BRAZIL FOOD & DRINK REPORT
INCLUDES 5-YEAR FORECASTS TO 2020
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Brazil Food & Drink Report Q2 2016

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BMI Industry View

**BMI View:** Brazil’s recession will deepen over 2016 leading to rising unemployment and a reduction in real wages, resulting in our weak outlook for consumption. Brazil’s manufacturing sector for consumer goods cannot support domestic demand, making the country reliant on imports. As the currency continues to weaken, import costs will rise and spur food inflation. Premium categories will be the hardest hit as consumers cut down discretionary spending.

### Food & Drink Spending

![Food & Drink Spending Graph](image)

<table>
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<tr>
<th>Year</th>
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<th>Non-alcoholic Drinks Sales, BRLmn</th>
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*e/f = BMI estimate/forecast. Source: BMI, national statistics*

### Latest Updates & Industry Developments

- Food sales (local currency) growth y-o-y in 2016 +6.0% (-7.1% in USD terms); compound annual growth rate (CAGR) 2015-2020: +7.2%.
- Non-alcoholic drinks sales (local currency) growth y-o-y in 2016 +5.8%; CAGR 2015-2020: +7.0%
- Favourable industry structure will limit losses for leading brewers as their strong market position limits their incentive to cut prices.
- The supermarket format will continue to generate the largest portion of mass grocery retail sales.
SWOT
Food & Drink

Food & Drink SWOT Analysis

**Strengths**

- Brazil is a major producer and exporter of agricultural commodities, and is the largest grower of coffee.

- Beef exports are booming as record numbers of exporters gain EU licences.

- Brazil's huge population offers substantial returns for successful food and drink firms.

- The discount and convenience store formats are set to experience particularly rapid growth.

- Companies are having success diversifying their range of store formats as well as targeting new regions by moving away from the largest cities and into 'frontier' parts of the country.

**Weaknesses**

- Income inequality is a major concern, with consumption patterns varying significantly according to salary.

- In spite of its great potential, the Brazilian dairy sector lacks competitiveness and has therefore received less investment than other agricultural sectors.

- Regional cultural variations limit the extent to which producers can rely on a single marketing and production strategy for the entire Brazilian market.

- AB InBev dominates the beer market, making it difficult for smaller players and new entrants.

- Downward price trends for food products have put pressure on the margins of mass grocery retailers and their suppliers.

**Opportunities**

- Convenience foods and healthier produce have strong appeal among middle- and upper-income groups, which will very likely result in strong growth rates in sub-segments such as soft drinks and alcoholic beverages.
A strong beer culture, combined with rising disposable income, leaves room for premiumisation.

Global import restrictions on Brazilian beef are coming to an end as producers meet quality standards.

Convenience has strong appeal among middle- and upper-income groups, whose lifestyles increasingly mirror those of their counterparts in developed countries.

Threats

- Economic stability cannot be guaranteed over the longer term.
- High inflation would have severe consequences for food and drink industries, with price-stretched consumers once again cutting back on non-essential purchases.
- High interest rates place constraints on company investment plans.
- If implemented, the tax hike imposed on alcohol and soft drinks will have negative consequences for drinks manufacturers.
- Consolidation of companies may limit consumer choice.
Industry Forecast

Consumer Outlook

**BMI View:** Real private consumption growth will remain relatively slow in the coming years as Brazil's consumer boom comes to an end. A run-up in household debt levels in the last few years will constrain consumers' take-up of credit. A deteriorating labour market, indicated by a substantial slowdown in job creation, will also keep consumer confidence relatively weak. In addition, our forecast for continued weakness in the Brazilian real in the next few years implies no improvement in consumers' purchasing power.

Latest Updates

- Real private consumption growth will slow down after its recent highs, expanding by an annual average of 2.0% between 2015 and 2024, down from 4.4% in the previous 10 years.
- Moreover, despite our forecast for rate hikes in the near term, Brazil's Selic target rate will continue to converge with its regional peers over the forecast period due to stronger inflation-fighting credentials and deepening capital markets.
- The Petrobras corruption scandal continues to unfold, and could have a more substantial negative impact on headline real GDP growth than we currently anticipate.

Structural Trends

The next few years will see relatively slow real private consumption growth, but we anticipate a moderate acceleration in the latter half of the forecast period. First, the worst of the current economic slowdown will have passed, creating new opportunities in the oil and gas and construction sectors, and bolstering job creation. Second, in line with our view for moderately stronger economic activity, we forecast a rise in GDP per capita over the next decade, which will increase the purchasing power of the country's poorest segments and help to drive consumption.

Moreover, despite our forecast for rate hikes in the near term, Brazil's Selic target rate will continue to converge with its regional peers over the forecast period due to stronger inflation-fighting credentials and deepening capital markets. This will improve the transmission mechanisms of monetary policy (see 'Secular Policy Rate Convergence To Continue', March 19 2013). In turn, this will bring down average lending rates and increasing consumers' access to financing, supporting consumption. Real private consumption growth will not return to its recent highs over the forecast period, although a massive consumer base, growing access to financing, and modestly stronger economic activity in the latter half of the decade will mean that long-term investment opportunities in Brazil's consumer sector persist despite significant near-term headwinds.
Investment Continuing

Despite the slowdown in consumption and credit growth, Brazil continues to attract significant investment. The food and drink sector tends to be less affected by variations in private consumption compared with consumer cyclical industries (eg, automotive, tourism). Despite the consumer slowdown, retailers Companhia Brasileira de Distribuição and Carrefour Brazil have continued to perform strongly in recent quarters. In the dairy sector, Italian group Parmalat acquired the dairy units of BRF - Brasil Foods S.A. in September 2014.

Although Brazilian retail is getting increasingly competitive, it still remains undeveloped compared with many regional neighbours, with the non-organised sector still accounting for around 40% of grocery sales. This leaves the potential for external players such as Chilean giant Cencosud to further consolidate its presence on the market.

The risks to our 2015 and 2016 real GDP growth forecasts lie primarily to the downside. The Petrobras corruption scandal continues to unfold, and could have a more substantial negative impact on headline real
GDP growth than we currently anticipate. Should the company cut its capital expenditure programme more heavily than we expect, this would pose downside risks to our real fixed investment forecasts. Moreover, the corruption investigation could drag on for several quarters, forcing companies to stop work on projects while individuals are indicted and the tendering processes are examined. Overall, these factors could see Brazilian real GDP growth contract more significantly than we currently expect in 2015, and underperform our expectations for 2016.
Food

**BMI View:** Brazil's food industry will see robust growth over 2016, largely driven by inflation; however, the industry will contract in real terms. As consumers become increasingly price conscious, we expect staples, particularly pasta products, to perform well, while non-essential food items see a contraction. Premium product categories will be the hardest hit as consumers reduce discretionary spending.

**Latest Updates**

- Food sales (local currency) growth y-o-y in 2016 +6.0% (-7.1% in USD terms); compound annual growth rate (CAGR) 2015-2020: +7.2%.

- Per capita food sales (local currency) growth y-o-y in 2016: +5.1% (-7.9% in USD terms); CAGR 2015-2020: +6.4%

- Pasta products will show strong growth over our forecast period as the category becomes more popular.

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**Food Sales**
*(2013-2020)*

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*e/f = BMI estimate/forecast. Source: BMI, national statistics*
Structural Trends

Over our five-year forecast period, food consumption is expected to continue growing steadily, although at a much slower pace compared with the 2009-2014 period. Between 2015 and 2020, per capita consumption is forecast to grow by 6.4% (compound annual growth rate in local currency terms), compared with 9.8% between 2009 and 2014. This growth is expected to be driven primarily by inflation. In urban locations, there is also an ongoing trend towards value-added convenience foods as working lifestyles increasingly come to mirror those in the developed world, with less time for cooking resulting in more consumption of ready meals.

Staple products have so far been relatively unscathed by the poor consumer outlook, as households have first cut down on discretionary items. Nevertheless, as consumer confidence continues to decline and consumers become more price-conscious, we expect the food sector to be negatively affected. Food sales growth will fall from 7% in 2015 to 6% in 2016, then slightly recover in 2017. In particular, we believe that premium product categories, such as premium confectionery, will be the first hit, while cheaper brands or product categories will perform better.

Bread, rice and cereals show no major changes in growth as consumption is particularly steady in this category. Cereals and bread will continue to prop up this category as consumers feel the pinch of reduced purchasing power. The pasta products category will show double-digit growth over our forecast period as the category gains popularity, expanding from a low base. The increasing popularity of the category is largely driven by convenience and the perception that pasta is a healthier option compared to other carbohydrates. Per capita consumption of canned foods is relatively high in Brazil, especially vegetables, meat, fish and beans. The popularity of canned food is especially prominent among the poorer segments of the population, where these comparatively cheap and easy-to-store products form a substantial part of the average person's diet.

The confectionery category will show solid growth over 2016, despite an expected reduction in discretionary spending. The category is unusually resilient on the back of a weakened consumer outlook. Brazil has the largest population with net incomes above USD75,000 in Latin America, meaning that there is a sizeable consumer base that is less likely to cut down on non-essential food spending. We believe that this particular consumer segment is propping up the confectionery category. Between 2009 and 2014, confectionery value sales in Brazil more than doubled.

