of a new 6mtpa plant for 2018, located in Itori, as the projected as yet to be be comissioned and there was no real investment so far. In addition, with a utilization capacity under 50% in 2014, and our estimates of just 42% in 2018, we believe that the Itori project doesn't make sense in the short to medium term and will probably be put on hold.

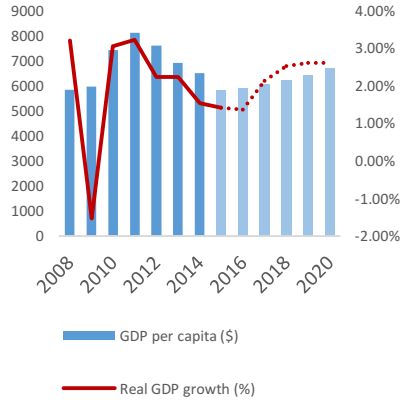
1. **Market share-** as we have discussed, gaining market share in Nigeria will be critical for industry players to avoid high levels of capacity underutilization. We've assumed a market share of 60.56% in 2015 and 63% over the forecast period in line with the 64% achieved in 9M2015 that already reflected Dangote's new pricing strategy. Dangote's competitors response to the price cut should diffcult gaining additional market share. Our assumptions correspond to a volume of 12.5 mt in 2015 (-3.5% yoy) and 14.8mt in 2017 and CAGRs 9.5% from 2015 to 2024.
2. **Cement price-** with the recent 18% price cut in prices, we've decreased revenue per ton in 2015 for NGN 30,644, which corresponds to NGN 1,360 per every 50kg bag sold in the last quarter. This is still a relatively high revenue/ton (+6% yoy) due to the high prices charged before September. The full effect of the price cut will only be felt in 2016, when we expect the 50kg bag price to remain unchanged, corresponding to NGN 27,200 per ton. Increasing competitive pressures should keep prices in low levels over the next few years, with our forecasts pointing to NGN 27,472/ ton in 2018. These estimates are also supported by historical movements in cement price in Nigeria. In fact, although inflation in the country was on average 9.7% pa between 2011 and 2015, cement prices in Naira terms, remained unchanged during the same, even without accounting with the price cut.
3. **Cash costs per ton-** efficient cost management will be decisive to remain competitve in the market. Without any major energy supply crisis like in 2014, we expect cash costs per ton to decrease 15% yoy in 2015, in line with the 9M 2015 results. The full effects of new coal mills in Obajana and Ibese and the complete energy readaptation of Gboko should begin to be felt in 2016. We forecast that cash costs will continue to decrease until 2018 at na average of 1% pa.
4. **Direct deliveries-** Dangote's strategy for Nigeria depends on the distribution from its plants, in the south, to other regions and potentially to neighboring countries. According to the management, 60% of current deliveries are made directly to the final customer by truck. In our view, increase in competition, particualrly Lafarge's regional expansion, will oblige Dangote not only to increase its share of direct deliveries, but also to expand its delivery range to protect its market share. Thus, we predict that not only the share of direct deliveries will increase (62% in 2015 to 70% in 2018), but also, haulage costs per ton will rise over the forecast period.
5. **Advertising expenses-** as already mentioned, we believe that in order to differentiate in a growing competitve environment, DCP will have to increase branding expenses. Thereby, we are forecasting that advertising expenses will

Figure 41 - Per capita cement consumption (kg)



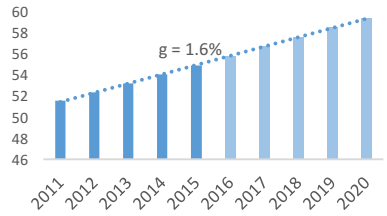
Source: Global cement

Figure 42 - GDP per capita in South Africa (USD) and real GDP growth



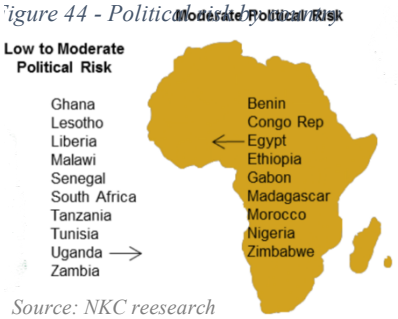
Source: IMF

Figure 43 - Population in South Africa



Source: IMF

Figure 44 - Political risk by country



Source: NKC reesearch

increase from 1.0% in 2015 to 2.0% between 2016-18. After this period, as the macroeconomic situation improves, advertising expenses will return to their previous level of 1.0%.

South & East Africa

Dangote cement is currently operating in four countries in South & East Africa: (1) South Africa, (2) Ethiopia, (3) Zambia and (4) Tanzania. The presence in countries within the COMESA free trading area (Ethiopia and Zambia) can facilitate potential future exports for neighboring countries. An intention to expand to Kenya and Zimbabwe in 2018 was announced in September, however we're not considering these markets for now since construction has not been comissioned yet.

One attractive factor in the region for the cement industry is the existence of vast limestone reserves needed for integrated plants. On the other hand, the geographic proximity to the Indian Ocean facilitates the import of low cost cement from Asia, increasing competitive pressure. To avoid this situation, Dangote strategically built its facilities in inland areas, away from the imported cement threat, with the exception of Tanzania.

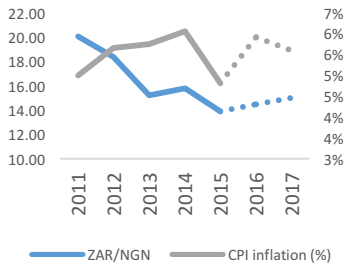
- Macroeconomic and political scenario

South Africa

South Africa (SA) is one of the **less rapidly growing economies in Sub-Saharan Africa**, recording a real GDP growth of just 1.53% in 2014, the lowest since the financial crisis affected the country in 2009. The situation should even worsen this year, with the IMF reviewing downards its growth estimates to 1.4% and 1.3% in 2015 and 2016 respectively. Growth is then expected to recover in 2017, to 2.1%. The miners five months strike in 2014, the largest industrial action since the apartheid, was the main contributor for the unimpressive growth that year. Since then, the weak demand from two of South Africa's main trade partners, European Union and China, allied with an inadequate energy supply and political uncertainty in key areas like agriculture have been slowing down local economy.