In 2014, an estimated 67% of the overall market was accounted for by chocolate confectionery, followed by sugar confectionery and gum, with market shares of 27% and 6%, respectively. There is a gradual trend
towards the purchase of premium confectionery products, particularly among Brazil’s growing middle-class population. This trend explains the success of premium chocolate manufacturer and retailer Kopenhagen, which has retail outlets in most Brazilian malls. In 2014, Brazilian biscuit consumption was estimated to be 10.3kg per capita. This, against the per capita consumption of 6.9kg in 2002, demonstrates the rapid advancement of the market. This relatively high level of consumption can be attributed to a long-standing tradition of biscuit consumption at every socioeconomic level, with biscuits already purchased by 98% of Brazilian households.

Although the Brazilian dairy market has grown significantly in recent years, production growth was weighed down by the sector’s lack of competitiveness. The dairy sector in Brazil remains one of the most fragmented sectors within the country’s agricultural industry. On the demand side, growth in dairy consumption will continue to be driven by rising disposable incomes, population growth and the increased perception of dairy products as healthy and nutritious.

Over the next five years, the premiumisation trend in food consumption will boost dairy sales. In particular, growth in Brazil’s dairy sector is expected to be driven by the yoghurt and cheese markets, which are both relatively immature. In the meantime, the Brazilian dairy sector is rapidly consolidating, with all of the leading firms keen to secure market share. With the number of remaining opportunities diminishing, all the big firms are now concentrating on soaking up the smaller, regional firms that can help their expansion in less-consolidated regions. Due to the combination of a large consumer base and high production potential, foreign interest is also shaping the outlook. In September 2014, BRF - Brasil Foods S.A. agreed to sell its dairy units to Parmalat, and Arla acquired an 8% stake in its long-time partner Vigor Alimentos S.A., strengthening its presence in the country.
## Table: Food Sales (Brazil 2013-2020)

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<td>577,893.0</td>
<td>622,689.2</td>
<td>667,160.3</td>
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<td>87,577.0</td>
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*e/f = BMI estimate/forecast. Source: BMI, national statistics*
Drink

**BMI View:** A weak consumer outlook will weigh on beer sales over 2016, with beer growing modestly over our forecast period to 2020. However, leading brewers will not be acutely affected by tepid growth in sales.

**Latest Updates**

- Non-alcoholic drinks sales (local currency) growth y-o-y in 2016 +5.8%; compound annual growth rate (CAGR) 2015-2020: +7.0%.
- Carbonated drinks sales (local currency) growth y-o-y in 2016 +6.8%; CAGR 2015-2020: +8.2%.
- Coffee, teas and other hot drinks sales (local currency) growth y-o-y in 2016 +4.9%; CAGR 2015-2020: +5.9%.
- Favourable industry structure will limit losses for leading brewers as their strong market position limits the incentive for these brewers to cut prices.

**Structural Trends**

**Alcoholic Drinks**

The economic slowdown and increased duty have combined to slow growth in the previously very dynamic beer sector. In particular, we believe that premium product categories, such as spirits or premium beer, will be the first hit, while cheaper brands or product categories will do better. Fewer households falling into the USD10,000-25,000 cohort will drive this trend, as this bracket tends to be a large consumer of brands and premium food products. However, a favourable industry structure will mitigate losses for leading brewers as opposed to more fragmented industries. A strong market position will limit the need to reduce prices in order to gain marginal market share.

Meanwhile, wine is gradually becoming more popular among middle-class Brazilians as an accompaniment to a meal, and value consumption is thus forecast to rise gradually over the forecast period. Despite the historical dominance of beer, we believe a shift towards wine remains a long-term possibility as consumer affluence increases. In European markets traditionally dominated by beer, such as Germany, Ireland and the UK, the past 20 years have witnessed a phenomenal rise in wine consumption and an associated drop in the consumption of beer. This has been driven by wine’s well-publicised health benefits, the growing trend towards drinking at home and the increased affordability of good-quality wine. All of these trends may eventually be mirrored in Brazil.

**BMI** believes the final factor - the availability of good-quality, affordable wine - is likely to be the main sticking point currently limiting consumption growth. High import taxes and low sales volumes mean that
foreign wine is expensive and can often be difficult to find, while the quality of Brazil’s domestic wine often leaves a lot to be desired. However, as wine distribution increases and investment in the local industry increasingly results in wines of quality comparable to its regional neighbours, this is now changing, and the Brazilian wine sector could potentially be one of the most dynamic in the Latin American food and drink industry over the next five years.

Brazil already has a fairly strong spirits culture and over the next five years we see spirits gaining market share from the beer sector. Rising affluence will increasingly push consumers towards premium varieties.

### Non-Alcoholic Drink Sales

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</tr>
<tr>
<td>% growth y-o-y</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
<td>40%</td>
</tr>
</tbody>
</table>

*e/f = BMI estimate/forecast. Source: BMI, national statistics*

### Hot Drinks

Brazil is the largest grower of coffee in the world, and the second largest coffee market behind the US. The increased popularity of coffee in Brazil can be attributed to the high quality of locally processed coffee (ABIC, the country’s coffee industry association, introduced a coffee quality programme in 2004), as well as rising consumer affluence. The industry is set to receive a further boost from growing international demand for coffee that has been processed in Brazil.
According to figures from ABIC, total domestic volume sales of coffee (including soluble/instant coffee) increased by around 14% between 2008 and 2013. Brazil's coffee market is relatively mature by regional standards, with per capita consumption estimated at USD31 in 2014, against USD9 in Argentina. Consumption growth has increased markedly since 2003, and in June 2008 US coffee shop chain Starbucks revealed that its Brazilian stores were generating the highest number of sales transactions per store in Latin America. As a consequence of this success, it announced in August 2010 that it would take full control of its operations in Brazil through the acquisition of local firm Cafés Sereia do Brasil Participações, which owned a 51% stake in the network. The success of Starbucks highlights the growing demand for higher-value gourmet coffee varieties, and this trend is likely to mean value sales increase at a faster rate than volume sales over the next five years.

The company's US origins and high prices have made it something of a status symbol for affluent young Latin Americans. In addition, Starbucks has brought a consistency of quality to the marketplace that is currently lacking in the region's independent coffee houses, which use lower quality beans to keep prices affordable. The firm has to some extent been limited by the number of consumers willing to pay up to USD5 for a cup of coffee. However, the ongoing explosion in the number of middle-class consumers in emerging markets such as Brazil means this problem is gradually diminishing.

Growing international demand for coffee that has been processed in Brazil is set to give a further boost to the coffee industry. The emergence of a sophisticated local market has facilitated the development of higher-quality domestic processing. While this sub-sector still represents only a tiny percentage of Brazil's total coffee exports, its phenomenal growth rate is an indicator of the industry's potential, and with domestic consumption also on the rise the Brazilian coffee-processing industry looks to have a bright future. Meanwhile, tea value sales are expected to increase over the forecast period, albeit from a low base, as consumers drink more herbal and speciality varieties seeking their perceived health benefits.

Soft Drinks

Brazil's climate favours the consumption of cold soft drinks, while consumption is also boosted by the young average age of the country's population. However, sales figures released by the country's national soft drink association ABIR show that growth in the sector has not been uniform across categories, with volume sales of fruit juice/juice drinks and energy drinks greatly outperforming those of carbonated soft drinks, iced tea and bottled water. In all soft drinks categories, we forecast value sales to grow at a faster pace than volume sales, highlighting a premiumisation trend.
Although carbonated drinks will experience strong growth over the next five years relative to less mature categories such as fruit juices and functional drinks, we still expect significant opportunities. Even considering the growing population, this is still a solid return.

<table>
<thead>
<tr>
<th>Table: Non-Alcoholic Drink Sales (Brazil 2013-2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-alcoholic drinks, sales, BRLmn</strong></td>
</tr>
<tr>
<td>51,846.9</td>
</tr>
<tr>
<td><strong>Non-alcoholic drinks, sales, BRLmn, % growth y-o-y</strong></td>
</tr>
<tr>
<td><strong>Coffee, teas and other hot drinks, sales, BRLmn</strong></td>
</tr>
<tr>
<td><strong>Coffee, teas and other hot drinks, sales, BRLmn, % growth y-o-y</strong></td>
</tr>
<tr>
<td><strong>Soft drinks, sales, BRLmn</strong></td>
</tr>
<tr>
<td><strong>Soft drinks, sales, BRLmn, % growth y-o-y</strong></td>
</tr>
<tr>
<td><strong>Fruit and vegetable juices, sales, BRLmn</strong></td>
</tr>
<tr>
<td><strong>Fruit and vegetable juices, sales, BRLmn, % growth y-o-y</strong></td>
</tr>
<tr>
<td><strong>Mineral or spring waters, sales, BRLmn</strong></td>
</tr>
<tr>
<td><strong>Mineral or spring waters, sales, BRLmn, % growth y-o-y</strong></td>
</tr>
<tr>
<td><strong>Carbonated drinks, sales, BRLmn</strong></td>
</tr>
<tr>
<td><strong>Carbonated drinks, sales, BRLmn, % growth y-o-y</strong></td>
</tr>
</tbody>
</table>

*e/f = BMI estimate/forecast. Source: BMI, national statistics*
Mass Grocery Retail

**BMI View:** A weakening consumer profile due to economic headwinds will negatively affect food retail sales over 2016. As consumers increasingly become price-sensitive, we will see an uptick in the sales of value brands and private labels. Furthermore, we expect to see the cash-and-carry and convenience formats show strong growth over our forecast period.