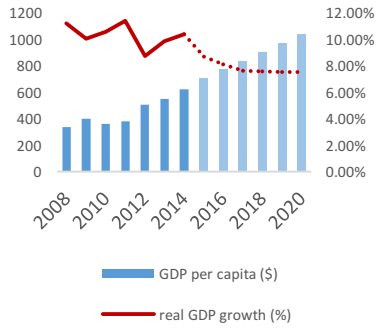
All these economic indicators may not seem promising for the cement industry, but there is still room for growth. In fact, according to companies' data, the cement market, in quantity terms, has grown at higher rates than GDP over the period

Figure 45 - ZAR/NGN exchange rate and inflation rate in South Africa



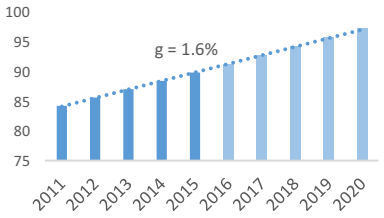
Source: IMF, Bloomberg, Analyst estimates

Figure 46 - GDP per capita (USD) and real GDP growth in Ethiopia



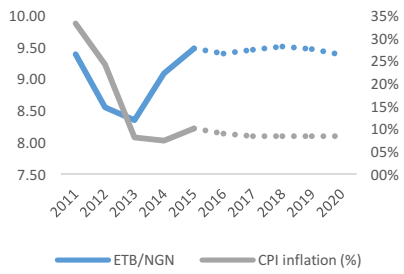
Source: IMF

Figure 47 - Population in Ethiopia



Source: IMF

Figure 48 –ETB/NGN exchange rate and inflation rate in Ethiopia



Source: IMF, Bloomberg, Analyst estimates

2011-14 (5% pa), and estimates predict that this trend will continue. Moreover, and despite the economic challenges, the federal government intends to invest ZAR 827bn in public infrastructures, to addres the country's infrastructure deficit. Although this deficit may not be so severe as in other African countries, South Africa still has a per capita cement consumption, in 2014, of just 215kg (about half the global average) and only 22% of its road network its paved, low even comparing to other developing nations.

Ethiopia

Ethiopia is among the **five fastest growing economies in the world** according to the IMF ranking. The country has experienced real GDP CAGR of 10.1% over the 2008-2014 period, and the IMF expects that this growth will continue at CAGR of 7.7% until 2020. 2015 should be the 12th consective year of economic growth in the country, with the economy growing 8.67%.

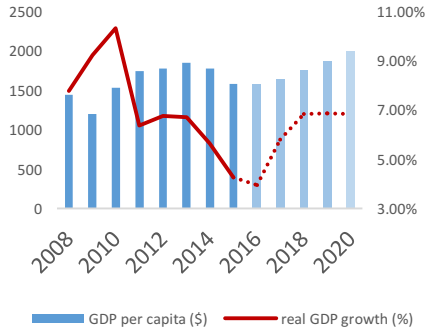
Cement market growth as also been robust in the country, with an average volumes growth rate of 14% pa between 2011 and 2013, according to the Global Cement Report. The inclusive and widespread economic development the country is currently experiencing should drive up private cement consumption, and continue to increase per capita cement consumption, that reached, according to our estimates, 113kg in 2015, a 62% increase since 2013 (70kg). In addition, the government should keep its heavy public investment, with capital expenditure around 10% of GDP, particularly in hydro-electric infrastructures, which will increase the demand for higher-grade cement, like Dangote's 42.5R.

In terms of **political and security risk**, the biggest threats to stability in Ethiopia are the tensions with Egypt around the construction of the Great Ethiopian Renaissance Dam in the Nile River and an old border conflict with Eritreia.

Zambia

Zambia's economy has experienced a **robust growth over the last decade**, with real GDP CAGR of 7.5% during the period 2008-14. IMF estimates that, although economic growth will continue, there will be a slowdown (CAGR 2015-20 of 6.0%) that has already begun, with GDP growth rate falling from 5.63% in 2014 to "just" 4.28% on 2015. This deceleration is the result of several exogenous shocks that hit the country during the year and that exposed Zambia's economy main fragilities: (1) vulnerability to trading partners' economic cycles (especially China and Switzerland); (2) dependence on copper for exports and FDI. So, the combination, in 2015, of an accentuated copper price drop and a decrease in demand from China, weighted heavily on the Zambian economy.

Figure 49 - GDP per capita (USD) and real GDP growth in Zambia

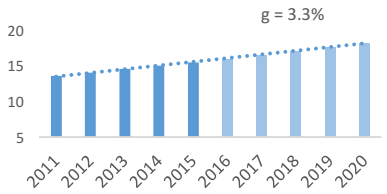


Source: IMF

Figure 50 – Copper prices

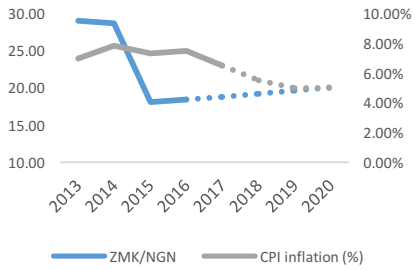
Source: Bloomberg

Figure 51 – Population in Zambia



Source: IMF

Figure 52 - ZMK/NGN exchange rate and inflation rate in Zambia



Source: Bloomberg, IMF and analyst estimates

The worsening of the economic prospects, allied with the threat of thousands of job losses in the mines and a power crisis caused by drought, have deteriorated the social environment in Zambia and increased **political risk** in the country.

Despite these challenges, the sound economic growth expectations and the government commitment to invest in roads and energy infrastructures present opportunities for the cement industry. The market as more than doubled since 2010, increasing from 0.7mt to 1.5mt in 2014, placing per capita cement consumption around 110kg which is low even for developing economies.

Tanzania

Tanzania is expected to grow **6.87% in 2015**, a value in is line with the 6.5% CAGR registered between 2008 and 2014. The IMF expects an acceleration in the next years, with 7.04% predicted growth in 2016 and a CAGR of 6.9% until 2020. Like other countries in the region, the **Tanzanian shilling** has been under tremendous pressure in 2015, reaching a **devaluation** of 37% against the dollar between January and July. Since then, the shilling has recovered, being the total devaluation against the Naira of 12% since January.

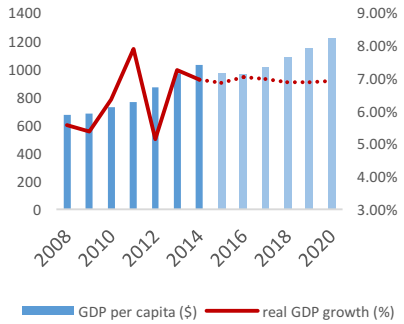
Strong economic growth, natural resources, geographical location and political stability have made Tanzania an attractive destination for foreign investment in Africa. FDI projects and the government's infrastructure investment program, should keep driving up the demand for cement in the country, that currently has a very low per capita cement consumption (74kg in 2014). However, the market has registered volume growth rates around 8%pa from 2010 to 2013, a growth that local manufacturers believe will continue also supported by a fast-growing population.

▪ Market & Competition

South Africa

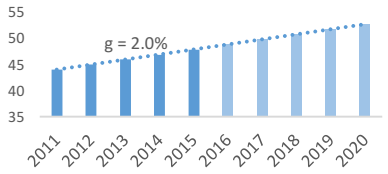
Dangote operates two 1.5mtpa plants in South Africa, one integrated and one grinding unit, through Sephaku Cement (SepCem) a joint-venture with JSE-listed Sephaku Holdings which owns 36% of the project, with Dangote owning the remaining 64%. There are currently five competitors present in the market: (1) Pretoria Portland Cement Limited (PPC), (2) Lafarge Industries South Africa Limited, (3) AfriSam Proprietary Limited, (4) NPC-Cimpor Limited and (5) Continental Cement, a new entrant. PPC is currently the market leader both in terms of market share and installed production capacity, with more than 5.3mtpa, followed by Lafarge with 3.6mtpa. Similar to other countries in the region, imports from Asia represent na important share of cement consumption. Recently there

Figure 53 - GDP per capita (USD) and real GDP growth in Tanzania



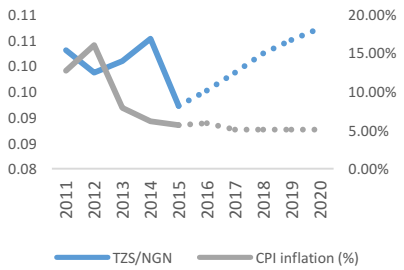
Source: IMF

Figure 54 - Population in Tanzania



Source: IMF

Figure 55 - TZS/ NGN exchange rate and inflation rate in Tanzania



Source: Bloomberg, IMF and analyst estimates

were some news reporting a merger between PPC and AfriSam, but the deal has been cancelled.

Despite the modest performance of South African economy in general, and the cement industry in particular, Dangote made a particularly successful entry, and according to management's estimates already achieved close to 15% market share in 9M 2015. DCP's entry increased even further the competitve environment in the market leading to a 2% decrease on average selling prices. Dangote's efficient production allied with a better quality cement offering and a strong sales and marketing strategy have been crucial.

Ethiopia

The Ethiopian market is very competitive, with a total of 15mtpa distributed across several operators, namely: (1) Addis Ababa Cement, (2) Mugher Cement, (3) Ethio Cement and (4) Derba Cement. Dangote operates since June 2015 one unique integrated plant with 2.5mtpa production capacity.

Although the Ethiopian cement market has experienced considerable growth and presents an optimistic outlook, the expected cement demand of 10mt is considerable below installed capacity, creating additional pressure for market share. With this objective, and in line with the strategies adopted in Senegal and South Africa, Dangote entered the market with a price cut relative to average prices in the country. This alowed DCP to gain immediate market share, with the integrated plant already running close to maximum capacity in September 2015. This was only possible due to Dangote's newer and more efficient technologies, comparing to its sub scaled competitors.

Zambia

Although there are four cement manufacturers operating in the country, Dangote's main competitor, similarly to other markets, is Lafarge with 1.3mtpa installed capacity in the country. As in Ethiopia, DCP has made a strong entry in Zambia, with its 1.5mtpa integrated plant having already a 65% utilization rate in the last month of 9M 2015. This has been particularly challenging for its competitors, with Zambezi Portland Cement's operations director even saying that his company has been losing money per cement bag since DCP arrived at Zambia.

Zambia can be a key growth market for Dangote, not only for the projected national growth but also for being a member of COMESA and an inland country with easy acces to other fast growing markets like the Democratic Republic of Congo. Cement price in the country is currently among the highest in the region (USD 130/ ton).

Tanzania

Dangote has recently inaugurated its 3mtpa integrated plant in Mtwara that should start operating in December 15 or January 2016. With this factory, Tanzania doubles its total production capacity to 6mtpa. Before DCP's entry in the market, the 3mtpa capacity was divided between 5 players, with the two largest being (1) Tanzania Portland Cement and (2) Mbeya Cement, subsidiaries of two cement giants, Heidelberg Cement and LafargeHolcim, respectively. Just like in Ethiopia and Zambia, Dangote will bet on 42.5R grade cement to differentiate, and we expect another aggressive pricing at entry that should lower current average price in the country (USD 124). In response to DCP entry in the country, the two main competitors are already planning capacity expansions. Tanzania's sound economic development and its strategic location within the COMESA, make it one of the most attractive nations in the region for the cement industry.

- Value drivers & Forecasts

Although we are aware of Dangote's expansion plans in the region (additional 1.5mtpa in Zambia and 2.5 in Ethiopia), again we're just considering projects that are already being developed. For these, we've estimated what we believe will be the key value drivers in the future: (1) Utilization rates, (2) Cement Prices and its evolution and (3) Cost of sales, administrative and selling costs.

1. **Utilization rates-** for FY 2015 our utilization rates are in line with the 9M 2015 results. Having in mind that, according to management, plants in South Africa and Ethiopia were already close to full capacity and Zambia was also performing strongly in the last months of the 3Q, we estimate utilization rates over the period of 70%, 65% and 55%, respectively. It's worth mentioning that for Ethiopia and Zambia we're just considering 50% of the annual capacity, since both plants were inaugurated in June 2015. The cement factory in Tanzania is expected to start contributing to sales in January 2016. In this way, we expect an annual utilization of 60%. For all the four plants, we're assuming that its utilization rate will increase gradually until it reaches a peak of 95% in the third complete year of production. Our estimates for the region point to volmues sold of 3.3mt in 2015 and 9.5mt in 2019, corresponding to a CAGR of 29%.
2. **Cement prices-** our revenue's estimates are based on price data collected in the region. Knowing that, so far, DCP has adopted agressive pricing strategies, we used in our estimates the lowest price registered in the country and we have assumed a marginal decrease in price of 2% for Tanzania in 2016, in line with what happened in South Africa this year. For all countries we expected that

competitive pressures should keep prices low over the first years of DCP's operations. After that period we assume prices rise with inflation until the end of the forecast.