**Latest Updates**

- Depressed household spending will weigh heavily on the mass grocery retail sector.
- The cash-and-carry and convenience formats will see strong growth over our forecast period.
- The supermarket format will continue to generate the largest portion of mass grocery retail (MGR) sales.
- The cash-and-carry format will become increasingly popular over 2016 as consumers opt for bulk purchases to reduce spending on food and drink.
- The convenience format will post strong results despite a weak consumer outlook.

**Structural Trends**

Mass grocery retail (MGR) sales growth over our forecast period will be more subdued than that experienced in recent years, on the back of weaker private consumption growth and general weakness throughout the economy. Food retailers offering low price points and a large range of private label products are well positioned in this lower-spending environment. For example, Pão de Açúcar (Casino’s subsidiary in Brazil) provides good value for money with its cash-and-carry format, and continues to expand rapidly in the country. On the other hand, electronics retailers have been hit hard by the recession, while traditional food retail sales are gradually slowing down. We also expect Carrefour to be relatively resilient in the country, with its Atacadao cash-and-carry stores and hypermarkets.

Supermarkets will continue to take the lion’s share of sales by value (more than 62% of total MGR sales), but of increasing importance are the convenience and discount formats, which are expected to register more rapid growth over the forecast period. These smaller outlets will experience considerable growth rates, albeit from a lower base. On the other hand, hypermarkets sales will slow down over our forecast period to 2020, illustrating the growing demand for convenience.

The large number of low-income consumers in Brazil and the recent focus on the discount format by the country’s major retailers mean that sales from discount stores are forecast to grow by 8.8% through to 2020 on a compound annual basis. Convenience store sales are expected to increase by a compound annual
growth rate of 9.4% over the forecast period as they become increasingly popular with Brazil's growing
number of urban middle-class consumers.

The cash-and-carry format will see strong growth over our forecast period as consumers seek to reduce
grocery expenditure. We expect consumers to make bulk purchases as opposed to shifting to the
discount format; this is due to consumers perceiving discount brands as low quality products.

The key task to master for MGRs will be taking advantage of Brazil's large consumer base while accounting
for the fact that large parts of the population continue to suffer from low incomes. In terms of future market
position, the degree to which individual operators manage to attract today's low-income consumers, many of
whom may belong to the middle classes of tomorrow, will be decisive. A weakening labour market and
fragile consumer sentiment in Brazil will gradually weigh on food retail sales, which have so far been
relatively unscathed by the country's economic troubles as consumers first cut back on discretionary
purchases. Carrefour is well positioned to maintain strong sales growth, thanks to a strong presence in the
cash-and-carry and convenience formats.

The Brazilian government played a proactive role in improving the infrastructure network in the country
(eg, transportation, energy) via tax incentives and large public and private investment. For example, the
second phase of the Growth Acceleration Programme (GAP) ran between 2011 and 2014. Although the
GAP has eased retailers' logistical problems and has extended the country's road network, the quality of the
transport network remains poor according to our Operational Risk Team, which poses risks to supply
chain. Currently, Brazil's logistics network comprises underdeveloped ports and railways, and overreliance
on poor-quality road networks. The country's utilities network is heavily reliant on hydropower, which often
results in erratic electricity supply in conjunction with water shortages in many areas.
**Industry Risk/Reward Index**

**Latin America - Risk/Reward Index**

**BMI**'s Food & Drink Risk/Reward Index provides a platform for investors to compare markets across a variety of indicators that assess the relative strengths and weaknesses of individual countries. In doing so, our index provides a platform for benchmarking regionally, and by being forward-looking by nature, we can gauge which markets we think are going to provide the strongest opportunities in the future. We can also dig a little deeper and go sub-regional, which can be useful for ambitious regional food retailers or drinks companies.

Briefly touching on the indicators we use to assess countries, the reward part of the index takes into account market size, current consumption levels, future industry growth prospects (based on our five-year industry forecasts), market fragmentation (with greater fragmentation indicating higher opportunities) and the size of the youth population. The risk part of the index takes into account the legislative environment, the level of development of the organised retail sector (with higher development leading to lower risks), as well as relevant aspects of the economic and political environment.

There have been some changes in our Food & Drink Risk/Reward Index since Q116. In the reward section, we have increased the weights of the 'per capita food consumption' and 'GDP per capita' indicators, at the expense of 'food consumption growth', 'population size' and 'youth population'. This gives mature markets an advantage over growth-focused economies. Reflecting these changes, more Central American markets feature in the top five; previously, the top five was dominated by South American markets and Mexico. Guatemala and Costa Rica have moved up the index, displacing Peru and Colombia on the back of good short-term economic growth prospects that translate into attractive consumer markets. Chile has overtaken Brazil to share first position with Mexico. Chile holds the highest scores in both the industry risk and country risk components. These high scores reflect Chile's business-friendly economy, which is attractive for multinational corporations, and is complemented by high mass grocery retail (MGR) penetration, thus ensuring efficient distribution channels to consumers.

**Chile Closes In On Brazil**

Since the last iteration of our Food & Drink Risk/Reward Index for Latin America, Chile has overtaken Brazil and now ranks joint-first, alongside Mexico. Chile presents a favourable consumer market due to high scores for MGR penetration, GDP per capita and food consumption per capita. Multinational
corporations wanting to invest in Chile's food and drink industry will benefit from a developed MGR sector that can reach consumers who have spending power.

Chile's situation has remained stable over the past few quarters. The country benefits from the highest risk score in the region and the most developed food and drink industry, helping the country achieve the leading position in the index. The success of Chilean grocery retailers Cencosud and Falabella pursuing regional expansion symbolises the high degree of industry development. Nonetheless, we believe that opportunities are limited for new entrants, due to the small consumer base by regional standards and market concentration.

A deteriorating macroeconomic environment has led to Brazil losing its leading position in the index. We expect Brazil to enter a deeper recession in 2016, which will result in firms reducing operations as they navigate tough economic conditions. We expect large workforce reductions, which will translate to lower incomes and lower private consumption. Despite facing these headwinds, Brazil remains a key market over the long term due to the size of its population, representing the largest consumer base in the region.

From a regional perspective, while the outlook has remained relatively stable since last quarter, the overall macroeconomic environment remains weak in several key economies, such as Brazil and Colombia. In Brazil, a deterioration of the labour market and the Petrobras scandal will continue to weigh on household spending, while the Colombian economy has been affected by lower oil prices. On the other hand, weaknesses in Latin American currencies has affected headline food consumption and GDP per capita in US dollar terms, even for markets with a positive consumer outlook, such as Mexico.

While Colombia was previously one of our preferred consumer stories in the region, the country has fallen down our rankings in recent quarters. Given Colombia's reliance on oil exports, structurally lower oil prices will continue to drive a depreciation of the Colombian peso and therefore erode household purchasing power. Regional rivals like Peru, on the other hand, will offer growing opportunities for food companies, driven by market fragmentation and the acceleration of private consumption. Peru ranks in the bottom three, but we believe that its ranking will improve as the economy rebounds over 2016, with tax cuts and employment gains set to boost household spending. Elsewhere in the region, based on the constructive outlook of our Latin America Country Risk team, we believe that Argentina has the potential to climb up in our index if its business environment improves and economic growth accelerates following the presidential election in October 2015.

The Central American region presents key markets poised for long-term growth prospects. Guatemala and Costa Rica have fragmented markets that provide scope for new market entrants to develop and grow the
market. Furthermore, the short-term economic growth outlook is promising for the region as Central America will benefit from increased US demand for manufactured goods, particularly in Guatemala, Honduras and El Salvador. Our Latin America Country Risk team expects household spending to benefit from an uptick in remittances from the US and lower oil prices. Nonetheless, small populations by regional standards and poor risk scores will hamper some Central American economies from achieving high rankings. Among Central American countries, we identify Guatemala as the standout opportunity, as it benefits from a larger and younger population. In addition, its economy will benefit from lower global oil prices and a strengthening US economy, which will reduce the negative impact of fuel subsidies and boost exports.

Although our Food & Drink Risk/Reward Index favours countries with a strong growth outlook - the reward portion carrying a 60% weight - risk plays a fundamental role in Latin America. Indeed, variations in the risk index are much greater than in the reward side. Countries at the top of our index - Brazil, Chile and Mexico - have the best risk profiles in the region.

**Costa Rica Sets Itself Apart With A Balanced Profile**

Latin America Food & Drink Risk/Reward Scores Q216

![Graph showing risk and reward scores for different Latin American countries, with Costa Rica having a balanced profile compared to its neighbors.]

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The table below outlines the factors that make up each index and the scores for the Latin America region. The six factors that make up the reward index are: food consumption per capita; market fragmentation; per capita food consumption (five-year compound annual growth); population size; GDP per capita; and youth population.