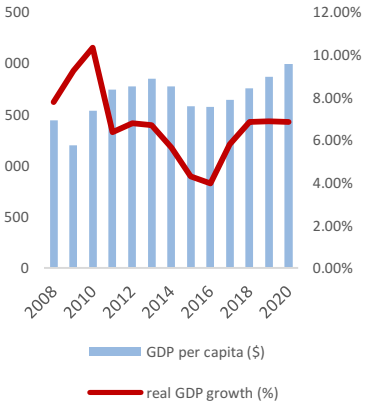
3. **Cost of Sales, Administrative and Selling expenses-** due to lack of detailed information on the expenses outside Nigeria, we forecast costs for W&C Africa and S&E Africa together. Cash cost per ton were in 2014 NGN12,259, a value we expect to decrease as new firms pass the ramp up phase and begin to operate at maximum efficiency. Thus, we expect a continuous drop in cash costs per ton at a CAGR of -3% until 2017. Cash costs in new markets will however continue to be significantly higher than in Nigeria, where Dangote is particularly efficient. Like in Nigeria, we believe that the increasingly competitive environment in Africa will force Dangote to increase expending in advertising, which we expect to be 1% of revenue in 2015 and 2.5% between 2016 and 2018 and then will return to 1.5%. Dangote's distribution in the majority of markets outside Nigeria passes by delivering directly to customers, eliminating distributors. This type of strategy demands a exhaustive utilization of DCP's fleet. Haulage costs per ton are currently NGN2,357 and we expect these costs to increase over time as Dangote begins to distribute cement over wider areas within the countries and to neighboring nations. As for the administrative expenses, we believe they will keep in line with 9M 2015 results, at around 7.5% of revenues.

West & Central Africa

Dangote's current operations in the region include: an import terminal in Ghana, a grinding plant in Cameroon and an integrated unit in Senegal. In addition, grinding plants in Côte d'Ivoire, Ghana and Rep. of Congo and an import terminal in Liberia should open over the next couple of years. Plans for grinding plants in Mali and Niger were also announced recently.

Unlike Southern Africa, West and Central Africa offers very little limestone reserves viable for integrated facilities, and so Dangote strategy is to transport clinker from Nigeria and Senegal to the other facilities, taking advantage of free trade areas like ECOWAS and CEMAC.

igure 56 - GDP per capita (USD) nd real GDP growth in Ghana



Source: IMF

- Macroeconomic and political scenario

Ghana

Political stability and the discovery of oil created conditions to continuous economic growth in Ghana over the last years. National economy grew at a CAGR of 7.8% from 2008 to 2014 and the IMF predicts that this trend will continue at a 6.2%

CAGR until 2020. 2015 will however be a year of deceleration (3.5%) in growth that should recover in 2016 (5.7%). Despite this robust economic performance, the **devaluation of the Ghanaian Cedi** has been quite challenging for cement importers like Dangote Cement.

Senegal

Comparing to other countries within the ECOWAS area, Senegal's economic **growth hasn't been impressive**, with a CAGR of 3.5% from 2008 to 2014. Even so, the IMF predicts 5.11% growth for 2015, a year that should mark the beginning of a high growth period until 2020, at an average rate of 6.8% pa.

Senegal is part of the CFA franc zone. This zone is composed by 14 african countries divided in two groups, depending on the currency in circulation: (1) West African franc or (2) Central African Franc. Although they're in theory two totally separeted currencies, both have a fixed exchange rate to the euro: 1 euro = 655.957 francs.

- Market & Competition

Ghana

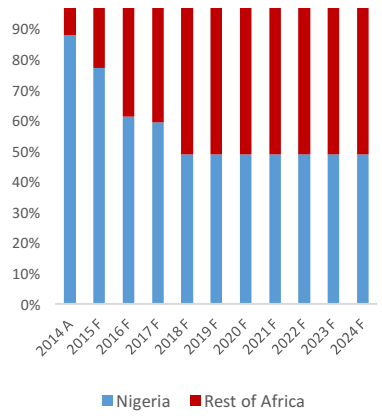
Dangote operates a 1mtpa bulk cement terminal import in Ghana since 2010 and its 1.5mtpa grinding plant should open in 2016. Both plants will be supply directly from Nigeria, eliminating third-party cement. There are two other cement manufacturers in the market, (1) West African Cement and (2) HeidelbergCement Africa. However, local producers have strong competition from imported cement, especially from Asia. Doing business in Ghana as been particularly challenging in the last couple of years, still, the positive macroeconomic outlook for the country and a recent increase in cement import tax should benefit the local producers.

Senegal

The 1.5mtpa integrated plant in Senegal will serve has an export base for neighboring countries. Altough DCP has made a strong entry in the country, having already an estimated market share of 40%, being the remaining split between two other players, the low price in the country (USD 70/ton) makes exports particularly attractive. Thus, Dangote competition in Senegal should consider also players in the neighboring countries, especially those who also belong to the ECOWAS and UEMOA areas, like Sierra Leone, The Gambia, Burkina Faso, Liberia, etc. In this region, HeidelbergCement has a strong presence with operations in five countries (besides Ghana) from where it can also export cement.

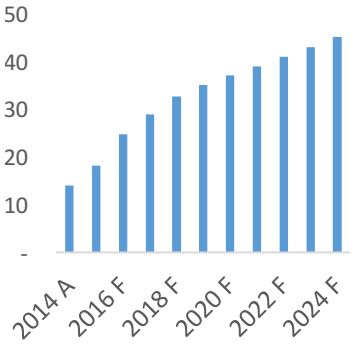
- Value drivers & Forecasts

Figure 57- DCP production distribution by region



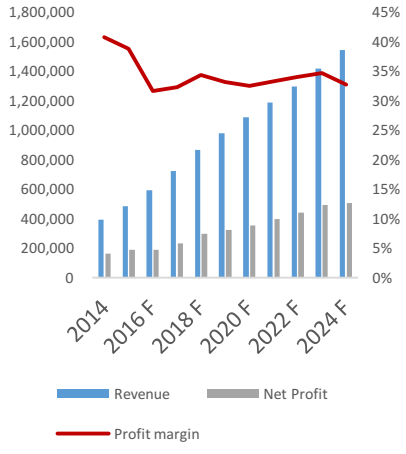
Source: Analyst estimates

Figure 57- DCP production (mtpa)



Source: Analyst estimates

Figure 57- DCP revenue and profit (NGNm)



Source: Analyst estimates

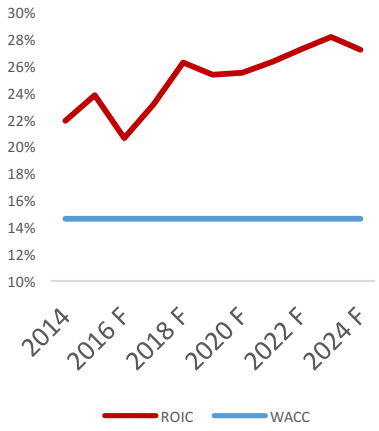
In our estimates for West and Central Africa, we followed the same criterion as before regarding the new expansion plan announced in September 2015. In this way we're just considering current plants in Senegal, Ghana, Cameroon and future operations in Côte d'Ivoire, Republic of Congo, Liberia and Serra Leone. Moreover, given DCP's usual delays in opening its plants, we're assuming a 2 quarters delay in all future projects in comparison to the company's expectation. In our view, key value drivers in the region will be the same as in South & East Africa:

1. **Utilization rates-** for 2015 our estimates are in line with 9M results. We expect an utilization rate of 84% in Senegal, corresponding to a 40% market share that DCP has already achieved, 50% for Ghana, where volumes have almost doubled since 2014, and 50% for Cameroon, that as been ramping up production and recorded utilizations of 65% in the last months. We expect that all plants take around 3 years to achieve its maximum output that we believe will be around 60%-70% depending on the markets, with the exception of Senegal. Due to its strategic importance in and being the only integrated plan in the region, we expect full utilization by 2017.
2. **Cement prices-** in markets where DCP is not yet operating or will increase significantly its capacity, like Ghana, we expect that cement prices in the first year should decrease marginally by 2%, as it has happenend so far. Competitive pressure should keep prices at low levels in an initial periods, after which we assume prices move with inflation. The only exception is, again, in Senegal where we believe exports will have a considerable effect in the current low price of cement. We assume a 3% price increase until 2018 for this plant.
3. **Cost of Sales, Administrative and Selling expenses-** as already discussed, we estimate costs for West and Central Africa together with S&E Africa, given the current lack of detailed information.

Consolidated performance

Based on our forecasts, nominal consolidated revenue will increase from NGNm 285,645 in 2014 to NGNm 1,540,978 in 2024, corresponding to a CAGR of 14,68%. This growth will be suported not only by the increase in revenue in Nigeria, but specially by the increase in revenue in operations outside Nigeria, that are expected to weight 44% on consolidated revenue in 2024, from 5% in 2014. Volumes sold will follow this growth, increasing from 14.0mt in 2014 to 45.0mt in 2024 (CAGR:12.4%). Once again, this increase in mainly supported by the operatins outside Nigeria, where production will increase from 1.1mt in 2014 to 17.19mt in 2024, with Tanzania, South Africa and Ethiopia being the major markets for Dangote, both in terms of volumes and revenue.

Figure 57- DCP ROIC vs WACC



Source: Analyst estimates

We forecast a Net Profit of NGNm 225,457 in 2018 and NGNm 503,955, from NGNm 160,578 in 2014. However, margins will decrease as new plants start to open in new, given the lower cost-effciency of operations outside Nigeria. In this way, we estimate that EBITDA margen will fall from 57% in 2014 to 52% in 2024 and Net Profit margin will drop from 41% in 2014 to 33% in 2024.

ROIC is expected to increase to 27% in 2024 from 22% in 2014. However, we have to consider that 2014 was a particularly bad year for the cement industry in Nigeria. Comparing to ROIC levels in 2013 and 2012 (36% and 34%, respectively), ROIC in 2024 will be significantly lower, which can be explained by the decrease in operating margins. Nevertheless, ROIC will continue to be above Weighted Average Cost of Capital, allowing for value creation in the long-term.

Financials

To finance the expansion program, Dangote has been increasing borrowings over the last years. Company's borrowings are composed exclusively by bank loans and loans from the parent company. Borrowing from the parent company is the primary funding mechanism of Dangote, with loan increasing from NGNm 45,000 in 2013 to NGNm 125,000 in 2014. The ratio Net debt/Equity, at book values, has increased from 0,20 in 2013 to 0,38 in 2014 and we forecast it will increase to 0,45 in 2015. Until the end of the forecast period, it will decrease, as the company decreases investments and generates more cash. Capital Expenditure in 2015 should maintain its 2014 level, around NGNbn 207, after which we expect to progressively decrease until it reaches the industry steady-state average of 10% of revenue.

In terms of dividends, we expect that in 2015 the company will maintain its dividend payout at the same rate as in 2014, 64%, with this value increasing gradually as the company continues to generate cash.

Valuation

To determine a price target for FY2016 an Adjusted Present Value (APV) model was applied to four different scenarios: Worst Case, Pessimistic, Base Case and Best Case. The four scenarios were than weighted according to the likelihood of materializing to reach a final FY2016 Price Target.

The APV model was chosen over a classic Discounted Cash Flow model (DCF) due to an expected significant change in Dangote's leverage over the forecasting period. Using this approach, the projected Unlevered Free Cash Flows and Tax

Table 1 – Valuation data

Valuation data	
Risk free	10,9%
Unlevered Beta	0,79
Equity premium	5%
Levered Beta	0,84
Cost of Equity	15%
Tax rate	32%
Ku	15,0%
D/(D+E)	8,2%
E/(D+E)	91,8%
D/E	9,0%
Perpetuity growth rate	4,1%

Source: Analyst estimates

Table 2 – Adjusted Present Value model

Adjusted Present Value (APV)	
Total PV	**1 405 226**
Continuing Value	**1 363 819**
+ Enterprise Value	2 769 045
- Net debt	330 687
- Minorities	4 284
Equity Value	2 434 074
#shares	17 041
"Base Case"PT FY16	142,84
Final Enterprise Value	2 733 031
Final Price Target FY16	**140,62**
Current share price	170,00
Dividend per share	8,10
Recommendation	**SELL**

Source: Analyst estimates

Shields are calculated separately and discounted at the same rate, the unlevered cost of capital.

Besides modelling different scenarios, a sensitivity analysis was performed, to understand the impact of different costs of capital and terminal growth rates in the "base case" price target.

- Cost of Capital

The Capital Asset Pricing Model (CAPM) was used to calculate the Unlevered Cost of Capital:

Risk free - The risk-free rate was computed by adding projected difference between US and local inflation to a 10-year US government bond yield, reaching a risk free rate of 10.88%.[4]

Unlevered beta- To calculate the unlevered Beta, a group of 13 local and international comparable cement companies (including Dangote) were selected according to geographical diversification, market capitalisation and capital structure. Their levered betas were obtained by regressing 60-month stock returns against the Morgan Stanley Capital International (MSCI) World Index and were de-levered using current capital structures.[5] The average unlevered industry raw beta obtained was 0.69, producing an unlevered smoothed beta industry of 0.79[6]. This value is considerably higher than Dangote's current raw unlevered beta of 0.23 and the average unlevered beta of comparables in emerging markets, 0.54. However it's closer to the beta of developed countries companies like LafargeHolcim (0.87) and HeidelbergCement (1.17), Dangote's biggest competitors in Sub-Saharan Africa.

Market risk premium - The market risk premium used was 5.16%, the implied market risk premium according to Aswath Damodaran.[7]

Cost of Capital - Aplying the CAPM equation using the 10.88% risk free, 0.79 unlevered beta and 5.14% market risk premium we obtained an unlevered cost of capital of 14.96%.

- Adjusted Present Value model

Perpetuity growth rate was computed as the product between Return on Investment Capital (ROIC) and Investment rate (IR) : $g = ROIC\ x\ IR$. ROIC was

[4] As suggested by Tim Koller, Marc Goedhart and David Wessels in Valuation: Measuring and Managing the value of companies

[5] $\beta u = \frac{\beta l}{1+\frac{D}{E}\times(1-t)}$

[6] [6] $\beta smoothed = \left(\frac{2}{3}\right)\times\beta raw + \left(\frac{1}{3}\right)$

[7] Aswath Damodaran, (*http://pages.stern.nyu.edu/~adamodar/*)

obtained as the ratio between Net Operating Profit Less Adjusted Taxes (NOPLAT) and Invested Capital in the previous period: $ROIC_t = \frac{NOPLAT_t}{Invested\ Capital_{t-1}}$. Investement Rate, that measures the percentage of NOPLAT that is reinvested to grow the business, was calculated as $IR = \frac{Net\ Invesment}{NOPLAT}$, in which Net Investment is the difference between CAPEX and Depreciation. In this way, it was obtained a growth rate of 4.1%.

Finally, both Net Debt and Minorities were valuated at their respective book values and subtracted to the Enterprise Value obtained of NGN 3,007bn to achieve a "base case" price target for year end 2016 of NGN 142.84 per share.

After performing the scenarios' analysis and weighting the four price targets, we obtained a final **FY2016 price target of NGN 140,62**

Table 4 –Multiples comparison

Adjusted Present Value (APV)								
Discount factor		0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33
Discounted FCF		159827,29	201441,14	187687,1	177574	176849	169043	161529	141507
Discounted Tax Shields		8769,9201	7057,3187	4752,665	3535,04	2540,07	1643,51	913,848	556,616
PV FCF	1 375 457								
PV Tax Shields	29 769								

▪ Sensitivity Analysis

Source: Analyst estimates

Considering the high impact that Unlevered Cost of Capital and Continuing Value growth rate have on the valuation, a sensitivity analysis was performed to test how the "base case" price target respnds to changes in both rates.

Table 5 –WACC and g sensitivity naysis

		Perpetuity growth rate						
		2,62%	3,12%	3,62%	4,1%	4,62%	5,12%	5,62%
Unlevered cost of capital	11,96%	186,07	193,05	200,86	209,67	219,67	231,14	244,42
	12,96%	164,54	169,86	175,75	182,30	189,64	197,92	207,32
	13,96%	146,86	151,00	155,54	160,55	166,08	172,24	179,15
	14,96%	132,10	135,38	138,95	142,84	147,11	151,82	157,02
	15,96%	119,60	122,23	125,08	128,16	131,52	135,18	139,20
	16,96%	108,88	111,02	113,32	115,80	118,47	121,38	124,54
	17,96%	99,59	101,35	103,23	105,24	107,41	109,74	112,27

• Scenario Analysis

Operating in an emerging region like Sub-Saharan Africa allied with the current aggressive expansion adds extra uncertainty to Dangote Cement's future cash flows. To model this uncertainty and to better understand the impact that different future states of the world have on valuation, three extra scenarios were built: (1) Worst case scenario, (2) Pessimistic Scenario, (3) Best case scenario. In this way, the two negative scenarios reflect the materialization of some of the most likely risks and that would have greater impact on final valuation and the positive scenario replicates a higher than expected future growth.

Table 6 –Scenario analysis

Results	PT FY16	EV	Prob.
Base Case	142,84	2 769 045	80%
Worst Case	94,14	1 976 796	5%
Pessimistic	120,50	2 394 564	10%
Blue Sky	191,76	3 589 968	5%
Final Valuation	**140,62**	**2 733 031**	

Source: Analyst estimates

All three scenarios have plausible probabilities of occurring and are based on real risks and opportunities that were analyzed in previous sections. The scenarios model the impact of changes in four assumptions that directly affect the future performance of Dangote in three major markets, Nigeria, Tanzania and South consolidated revenue in 2024. So, the assumption modeled are: (1) Nigerian cement market growth, (2) Dangote market share in Nigeria, (3) Utilisation rates in Tanzania, (4) Utilisation rates in South Africa.

Worst case Scenario - This scenarios models a much lower than expected cement market growth in Nigeria as well as a significant fall in Dangote's market share in the country and a poor performance in the second largest market for the company: Tanzania.For the cement market growth we have assumed the same fall in 2015 as in the base case (-3.5%) but only 2.0% for 2016 (6.0% in base case) and a CAGR during the 2015-24 period of only 4.55%, much lower than base case's 8.99%. This difference can be the result of one of the several macroeconomic risks in Nigeria, or the combination of them. A new drop in oil prices as the consequence of the Iran vs Saudi Arabia rivalry or the outbreak of violence in the Niger Delta are the most probable macroeconimc risks in Nigeria and that can ultimately affect the cement market. In this scenario we've also assumed a decrease in Dangote's market share in Nigeria from 63% in the base case to 55% from 2016 onwards and lower utilisation rates in Tanzania of 45% in 2016 (65% in base case), increasing until it stabilizes in 70% in 2019 (100% in base case). The first assumptions reflects a potential "business model" fail (concentration of plants and long distance distribution) and the consequent loss of market share to Lafarge, whose strategy involves the acquisition and construction of smaller plants in a vaster geographic area. For Tanzania, our assumptions reproduce the effects of a significant increase in competiton not only from already established competitors, that are already planning capacity expansion, but also from potential new entrants in the market, attracted by the favourable macro environment in the country.

Given the very pessimistic assumptions in this scenario, we attributed a probability of just 5%. The FY2016 price target obtained was NGN 94.14.

Pessimistic scenario - For this case we have modeled the same risks as in the previous scenario but in a less severe degree, having a lower impact on the cement market. We assumed the cement market growth for 2015 will be the same (-3,5%), increasing to 4% in 2016, and a CAGR of 6.55% during the forecasted period.