<table>
<thead>
<tr>
<th>Country</th>
<th>Reward</th>
<th>Industry Reward</th>
<th>Country Reward</th>
<th>Risk</th>
<th>Industry Risk</th>
<th>Country Risk</th>
<th>Food &amp; Drink Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>41.9</td>
<td>40.0</td>
<td>43.7</td>
<td>66.0</td>
<td>72.5</td>
<td>59.5</td>
<td>51.5</td>
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<td>Mexico</td>
<td>42.4</td>
<td>30.0</td>
<td>54.8</td>
<td>58.9</td>
<td>65.0</td>
<td>52.7</td>
<td>49.0</td>
<td>1</td>
</tr>
<tr>
<td>Brazil</td>
<td>42.4</td>
<td>30</td>
<td>55</td>
<td>54.5</td>
<td>62.5</td>
<td>46</td>
<td>47.2</td>
<td>3</td>
</tr>
<tr>
<td>Guatemala</td>
<td>49.4</td>
<td>58.0</td>
<td>40.8</td>
<td>42.5</td>
<td>41.5</td>
<td>43.6</td>
<td>46.6</td>
<td>4</td>
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<td>Costa Rica</td>
<td>43.4</td>
<td>48.0</td>
<td>38.9</td>
<td>49.1</td>
<td>46.5</td>
<td>51.7</td>
<td>45.7</td>
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<tr>
<td>Argentina</td>
<td>44.7</td>
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<td>53.4</td>
<td>43.8</td>
<td>40.0</td>
<td>47.6</td>
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<tr>
<td>Colombia</td>
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<td>34.0</td>
<td>39.3</td>
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<td>57.5</td>
<td>49.4</td>
<td>43.4</td>
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<tr>
<td>Peru</td>
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<td>34.0</td>
<td>39.3</td>
<td>50.3</td>
<td>47.5</td>
<td>53.1</td>
<td>42.1</td>
<td>9</td>
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<tr>
<td>Venezuela</td>
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<td>54.0</td>
<td>45.2</td>
<td>26.9</td>
<td>20.0</td>
<td>33.8</td>
<td>40.5</td>
<td>10</td>
</tr>
<tr>
<td>El Salvador</td>
<td>36.3</td>
<td>44.0</td>
<td>28.6</td>
<td>37.5</td>
<td>31.0</td>
<td>44.0</td>
<td>36.8</td>
<td>11</td>
</tr>
</tbody>
</table>

Each score is out of 100, with 100 the highest. The Food & Drink Risk/Reward Index is the principal index. It comprises two sub-indices, ‘reward’ and ‘risk’, which have a 60% and 40% weighting respectively. In turn, the ‘reward’ index comprises ‘industry reward’ and ‘country reward’, which have equal weighting and are based upon growth and size of a country’s food, alcoholic drinks and soft drinks market (industry) and the broader economic and socio-demographic environment (country). The ‘risk’ index comprises ‘industry risk’ and ‘country risk’, which also have equal weightings and are based on a subjective evaluation of the market’s regulatory and competitive issues (industry) and its broader country risk exposure (country), which is based on BMI’s proprietary Country Risk Index. Source: BMI

The first indicator we are going to look at is **food consumption per capita**, which reflects the existing spending power of the top ranked markets: Brazil, Mexico and Chile. All three countries possess relatively well-developed food and drink sectors compared with many of the emerging markets we cover globally. Consequently, their scores are more comparable with high-income developed states for the purposes of our index framework.

The second indicator we are going to look at is **market fragmentation**, which is a subjective indicator that assesses how relatively developed (less fragmented) or underdeveloped (more fragmented) a market is. Whereas the first indicator dishes out strong scores for high existing spending, the second indicator rewards countries where the long-term scope for growth is the greatest. These are typically markets where there is a
lot of room for growth, innovation and development. Almost all the markets we rate in Latin America score well here, which underlines why so many of the region's leading food and drink companies are investing so heavily in regional growth. Latin America as a region is hugely important to almost all of the largest food and drink companies and in many cases contributes more to annual sales than Asia does.

The third indicator within the reward part of the index system is **per capita food consumption growth** (five-year compound annual growth). Along with market fragmentation, this is the joint highest-weighted indicator within the reward score framework. Given that our index are designed to be forward-looking, this indicator is one of the main ways we gauge growth and, in combination with some of the other high-weight indicators we look at, informs our preferences for certain markets. Compared with a number of emerging markets we cover, especially in Sub-Saharan Africa, existing per capita food consumption levels are relatively high across most of Latin America, so the overall growth rates in per capita food consumption are generally not as strong as they might be in poorer regions.

**Population size** is the fourth indicator and, as mentioned earlier, Brazil scores particularly well here. **GDP per capita** is the fifth indicator; almost all the Latin American countries score reasonably here, which ties back into the per capita food consumption growth indicator.

The final reward indicator, **youth population**, was introduced as a way to factor in a more comprehensive demographic angle to our index. Again, much of the scoring is reasonable. A combination of a large and young population, solid infrastructure and good growth prospects always sits well with regionally focused and growth-seeking food and drink companies.

**The Seven Risk Indicators**

The seven factors that make up the risk index are: mass grocery retail (MGR) penetration; regulatory environment; short-term economic risk index; income distribution; legal environment; economic openness; and availability of labour.

The first risk indicator we are going to look at is **MGR penetration**. This is our principal way of assessing how relatively developed the overall consumer sector is. A higher MGR score is risk-positive in the sense that it reflects better-developed routes to consumers. Very low MGR scores reflect the ongoing predominance of kiosks and markets with weak centralised distribution mechanisms. Internal distributions systems and by extension the development of organised retail affects how efficiently companies can reach the market and at what cost. In less-developed retail markets (this is especially true in large geographies),
much of the distributional onus can fall on the companies themselves. MGR is relatively well developed in Brazil, Chile and Mexico.

The second factor, regulatory environment, evaluates the complexity of regulations such as labelling and nutrition requirements. It also can be used to gauge the state of the overall business environment. The more developed and mature markets usually score better here, and that is once again the case this quarter. Brazil and Chile score quite well, while Venezuela has work to do.

The third factor, short-term economic growth, assesses the economy's current economic health, high scores in this criterion are indicative of long-term growth potential. It is principally the candidates towards the top of our index that do well on this criterion, underlining the link between economic stability and the overall attractiveness of the consumer market-Chile and Mexico rank well in this criteria.

The fourth factor, income distribution, is measured by the proportion of private consumption accounted for by the middle 60% of earners.

The fifth factor, legal environment, is a measure of the hurdles that any producer is likely to face in areas such as starting and closing businesses, paying taxes, dealing with licences and registering property.

The sixth factor, economic openness, is a measure of how business-orientated an economy is and measures the level of foreign direct investment protectionism, tax rates and the level of government intervention. Here, Chile and Honduras score well whilst Venezuela scores poorly. The final risk factor, availability of labour, measures the size of the labour force and its qualifications. A large labour force equipped with basic skills is advantageous to businesses choosing to operate in a country. Most of the Latin American markets scored reasonably well in this criterion.

Table: Latin America Food & Drink Risk/Reward Sub-Factor Index Q216 (scores out of 10)

<table>
<thead>
<tr>
<th>Reward</th>
<th>Chile</th>
<th>Mexico</th>
<th>Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food consumption per capita</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Market fragmentation</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Per capita food consumption, five-year compound annual growth</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Population size</td>
<td>3</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>GDP per capita, USD</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Youth population, %</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Reward</td>
<td>Chile</td>
<td>Mexico</td>
<td>Brazil</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>MGR penetration</td>
<td>7</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Regulatory environment</td>
<td>7.5</td>
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<td>Short-term economic growth</td>
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<td>3</td>
</tr>
<tr>
<td>Income distribution</td>
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<tr>
<td>Legal Environment</td>
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<tr>
<td>Economic Openness</td>
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<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Availability of Labour</td>
<td>6</td>
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</tr>
</tbody>
</table>

Source: BMI
Brazil Risk/Reward Index

There have been some changes in our Food & Drink Risk/Reward Index since Q116. In the rewards section, we have increased the weights of the ‘per capita food consumption’ and ‘GDP per capita’ indicators, at the expense of ‘food consumption growth’, ‘population size’ and ‘youth population’. This gives mature markets an advantage over growth-focused economies.

Despite the significant headwinds to household consumption mentioned above, Brazil remains in the top three of our Food & Drink Risk/Reward Index for Latin America for Q2 2016. Brazil's food and drink sector remains one of the strongest in Latin America, due to a large population, high food consumption and a risk score well above average. Nonetheless, Chile has overtaken Brazil, which occupies the first position in our index. A further deterioration in Brazil's economic outlook has resulted in Chile overtaking Brazil.

Brazil's underperformance mostly relates to the macroeconomic side (Country Risk category), where it trails the regional average. Brazil's weaker score in the risks category is due to a number of factors that could inhibit an investor's chance of realising an appropriate return. Poor infrastructure in the country's less developed regions presents major difficulties. The regulatory environment can also pose a problem, with food and drink importers having to fulfil a long list of requirements mandated by the government. For example, importers must provide advance copies of invoices, company registration and certificates of product testing.

With a population of just above 200mn, dynamic consumer growth and a relatively favourable business environment, Brazil will continue to attract a significant amount of attention in the coming years. Although Brazil has plenty to offer to foreign investors, we highlight that the country remains a challenging market in which to invest. High entry barriers are manifested through often-conflicting regulatory frameworks across different states, high taxes and local companies aided by state subsidies. Moreover, some of Brazil's largest and most successful businesses remain firmly in state hands, further raising entry barriers for foreign companies looking to set up shop in the country.
Brazil Vs Latin America
Risk Reward Index Scores Q216

Source: BMI
Market Overview

Food

Recent Developments

- The food and beverage industry is well developed, and leading international operators have a strong presence.
- There are around 45,000 food-processing companies, including major multinationals.
- The sector is, however, composed mostly of small- and medium-sized companies.

Prepared Food/Canned Food

Leading players in the Brazilian packaged food industry are global manufacturers such as Nestlé, Parmalat and Unilever. Small- and medium-sized regional manufacturers also have a strong presence, benefiting from an intrinsic understanding of the local market and, often, cheaper prices.