Unlike in the worst case, in this scenario we assumed th Dangote maintains its market share of 63%, which we believe is more probable given the company's

advantages in the country. However we modeled expansion risks in a greater extent, forecasting lower than expected utilisation rates not only in Tanzania but also in South Africa. We assumed that utilisation rates in 2016 for Tanzania and SA will be 45% and 60%, respectively, with both converging to a 75% utilisation rate in the medium term (in base case long-term rates for Tanzania and SA are 100% and 95%, respectively). The risks in Tanzania are the same as previously discussed, whereas in South Africa, the main concern is regarding the current slow growth macroeconomic environment in the country. Since in this scenario, the macroeconomic situation is not so negative as in the worst case, and because we believe that the most likely risks to materialize are expansion risks, rather than a significant market share decrease in Nigeria, we conceded a 10% probability to this scenario. The scenario's FY2016 price target is NGN 120.50

Best case scenario - In this final scenario we modeled the positive effects of a considerable recovery in worldwide oil prices and its impact in the Nigerian economy and ultimately in the cement market. This increase in oil prices, altough it doesn't seem likely today, can in fact materialize if the tension between Iran and Saudi Arabia escalates into armed conflict, which would affect the global oil supply. Having this in consideration, for cement market growth rates we assumed for 2015 the same 3.5% decrease, increasing to 8% in 2016 and a CAGR of 11.21% between 2015 and 2024.

For Dangote market share in Nigeria we forecasted it reaches 65% in 2016, increasing progressively until it reaches 75% in 2019. These assumption reflect a complete success of Dangote's production and distribution strategy, allowing to gain market share over its competitors in regional markets farther away from Dangote's plants.In Tanzania we forecast that the predicted economic growth materializes but also that Dangote, due to its higher cost efficiency compared to competitos, enters the market succesfully with 75% utilisation rate in 2016, and achieving full production in 2018.

We have attributed a 5% probability to this scenario, and arrived at a 2016 year end price target of NGN 191.76.

Table 4 –Multiples comparison

Source: Analyst estimates, Bloomberg

	EV/EBITDA	P/E	Market Cap (USD)	D/E
Dangote (implicit)	9,6	11,8	13 425	0,09
Dangote Cement	10,6	13,4	13 425	0,09
AshakaCement	5,6	11,3	259	-0,18
Lafarge Africa	9,0	11,7	2 035	0,03
CCNN	4,1	6,7	47	0,04
PPC SJ	6,6	10,2	651	0,74
Yanbu Cement	9,6	8,6	2 821	0,05
Qassim Cement	7,7	6,0	1 928	0,02
LafargeHolcim	36,4	9,0	33 460	0,55
HeidelbergCement	16,2	8,0	15 439	0,42
Taiwan Cement	15,3	11,4	3 289	0,50
China Resources Cem	6,3	6,4	2 133	0,99
Buzzi Unicem	21,3	8,7	3 542	0,32
UltraTech Cement	35,4	17,1	11 538	0,09

Multiples

To triangulate our APV valuation as well as the current market valuation of Dangote, we compare P/E ratio and EV/EBITDA of Dangote with a range of both local and international competitors.

Financial Statements

tatement of Profit or Loss	2011 A	2012 A	2013 A	2014 A	2015 E	2016 F	2017 F	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	2024 F
IGN'000 000														
Revenue	**241 406**	**298 454**	**386 177**	**391 639**	**481 016**	**591 537**	**720 695**	**864 339**	**977 232**	**1 086 757**	**1 184 440**	**1 294 819**	**1 415 961**	**1 540 978**
Cost of Sales	-97 708	-118 304	-130 473	-143 058	-155 713	-219 103	-259 160	-300 303	-334 396	-366 106	-396 356	-431 951	-471 260	-512 571
Gross Profit	**143 698**	**180 150**	**255 705**	**248 581**	**325 304**	**372 434**	**461 535**	**564 036**	**642 836**	**720 651**	**788 084**	**862 868**	**944 701**	**1 028 407**
Administrative expenses	-14 647	-22 953	-25 993	-27 659	-26 340	-34 595	-43 337	-52 793	-59 777	-66 362	-71 911	-78 341	-85 376	-92 674
Selling and distribution expenses	-11 959	-15 105	-35 554	-37 428	-38 639	-61 847	-77 686	-91 403	-98 911	-105 190	-113 053	-121 767	-131 237	-140 908
Other income	651	4 400	1 724	3 609	2 405	2 958	3 603	4 322	4 886	5 434	5 922	6 474	7 080	7 705
Operating Profit	**117 742**	**146 492**	**195 883**	**187 102**	**222 352**	**216 625**	**265 131**	**334 318**	**389 532**	**441 864**	**466 948**	**495 893**	**525 919**	**557 021**
Depreciation	16 089	27 594	33 706	36 266	36 563	46 637	54 251	57 829	62 348	65 678	68 478	70 977	73 902	77 287
EBITDA	**133 831**	**174 086**	**229 588**	**223 368**	**258 915**	**263 262**	**319 383**	**392 148**	**451 881**	**507 542**	**535 427**	**566 869**	**599 821**	**634 308**
Finance costs	-3 963	-10 844	-5 121	-2 413	-21 276	-29 137	-31 507	-29 148	-22 567	-19 297	-15 940	-11 857	-7 580	-5 307
Profit before tax	**113 780**	**135 648**	**190 762**	**184 689**	**201 076**	**187 488**	**233 624**	**305 170**	**366 966**	**422 568**	**451 008**	**484 036**	**518 339**	**551 714**
Income tax	7 636	9 377	10 437	-25 187	-18 440	-16 254	-25 836	-40 462	-80 824	-117 390	-131 156	-146 600	-163 422	-215 981
Consolidated Net profit	**121 416**	**145 024**	**201 198**	**159 502**	**182 636**	**171 234**	**207 789**	**264 708**	**286 142**	**305 178**	**319 852**	**337 436**	**354 918**	**335 733**
Minority interest	0	87	714	1 077	-123	-2 888	-7 065	-12 019	-13 215	-14 230	-15 741	-17 892	-20 207	-19 619
Attributable income	**121 416**	**145 112**	**201 913**	**160 578**	**182 513**	**168 346**	**200 723**	**252 689**	**272 926**	**290 948**	**304 111**	**319 544**	**334 710**	**316 114**