Nestlé produces food and nutritional products in a variety of segments, including milk, coffee, cereals, biscuits, chocolate, frozen goods and ice cream. The firm produces 1,300 different items under more than 140 brands and has 30 production plants in the states of São Paulo, Minas Gerais, Rio Grande do Sul, Goiás, Rio de Janeiro and Espírito Santo.

Unilever has 10 production plants in São Paulo, Minas Gerais, Goiás and Pernambuco that produce food and ice cream as well as hygiene and beauty products.

Confectionery

High consumption rates and the good prospects for future growth have driven many of the main international players to enter the Brazilian confectionery market. International majors such as US-based The Hershey Company and Switzerland's Nestlé now compete with the major South American confectionery producers. Our industry figures suggest that Brazil is the world's fourth largest consumer market for chocolates (aggregate value sales, in US dollar terms), after China, the US and Japan, and is also the fourth largest market for sugar confectionery products. High consumption rates (we estimate per capita consumption of chocolate at 6.2kg in 2015) are partly due to the low cost of products owing to the proximity of raw materials. High consumption rates can also be attributed to Brazil's large youth population,
which makes up the main consumer market for chocolate and sugar confectionery. We estimate that around 40% of the population is below the age of 25 years old.

Domestic production reached 740,000 tonnes of sugar confectionery and 1.36mn tonnes of chocolate in 2014, according to our estimates. The country's strong position in terms of confectionery production is the result of a late-1990s influx of foreign manufacturers setting up production facilities to supply the Brazilian and neighbouring markets. Examples include FINI (Spain), Perfetti (Italy), Canel's (Mexico) and Arcor (Argentina). As a result, the market is highly competitive and profit margins are comparatively low. The industry is predominantly based in the south of the country, with the state of São Paulo hosting more than 50% of manufacturing facilities.

**Mondelez International** is a leading player in gum and sugar confectionery, with a market share above 50%, and main brands including Trident, Ping Pong Ploc, Clorets and Plets. Mondelez's most popular brands are Bis, Lacta, Sonho de Valsa, Diamante, Negro, Confeti, Ouro Branco, Trakinás, Lancy, Brek and Pascoal.

In the gum and sugar confectionery category, Mondelez is followed by Argentinian Arcor do Brasil, which operates three confectionery production plants in Bragança Paulista, Rio das Pedras and Recife. The company offers more than 50 brands across product categories in Brazil, with popular brands including Sambapito, Big Big, Poosh, Samba, Blow Up and Tortuguita. In the course of 2012, Arcor do Brasil, which holds around 10% of the country's sweets and gum market, was planning to invest USD25mn in marketing initiatives alone.

Chocolate represents, by far, the largest sector by value, accounting for more than two thirds of sales. In the chocolate sub-sector, Mondelez commands a market share above 30%, thanks to its division Lacta. Popular chocolate brands include Laka and the Sonho de Valsa line of praline products. Mondelez is followed by Nestlé, which has owned Garoto since 2002. Overall, Nestlé is estimated to hold a share of more than 20% of Brazil's chocolate market and also has a strong position in the sugar confectionery sub-sector. Leading brands include Especialidades Mentex, Nestlé Classic, Alpino, Chokito, Galak, Nescau, Seducao, Milkybar, Crunch, Charge and Magic.

These companies' strong position is a result of Brazilian consumer preference for established brands such as Nestlé's Classic and Kraft's Lacta, Sonho de Valsa and Bis. Manufacturers are accommodating this preference by launching brand extensions, as well as new flavours and new categories under popular and established brands.
Swiss business-to-business chocolate manufacturer **Barry Callebaut** signed a distribution and cooperation agreement with Brazilian food producer **Bunge Alimentos**, a subsidiary of global agricultural giant **Bunge Limited**. The deal allowed Bunge to distribute Barry Callebaut's food service chocolate products. The two firms also work together to develop chocolate products that meet the specific needs of the Brazilian food service/bakery market. The company has a production plant in the state of Minas Gerais and, in October 2014, announced an USD11.5mn investment to increase its production capacities.

**M Dias Branco** is Brazil's largest biscuit company. At the end of 2011, it acquired local rival **Pelágio Participações** for BRL240mn. This move came shortly after snack and soft drink giant **PepsiCo** sealed the acquisition of Brazilian biscuit maker **Mabel** in a deal worth about USD520mn, suggesting signs of consolidation in the sector.

**Dairy**

Global food giant Nestlé is the largest dairy producer in the country and invested USD40mn in a joint venture, **Dairy Partners America** (DPA), with New Zealand dairy cooperative **Fonterra** to set up and run a new dairy to maintain its leading position. In May 2014, Nestlé announced the end of the partnership with Fonterra. Nestlé will operate milk powder factories in the country, while DPA will continue to operate the chilled dairy business. Fonterra will now have a 51% stake in DPA. Another major dairy firm in Brasil is **Parmalat**, which acquired the dairy unit of **BRF - Brasil Foods S.A.** (created from the 2009 merger of **Perdigão** and **Sadia**) in September 2014.

Danone entered Brazil in 1970 and is now a leading producer of high-margin processed dairy products such as probiotic yoghurt. The firm is also a leading producer of biscuits and snack foods, as well as bottled water. The company has four production plants, which are in Minas Gerais and São Paulo. Nestlé opened a new dairy plant in the Brazilian state of Rio de Janeiro at the end of 2011. The facility now produces ultra-high temperature milk (Ninho and Molico brands), soy milk, chocolate milk and a ready-to-drink category of milk drinks (Nestlé Fast). In November 2014, Danone announced it would open its first infant formula factory in the country in 2016.

Milk imports mainly consist of packaged UHT milk, largely from Argentina and Uruguay, while condensed milk accounts for a growing share of milk exports.
Meat

Meat production in Brazil has increased steadily over the past five years, mainly driven by strong demand from export markets, particularly where beef and pork are concerned. Meanwhile, domestic demand has been growing at a slower rate owing to wide income disparities, with many consumers unable to afford meat on a regular basis. Production increases have been facilitated by higher investments in animal genetics, improved pasture and management practices, as well as government credit programmes.

The Brazilian meat industry is one of the largest and most profitable food sectors in Brazil. Brazil is the world's largest producer of beef, and home to some of the world's largest beef firms such as Marfrig, Minerva and JBS. Many of the firms that traditionally focused simply on packaging fresh meat are now concentrating on producing value-added products. For example, Marfrig acquired in 2008 Argentina-based Mirab, a leading manufacturer of meat snacks.

Despite being a massive worldwide exporter of beef, the industry continues to be plagued by safety concerns owing to the high prevalence of foot-and-mouth disease in some parts of the country. Many of the largest firms have sought to diversify into other countries and other sectors in an effort to shield themselves from this threat.

Successive bans of Brazilian beef by China in December 2012 and by Egypt and Peru in early 2014 following cases of Bovine Spongiform Encephalopathy (BSE) highlight the precarious position of many food firms operating in this sector. In 2008, the EU enacted a complete ban on Brazilian beef imports after concerns were raised about the country's handling of the latest foot-and-mouth outbreak. An EU Food and Veterinary Office report revealed irregularities regarding animal registration, identification, vaccination and certification. Gradually, following stringent inspection procedures, farms are being granted access to the EU market once more.

In a response to these bans, Marfrig, which derives around 16% of its revenues from exports to the EU, announced that it would expand its operations in Argentina and Uruguay. This kind of geographical diversification has been pursued by all of the country's leading meat firms and is one way to negate the effect of bans on Brazilian meat. JBS now has significant operations in Argentina and has been rapidly expanding in the US. However, despite this diversification, all leading Brazilian firms, including JBS and Marfrig, rely heavily on meat produced in Brazil. Ensuring that these firms do not have to suffer an endless cycle of export bans is crucial for safeguarding the long-term health of the Brazilian meat industry.
The government of Brazil is moving forward with plans to negotiate the lifting of embargoes against imports of the country's meat. The push follows a decision by the Argentinean government to lift a ban on Brazilian beef, made on June 22 2015. Argentina imposed the ban in 2012 owing to fears about BSE, after isolated cases of the disease were discovered in the Brazilian herd. The Health and Agrifood Quality Service of Argentina admitted that atypical cases of BSE could occur anywhere in the world and do not indicate that Brazilian imports pose a greater risk. Earlier in 2015, China lifted its embargo on Brazilian meat, while Brazilian Agriculture Minister Katia Abreu is in discussions to reopen the US, Saudi Arabia and Japanese markets for Brazilian beef.

In July 2015, the US Department of Agriculture will permit fresh beef imports from Brazil, under conditions to minimise the risk of foot-and-mouth disease (FMD). The Animal and Plant Health Inspection Service made the decision after it found Brazil to be compliant with US import certification requirements. Brazilian companies must meet food safety standards before exporting any beef to the US.

Prices of beef in November 2015 dropped 28% compared with April 2015, due to fall in domestic demand after economic recession, according to a new Mintec report. Beef exports also declined 18% y-o-y in H115, as a result of lower demand from two of the country's main beef importers, Russia and Venezuela. However, exports to Egypt, Brazil's main beef market in the Arab nation, increased 46% y-o-y in September 2015, while exports to the UAE, Jordan, Palestine and Oman also saw an uptick during the month. The country's total beef exports stood at 117,700 tonnes in September, the highest level in 2015 so far. The increase in exports is expected to push beef prices upwards in the short term, added Mintec.

Poultry

Poultry production has been increasing, with both export and domestic demand strong owing to cheaper retail prices. The Brazilian poultry sector is highly concentrated. The threat of massive oversupply has resulted in calls for Brazilian poultry producers to cut production by around 5% around 2011-2012.