tatement of Financial Position	2011 A	2012 A	2013 A	2014 A	2015 E	2016 F	2017 F	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	2024 F
IGN'000 000														
urrent Assets	**66 631**	**123 895**	**149 303**	**137 104**	**153 266**	**188 482**	**266 773**	**390 039**	**466 478**	**548 168**	**633 604**	**725 564**	**801 914**	**838 981**
nventories	14 351	32 478	27 667	42 688	52 714	64 826	78 980	94 722	107 094	119 097	129 802	141 898	155 174	168 874
repayments	4 868	27 094	39 646	58 183	71 164	87 515	106 623	127 875	144 577	160 781	175 232	191 562	209 485	227 980
ash and bank balances	22 836	44 425	70 502	20 593	9 620	11 831	51 552	131 921	174 647	223 629	279 894	338 892	379 066	378 799
)ther current assets	24 575	19 898	11 488	15 640	19 768	24 310	29 618	35 521	40 160	44 661	48 676	53 212	58 190	63 328
Non-current assets	**459 853**	**534 306**	**695 123**	**847 617**	**1 017 713**	**1 110 353**	**1 181 618**	**1 233 104**	**1 287 494**	**1 343 499**	**1 393 465**	**1 451 971**	**1 519 665**	**1 596 476**
roperty, plant and equipment	397 711	478 092	581 465	747 794	917 890	1 010 531	1 081 796	1 133 281	1 187 671	1 243 677	1 293 643	1 352 148	1 419 842	1 496 654
repayments for property, plant and equipme	52 396	45 016	91 715	79 491	79 491	79 491	79 491	79 491	79 491	79 491	79 491	79 491	79 491	79 491
)ther non-current assets	9 746	11 198	21 942	20 332	20 332	20 332	20 332	20 332	20 332	20 332	20 332	20 332	20 332	20 332
otal assets	**526 483**	**658 201**	**844 425**	**984 721**	**1 170 979**	**1 298 835**	**1 448 391**	**1 623 143**	**1 753 972**	**1 891 667**	**2 027 069**	**2 177 535**	**2 321 579**	**2 435 457**
urrent Liabilities	**115 827**	**136 030**	**164 767**	**232 949**	**295 416**	**337 835**	**383 462**	**433 932**	**475 222**	**515 745**	**552 911**	**594 260**	**639 211**	**685 662**
rade and other payables	46 379	63 172	83 438	100 930	123 878	152 341	185 604	222 597	251 671	279 877	305 034	333 460	364 658	396 855
inancial Debt	30 445	50 434	55 434	106 450	138 386	152 224	159 835	166 229	172 878	179 793	186 985	194 464	202 243	210 332
)verdraft Balances	4 518	1 263	856	4 190	6 950	1 617	0	0	0	0	0	0	0	0
)ther current liabilities	34 485	21 162	25 040	21 379	26 203	31 653	38 023	45 106	50 674	56 075	60 892	66 335	72 310	78 475
Non-current Liabilities	**120 285**	**117 634**	**129 565**	**159 886**	**199 468**	**216 621**	**226 055**	**233 979**	**242 221**	**250 792**	**259 706**	**268 976**	**278 617**	**288 644**
inancial debt	116 766	112 462	124 850	131 942	171 525	188 677	198 111	206 035	214 277	222 848	231 762	241 032	250 673	260 700
)ther non-current liabilities	3 519	5 172	4 715	27 944	27 944	27 944	27 944	27 944	27 944	27 944	27 944	27 944	27 944	27 944
Total liabilities	**236 113**	**253 664**	**294 332**	**392 834**	**494 885**	**554 456**	**609 516**	**667 911**	**717 443**	**766 537**	**812 616**	**863 236**	**917 828**	**974 306**
Total Equity	**290 371**	**404 536**	**550 093**	**591 886**	**676 094**	**744 378**	**838 874**	**955 231**	**1 036 529**	**1 125 130**	**1 214 452**	**1 314 298**	**1 403 751**	**1 461 151**
otal equity and Liabilities	**526 483**	**658 201**	**844 425**	**984 721**	**1 170 979**	**1 298 834**	**1 448 391**	**1 623 142**	**1 753 971**	**1 891 666**	**2 027 068**	**2 177 534**	**2 321 579**	**2 435 457**

ree Cash Flow Map	2011 A	2012 A	2013 A	2014 A	2015 E	2016 F	2017 F	2018 F	2019 F	2020 F	2021 F	2022 F	2023 F	2024 F
IGN'000 000														
BIT	117 742	146 492	195 883	187 102	226 167	232 313	289 865	366 332	426 686	488 855	540 564	598 257	661 266	725 243
lotional Income tax	-37 678	-46 877	-62 682	-59 873	-72 373	-74 340	-92 757	-117 226	-136 539	-156 434	-172 980	-191 442	-211 605	-232 078
ax adjustments	44 045	52 784	71 480	33 913	47 125	48 762	56 839	67 437	48 494	32 869	36 724	41 048	45 758	14 399
NOPLAT	**124 110**	**152 399**	**204 681**	**161 142**	**200 918**	**206 735**	**253 947**	**316 542**	**338 640**	**365 290**	**404 307**	**447 863**	**495 419**	**507 564**
epreciation and amortization	16 089	27 594	33 706	36 266	36 563	46 637	54 251	57 829	62 348	65 678	68 478	70 977	73 902	77 287
Gross Free Cash Flow	**140 200**	**179 992**	**238 386**	**197 408**	**237 481**	**253 372**	**308 198**	**374 372**	**400 989**	**430 968**	**472 785**	**518 840**	**569 321**	**584 851**
APEX	-59 362	-129 134	-140 408	-218 789	-206 659	-139 277	-125 516	-109 315	-116 739	-121 683	-118 444	-129 482	-141 596	-154 098
hanges in NWC	-30 446	-32 562	52 466	-26 359	637	908	1 062	1 181	928	900	803	907	996	1 028
Operating Free Cash Flow	**50 391**	**18 296**	**150 443**	**-47 739**	**31 459**	**115 003**	**183 743**	**266 237**	**285 178**	**310 185**	**355 144**	**390 265**	**428 721**	**431 780**
lon-Operating Free Cash Flow	1 001	3 063	622	6 618	0	0	0	0	0	0	0	0	0	0
Total FCF available to investors	**51 392**	**21 359**	**151 066**	**-41 121**	**31 459**	**115 003**	**183 743**	**266 237**	**285 178**	**310 185**	**355 144**	**390 265**	**428 721**	**431 780**
nterests	-3 963	-10 844	-5 121	-2 413	-21 276	-29 137	-31 507	-29 148	-22 567	-19 297	-15 940	-11 857	-7 580	-5 307
ax shield	1 268	3 470	1 639	772	6 808	9 324	10 082	9 327	7 221	6 175	5 101	3 794	2 425	1 698
hange in Financial Debt		23 986	-12 814	52 173	68 758	36 324	18 662	14 318	14 891	15 486	16 106	16 750	17 420	18 117
hange in Equity (Cash)		-37 972	-134 769	-9 411	-85 750	-131 514	-180 981	-260 735	-284 723	-312 550	-360 410	-398 952	-440 986	-446 288
Cash Flow from Financing		**-21 359**	**-151 066**	**41 121**	**-31 459**	**-115 003**	**-183 743**	**-266 237**	**-285 178**	**-310 185**	**-355 144**	**-390 265**	**-428 721**	**-431 780**

Disclosures and Disclaimer

Research Recommendations

Buy	Expected total return (including dividends) of more than 15% over a 12-month period.
Hold	Expected total return (including dividends) between 0% and 15% over a 12-month period.
Sell	Expected negative total return (including dividends) over a 12-month period.

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