We expect strong demand for exports to be the main driver of production growth over the coming years. Brazilian exports are particularly attractive due to the weakness of the Brazilian real. A particularly high-potential market would be India, where chicken is a major dietary staple and the opportunities for value-added production are numerous. At present, only 5% of poultry is sold in frozen form, which may provide an avenue for Brazilian companies to stretch profit margins. One problem that may be encountered here is that Indian consumption mainly consists of chicken legs, while the more expensive breast meat is usually consumed in Europe and the US, thus undermining the potential for poultry producers to gain substantial
profit margins until the current economic crisis subsides. As mentioned earlier, our Agribusiness team expects the Brazilian poultry sector to benefit from Russia's one-year ban on agricultural products.

Brasil Foods and JBS are Brazil's largest poultry producers and exporters, accounting for about 70% of chicken exports in the country. A movement of consolidation occurred over the past few years. In 2013, JBS acquired the pork and poultry units of Marfrig. In July 2014, US meat processor Tyson signed an agreement with JBS to divest its poultry operations in Brazil. In December 2015, BRF entered into an agreement to acquire the Thai poultry processor, Golden Foods Siam Ltd for USD360mn. The deal will include Golden Foods Siam Ltd's assets in Thailand and Europe. BRF also announced in December 2015 that it had signed a pledge to acquire Eclipse Holdings Cooperatief UA, a Dutch pork products company for USD 85mn. Additionally, BRF has acquired a British food distributor, Universal Meats (UK) Ltd for USD50mn.

**Seafood**

The fisheries sector is characterised by the presence of approximately 300 small-scale and industrial-scale producers, and is focused on coastal areas, the river basins of the Amazon and other big rivers. Furthermore, the aquaculture sector, which harvests fish, crustaceans and molluscs, is of some significance. Catches are consumed fresh and are also processed for both the domestic and international markets. Overall, the fisheries sector accounts for around 0.5% of GDP, but production remains low considering Brazil's large coastal area.
Drink

Recent Developments

- Coffee remains a major export commodity, with Brazil accounting for around a third of the world's coffee crop. Around 160 firms export Brazilian coffee around the world.

- The soft drinks industry is highly concentrated, with the two leading players, The Coca-Cola Company and AmBev, accounting for more than 80% of value sales.

- The beer sector is dominated by AmBev, which controls almost 70% of the market. Its sales are dominated by mainstream brands such as Brahma and Skol.

Hot Drinks

Brazil is the second largest coffee market in the world (behind the US), and coffee is drunk by many Brazilians every morning. In early 2004, the Brazilian Coffee Industry Association introduced a quality programme that set minimum standards for domestic coffee production, with the dual aims of increasing per capita consumption of coffee and stimulating consumption of higher-quality blends.

Coffee remains a major export commodity, with Brazil accounting for around a third of the world's coffee crop. Around 160 firms export Brazilian coffee around the world. Well-established local preferences mean that no single brand can hold a dominant position across the entire country, and this is unlikely to change in the near future. Although this makes expansion relatively straightforward, as firms such as Sara Lee can improve their market share simply by acquiring one of many local firms, it also means that marketing and packaging costs are multiplied.

Soft Drinks

The soft drinks industry in Brazil is among the strongest in the world; however, most of this production is for export purposes. Brazil is considered a young country, with around 40% of its population younger than 25. In the past few years, the beverage industry has begun to try to attract these consumers, and soft drinks producers have invested substantial amounts in the country. The soft drinks industry is highly concentrated, with the two leading players, The Coca-Cola Company and AmBev, accounting for more than 80% of value sales. Competition in the sector is strong and is carried out mainly via strategic pricing. Manufacturers try to gain market share by frequently introducing product innovations, new flavours and novel packaging options.
Coca-Cola is the clear market leader, with 55% and 62% of volume and value sales respectively according to Afrebras, the Brazilian Association of Manufacturers of Soft Drinks. Coke's brands lead the market in Brazil, and the US company's products are produced by 16 different companies. Although Coca-Cola's sales in Brazil declined in 2013 due to a slowdown in private consumption, there is still room for growth in the soft drinks segment. Key bottlers include Coca-Cola Femsa, Brazilian Solar, which started its operations in 2013, and Chile's Embotelladora Andina, which holds the franchise for Rio de Janeiro. Coca-Cola Femsa holds the franchises for Greater São Paulo, Campinas and Santos in São Paulo state, as well as Mato Grosso do Sul state and part of Goiás state. AmBev is the second largest soft drinks producer, manufacturing and distributing PepsiCo drinks as well as its own brands.

In June 2015, Mexican bottling company Coca-Cola FEMSA invested USD500mn to open two new bottling facilities in Brazil and Colombia. The units have energy co-generation systems and technology to enable efficient use of energy and water. The company spent USD258mn to construct the Itabirito facility in Minas Gerais, Brazil, which has an annual production capacity of around 370mn unit cases.

Leão Junior, acquired by Coke in April 2008, is Brazil's leading maker of ready-to-drink teas, and its flagship bottled tea brand Matte Leao accounts for around 46% of the market. With this acquisition Coke now controls around 70% of the market, as its existing Nestea brand, which it jointly owned with Nestlé, already accounts for a quarter of ready-to-drink tea sales. In 2010, Femsa signed a contract to distribute Leão Junior. Lipton, which is distributed by AmBev and marketed by PepsiCo, controls around 25% of the market.

Beer

Brazil is the world's third largest market for beer, after the US and China, and represents more than 40% of Latin American sales. The sector is highly concentrated, with the four leading brewers controlling more than 95% of the market. The beer sector is dominated by AmBev, which controls almost 70% of the market. Its sales are dominated by mainstream brands such as Brahma and Skol. To expand its share of the premium segment, AmBev has revealed it will look to increase the presence of Stella Artois, currently the most popular premium beer in the UK. The brewer also plans to increasingly promote its flagship Budweiser brand in Brazil in an effort to encourage drinkers to buy more premium brands. The firm launched Budweiser in the market in September 2011 with the brand promoted through deals with nightclubs, US-themed restaurants, Brazilian celebrities and the sponsorship of concerts.
Ambev is followed by Brazilian Petrópolis and Brasil Kirin (previously Schincariol). According to Afrebras, the two brewers each control a market share above 10%. In November 2014, Petrópolis partnered with SABMiller, which had previously exited the country in 2012, in order to distribute its brands in the country. Heineken, which acquired Femsa beer operations, commands around 9% of the market with brands such as Kaiser. With AmBev already controlling around two thirds of the market, maintaining and increasing its market share depends on its ability to offer the increasing range of premium products that Brazilian beer drinkers are now seeking.

Results from AmBev, the country's largest brewer, highlight particularly strong growth in the premium-beers segment, and this trend is expected to continue over the long term. AmBev, the Brazilian unit of the world's largest brewer AB InBev, has revealed it will increasingly target the premium segment in the country in an effort to drive value sales. In Q215, the company said in a statement that the second quarter had been challenging, with tough comparables from the soccer World Cup and weak economic conditions in a number of markets, such as Brazil.

Brasil Kirin, which controls around 11% of the market, is also targeting the premium segment. In May 2008, the firm acquired Eisenbahn, an artisan brewer in São Paulo, which had revenues of BRL11mn in 2007. This is a welcome addition to Brasil Kirin's portfolio of craft beers and is a sign that AmBev is unlikely to have it all its own way when targeting drinkers of premium beer. Meanwhile, increasing attention from the country's competition authorities may see AmBev's dominance in the sector gradually erode.

Wine

Per capita consumption of wine is extremely low in Brazil compared with that of beer. As such, the country has historically only ever had a small wine industry. However, at 2009's Vinexpo wine show in Bordeaux, France, six Brazilian producers were exhibiting for the first time, and French winery Jean Jean revealed plans to establish a sales office in the country within the following year.

The Brazilian wine industry has experienced upsurge demand over the past few years and this trend is expected to continue as the country hosts the Olympics in 2016. The Brazilian Wine Institute, Ibravin, estimates wine exports at USD4.38mn in 2012. Brazil is targeting seven countries in its bid to increase the amount of wine that it exports, namely Canada, Germany, the Netherlands, Poland, Sweden, the UK and the US.
Wine production is concentrated in southern Brazil, notably the state of Rio Grande do Sul. Although production has increased over recent years, it is not sufficient to accommodate increases in demand, meaning a substantial amount of wine is imported. The small but growing number of boutique wine producers in Brazil has been attracting the interest of international wine buyers recently, as these producers seek to respond to consumers' calls for new, exciting wine varieties.

Brazil's vast size and fertile soil means that it is suitable for growing a wide range of grape varieties and, with the expertise of Chilean and Argentine producers on the doorstep, it is easy to see why the prospects for the Brazilian industry are talked of highly. With the average cost of labour cheaper in Brazil than in either Chile or Argentina, the export industry is likely to also be supported by Brazilian wines coming in at a highly competitive price point.
Mass Grocery Retail

Recent Developments

- The largest company in Brazil's mass grocery retail (MGR) is local group Companhia Brasileira de Distribuição (CBD), which is fully controlled by French retailer Casino since June 2012.

- Walmart has been present in the country for more than 15 years, and its network now includes a broad range of different fascias and store formats, with the overall portfolio consisting of more than 300 MGR outlets.

- Most international operators were initially attracted to wealthy and populous areas in the south east of the country as well as the highly populated region of the north east but have since expanded into other regions.

Brazil is the largest and most populous country in Latin America, with a population of more than 200mn. The socio-demographic structure of the country is characterised by significant inequalities in the distribution of wealth. We estimate that the poorest 20% of Brazilians account for only 3.3% of all income, while the wealthiest 10% earn 42.1% of all income. The overall income distribution profile is improving, but extremely slowly. Food retail accounts for around 30% of total retail sales in Brazil and 7% of GDP, with sales approaching USD150bn. Hypermarkets and supermarkets have gradually taken market share from traditional stores in recent years. Brazil's current mass grocery retail (MGR) structure developed following the implementation of the Real Plan in 1994. Today, the market is home to several of the world's largest grocery retailers, with operators attracted by the massive purchasing potential of the large Brazilian population, as well as the country's suitability as a strategic base for the rest of Latin America.

In recent years, the market has experienced increasing levels of consolidation and concentration, as well as the development of a greater diversity in store formats. Some 12 of the top 20 supermarket chains in 1997 have been absorbed by other groups. Control over Brazil's MGR sector is currently one of the most highly prized assets in the whole of global retailing. Local firm CBD and international firms Walmart and Carrefour are currently battling ferociously to secure market share, and consolidation is continuing at a very rapid pace.

Most international operators were initially attracted to wealthy and populous areas in the south east of the country as well as the highly populated region of the north east but have since expanded into other regions. CBD and Carrefour have been expanding from their traditional power base in São Paulo state into the less wealthy but more populated state of Rio de Janeiro, where nearly 30% of the population live. This trend is set to intensify over our forecast period, as MGRs seek to take a greater share of the food and drink sales of lower income groups, which represents a significant market opportunity over the coming years - particularly in a country as populous as Brazil.
In August 2015, the Brazilian antitrust agency approved a stake purchase by Abilio Diniz, former chairman of Grupo Pão de Açúcar (GPA), in French retailer Carrefour Brazil and food processor BRF. The clearance comes after the Council for Economic Defence (CADE) rejected concerns that Diniz's holdings in the local unit of Carrefour and BRF would pose a risk to competition. According to the ruling, Diniz is not violating antitrust law by renting real estate to GPA. Diniz has a 3% stake in BRF, which claims to be the world's largest poultry processor and one of Carrefour's suppliers. In addition, Diniz holds a stake of more than 5% in Carrefour.

While both the number of hypermarkets and their market share of food and drink products are increasing, consumers were more dependent on this sector of the MGR market prior to 1994, as they were predisposed to purchase larger quantities to overcome the impact of inflation. Once the government brought inflation under control, consumers changed their behaviour, and new consumption patterns were established, thereby forcing retailers to focus investments on other formats. Large retail chains started to develop supermarkets, discount stores and online shopping services and, owing to weaknesses in the non-food sector, captured a share of domestic appliances and home entertainment sales. Smaller stores are highly popular, with consumers less willing to travel long distances to shop. Large retailers, while maintaining the hypermarket format, have thus expanded with the launch of small- and medium-sized stores. Convenience stores have also experienced rapid growth in recent years, the majority of which are 'gas marts' associated with petrol stations.

Brazil's largest MGR is local group CBD, which is fully controlled by French retailer Casino since June 2012. CBD operates more than 600 outlets in 12 states under the fascias Pão de Açúcar, Extra, Sendas and CompreBem. The group also operates a chain of Extra Eletro consumer electronics and home appliance stores. The company has pursued growth by acquiring a number of smaller retail chains including the supermarket chain Supermercados Rossi Monza and the São Paulo-based cash-and-carry chain Assai Atacadista.

French retail giant Carrefour entered Brazil in 1975. Carrefour benefits from a strong presence across all categories and has experienced strong growth in the country over the past few years. In October 2014, the company opened its first Supeco store, a wholesale banner targeted at small businesses and retail consumers focusing on low prices. In parallel, Carrefour opened its first convenience store, Carrefour Express, in São Paulo in August 2014, responding to rising demand for convenience in the country and targeting an urban and more affluent population. In addition, we believe that Carrefour will benefit from the local expertise of Abilio Diniz, the former chairman of Grupo Pão de Açúcar, who acquired a 10% stake in Carrefour Brazil in December 2014.
Walmart has been present in the country for more than 15 years, opening its first Sam's Club store in metropolitan São Paulo. The US group's network now includes a broad range of different fascias and store formats, with the overall portfolio consisting of more than 300 MGR outlets. In 2004, Walmart purchased the Bompreço retail chain in north east Brazil from Dutch operator Ahold. Bompreço operates hypermarkets and supermarkets under the Hiper Bompreço and Bompreço Açúcar fascias. In December 2005, Walmart acquired Sonae's operations in Brazil, which consisted of 140 outlets.

According to Abras, the Brazilian Supermarket Association, Walmart is ranked third in Brazil's MGR sector, after CBD and Carrefour. Prior to the acquisition of the Bompreço chain in 2003, Walmart had only a small presence in Brazil, with just 25 outlets, including 13 Walmart Supercenters, 10 Sam's Club warehouse stores and two Walmart Todo Dias 24-hour stores. In the US, Sam's Club generates 13% of Walmart's total sales; in Brazil, BMI estimates the percentage to be slightly higher, at 15%. In recent years, Walmart has struggled to increase sales in Brazil, as illustrated by a 3.4% decline in store traffic in 2013.

Chile-based retailer Cencosud now ranks as the country's fourth largest grocery retailer, cemented by the acquisition of Supermercados Bretas at the end of 2010 and the acquisition of Prezunic a year later.

Makro Atacadista, a subsidiary of the Netherlands-based SHV, operates 50 stores in 21 states, including the federal district. Makro recorded sales of USD1.5bn in 2008, according to BMI estimates.
## Competitive Landscape

**Table: Key Players In Brazil's Food Sector**

<table>
<thead>
<tr>
<th>Company</th>
<th>Ownership</th>
<th>Sub-Sector</th>
<th>Revenue (USDmn)</th>
<th>Fiscal Year End</th>
<th>Market Capitalisation (USDmn)</th>
<th>Employees</th>
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<tbody>
<tr>
<td>Bunge Alimentos</td>
<td>Bunge Limited</td>
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<td>11,265.5</td>
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<td>JBS S.A.</td>
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<td>Marfrig Alimentos</td>
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<td>BRF S.A.</td>
<td>Food</td>
<td>12,358.0</td>
<td>12/2014</td>
<td>18,135.4</td>
<td>104,000</td>
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*na = not available. Source: Bloomberg*

**Table: Key Players In Brazil's Drink Sector**

<table>
<thead>
<tr>
<th>Company</th>
<th>Ownership</th>
<th>Sub-Sector</th>
<th>Revenue (USDmn)</th>
<th>Fiscal Year End</th>
<th>Market Capitalisation (USDmn)</th>
<th>Employees</th>
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<tr>
<td>Ambev</td>
<td>Anheuser-Busch InBev</td>
<td>Beer</td>
<td>16,223.5</td>
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<td>Coca Cola Femsa</td>
<td>Fomento Económico Mexicano, S.A.B. de C.V</td>
<td>Soft drinks</td>
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<td>16,158.7</td>
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<td>Embotelladora Andina</td>
<td>Embotelladora Andina S.A. (Andina)</td>
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<td>3,153.3</td>
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<td>16,486</td>
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*Source: Bloomberg*
<table>
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<tr>
<th>Company</th>
<th>Ownership</th>
<th>Revenue (USDmn)</th>
<th>Fiscal Year End</th>
<th>Market Capitalisation (USDmn)</th>
<th>Employees</th>
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<tr>
<td>Companhia Brasileira de Distribuição</td>
<td>Companhia Brasileira de Distribuição</td>
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<td>Carrefour S.A.</td>
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<td>Walmart Stores</td>
<td>Wal-Mart Stores</td>
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<td>Cencosud</td>
<td>Cencosud S.A.</td>
<td>18,793.1</td>
<td>12/2014</td>
<td>7,692.1</td>
<td>153,234</td>
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</tbody>
</table>

*na = not available. Source: Bloomberg*
Company Profile
Brasil Foods

Strengths
- The company is the largest food producer by sales in the high-growth Brazilian market.
- In recent years, it has focused on the development of higher-margin value-added products.
- It has invested heavily in new facilities in order to increase processing capacity and improve logistics.
- It has the dominant local position in processed meat, frozen pizza, margarine and refrigerated pasta.

Weaknesses
- A subdued consumption outlook in its home market will weigh on domestic sales.

Opportunities
- Further diversification of the product mix with a focus on value-added products will strengthen Brasil Foods’ position in the branded-food sector.
- Cost-saving synergies following the acquisition of Sadia.
- The company is expanding rapidly in the Middle East, where it already has a strong presence. Its strong presence in the region will also help the company expand to Asia and Africa.
- Depreciation of the Brazilian real will boost exports.

Threats
- Brasil Foods’ chicken export sales have in the past been heavily influenced by outbreaks of bird flu and the subsequent drop in demand for chicken meat.
Company Overview

Brasil Foods is one of Brazil’s largest meat processors, focusing on the breeding, production and sale of pork and birds (mainly chicken and turkey). In addition, it processes frozen pasta, soybeans and their derivatives and distributes frozen vegetables. In November 2007, Perdigão acquired local rival Eleva Alimentos, creating Brazil’s largest food producer by sales, surpassing Sadia SA. This deal immediately made it Latin America’s largest producer of long-life milk, processing around 1bn litres of milk a year. This was followed in May 2009 by the takeover of Sadia in an all-share deal. Former rival Sadia was obliged to agree to the takeover after it was left financially exposed by a disastrous foray into derivatives. In addition to domestic operations, it derives a large amount of revenue from exports to major markets including the Middle East, Eastern Europe, Central America, Japan and Africa.

Developments

2015

In December 2015, BRF entered into an agreement to acquire the Thai poultry processor, Golden Foods Siam Ltd for USD360mn. The deal will include Golden Foods Siam Ltd’s assets in Thailand and Europe. BRF also announced in December 2015 that it had signed a pledge to acquire Eclipse Holdings Cooperatief UA, a Dutch pork products company for USD 85mn. Additionally, BRF has acquired a British food distributor, Universal Meats (UK) Ltd for USD50mn. According to BRF, the acquisitions are part of the company’s strategic plan to globalize their operations; access local markets and strengthen their brand, distribution channels and expand their product portfolio offering globally.

BRF announced in November 2015 that it will establish a new facility in Seropédica, west of Rio de Janeiro, to enhance its domestic production. ‘Despite the extremely challenging economic scenario, we identified an excellent opportunity in Rio de Janeiro,’ said BRF CEO Pedro Faria (Just-food). The new plant, covering 11,000sq m, will produce meat products. The company will invest around BRL180mn (USD46.5mn) on construction of the facility, which will be its 36th plant in the country.

2014

In 2014, BRF acquired three companies in the Middle East: Federal Foods in the UAE, Al Khan Foods in Oman and Al Yasra in Kuwait. Al Yasra, which is a frozen food distribution business, was already Brasil Foods’ distributor in the country. In addition, the company inaugurated a food-processing plant in the Khalifa Industrial Zone of Abu Dhabi in 2014. The AED533mn (USD145mn) facility is expected to have a production capacity of 70,000 tonnes per year. With these investments, BRF expects to improve its operations in South and South East Asia, the Middle East and Africa. In 2014, BRF also entered a partnership with PT Indofood to enter the Indonesian poultry and processed food sector.

In September 2014, Brasil Foods divested its dairy operations to Parmalat, a company belonging to Lactalis, as part of its strategy to divest assets that are not part of its core
business. Due to strong growth potential in Brazil's dairy sector, the auction attracted the interest of fourteen firms, including Nestlé, Danone and Grupo Lala.

In FY14 (ending in December 2014), Brasil Foods' revenue rose by 4.0% year-on-year to BRL31.7bn. In addition, BRF more than doubled its net income in FY14 to BRL2.2bn. In the domestic market, the go-to-market (GTM) initiative, aimed to improve product delivery, started to show positive results. The company also reported good results for its international operations. It indicated that it expects the opening of the Russian market to Brasil Foods’ plants in September to have a positive impact on international sales over the next quarters.

2013

In 2013, Brasil Foods also became the first Brazilian company to export pork goods to Japan. A shipment consisting of pork shoulder and fillets departed in July, after the company agreed the transaction with Japanese trading conglomerate Mitsubishi. Two Brasil Foods facilities have now been approved to prepare pork items for export to the Japanese market: the Campos Novos unit and Herval D’Oeste unit.

Financial Data

Financial and operational data:

- Sales in 2014: BRL29,007mn
- Sales in Brazil in 2014: BRL15,367mn
- Production of meat in 2014: 3.83mn tonnes (2014)
- Sales in 2013: BRL27,787mn
- Sales in Brazil in 2013: BRL14,371mn
- Production of meat in 2013: 4.09mn tonnes (2013)
<table>
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<th>Strengths</th>
<th>Weaknesses</th>
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<td>• Brasil Kirin holds second position in the beer sector in Brazil, with a number of strong brands and a diverse beer portfolio.</td>
<td>• Brazil’s underdeveloped infrastructure network slows down distribution outside the country’s major cities.</td>
<td>• A young and growing population throughout the region provides significant growth potential across business segments.</td>
<td>• Strong competition from regional and multinational brewers, particularly AmBev.</td>
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<td>• The company has moved into the ready-to-drink juices market as part of plans to become a full beverages company (it already produces soft drinks).</td>
<td>• Brasil Kirin has been acquiring smaller players in recent years in a bid to increase market share and expand its portfolio.</td>
<td>• The company’s push into the premium beer sector in recent years holds significant potential, as its market share is forecast to grow strongly.</td>
<td>• Revised down its full-year EBITDA forecasts for 2015 amid concerns regarding depreciating BRL, decrease in sales forecast and an increase in raw materials.</td>
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**Company Overview**

Brasil Kirin (previously known as Schincariol) is a South American brewery and beverage maker based in Brazil. There are thirteen Brasil Kirin breweries around Brazil, with the headquarters situated at the city of Itu, São Paulo state. The company produces about 2.5bn litres of beer a year, and exports its products to other Latin American countries, Europe, the US and Asia. The company also offers a range of soft drinks. In summer 2011, Japanese-based brewer Kirin signed a deal to acquire a 51% stake in the business. In winter 2011, Kirin agreed to buy the remaining 49.54% of the business for BRL2.35bn, taking the total deal to BRL6.30bn.
Brasil Kirin aims to become a full beverages company and thus plans to restructure and diversify its product range to include ready-to-drink juices. Brasil Kirin already has a 6% share in Brazil's orange juice market with its Skinka brand. The company is also targeting the premium beer segment. In May 2008, the firm acquired Eisenbahn, an artisan brewer in São Paulo, which had revenues of BRL11mn in 2007. This was a welcome addition to Brasil Kirin's portfolio of craft beers.

After acquiring the promising beer business of Mexico-based Femsa in early 2010 (in an all-stock deal worth more than USD7bn), BMI was of the opinion that if Heineken acquired the well-placed privately owned Brazilian beer company, it would have truly outstanding long-term growth prospects in the Americas. As it turned out, Japan's Kirin stepped seemingly out of the blue to take majority control of Brasil Kirin for about USD2.5bn.

With full control, Kirin can focus on building its revenues in the highly attractive Brazilian market. Kirin CEO Senji Miyake has said that the company will install a new governance structure and a new business strategy at the brewer with the goal of increasing Brasil Kirin's net sales by 10% on an annual basis. Over recent years, Brasil Kirin has focused on the premium beer sector, which holds strong potential.

The company was recently fined BRL2mn for not respecting labour conditions negotiated with local unions on working hours, standard holidays and working breaks. This could tarnish the company's reputation in the country, even though it has indicated its motivation to comply with the notifications made by the labour ministry.

**Brasil Kirin sales:**

- BRL3,947mn (2013)
- BRL3,987mn (2014)
Carrefour

Strengths

- France's largest retailer by a considerable margin and the world's third largest retailer by annual sales, behind Walmart and Tesco.
- Emerging markets account for about 25% of annual sales, which is comparable to both Walmart and Tesco.

Weaknesses

- With over 70% of Carrefour's annual sales accounted for by Western European economies, the company's top- and bottom-line trajectories are constrained by subdued growth in the region's retail market.
- Carrefour's operating profit margins fell for five consecutive years until 2013, highlighting the need for a much more aggressive approach to cost cutting.

Opportunities

- Carrefour's bottom line will benefit from a return to growth in Western Europe, especially in Spain.
- Room to improve its relatively low operating margins versus peers.
- Positive turnaround in France, especially thanks to Carrefour's strong investment in the convenience format.

Threats

- Slowing growth in private consumption in Brazil, coupled with a challenging retail sector in China, will limit the company's progress in these markets.
- Need to focus on turnaround in France could result in a loss of competitiveness abroad in markets that ultimately are crucial to long-term growth potential.
Company Overview

Carrefour is France's leading retailer and the world's third largest by annual sales behind Walmart and Tesco. It is also one of a small handful of multinational retailers that has a strong presence in other Western European markets: in addition to France, Carrefour operates in Belgium, Spain and Italy. Though its international presence has somewhat decreased in the last year, Carrefour maintains a strong market position in key food retail markets like Brazil and China.

Latest Results

Carrefour reported improving sales in the first half of FY2015 (ending in June), as sales revenue grew by 5.2% y-o-y (2.9% on an organic basis). Following several years of financial difficulties, which reached their nadir in 2011-2012, Carrefour gradually turned around its domestic operations and divested its assets in non-core markets. Operations continued to improve in France in H115, despite intense competition and stagnating household spending. Latin America remained a bright spot for the group, with organic growth coming in at 15.5% y-o-y, while the retailer experienced difficulties in China, on the back of a slowing consumer environment.

Successful Turnaround since 2013

Since early 2013 and the first effects of its turnaround, Carrefour's share price has outperformed other global retailers such as Walmart, Tesco and Casino (see chart below). In particular, Carrefour's share price has performed strongly by industry standards since the beginning of 2015, in a challenging food retail environment characterised by deflationary pressures in mature markets and a slowdown across emerging markets.
Also reflecting this positive turnaround, Carrefour's margins have improved in recent years, thanks to streamlined operations in France and a solid performance in key markets such as Brazil. The retailer reported operating margins of 3.2% in FY14, which is still below Casino (3.6%) and Walmart (5.6%). While we believe that there is further room for improvement, we expect Carrefour's margins to remain lower than leading global retailer Walmart's. France, which accounts for almost half of Carrefour's sales, is one of the most competitive retail markets in the world, with the presence of several strong retailers such as E. Leclerc, Casino and Auchan, and the ongoing price war will continue to put pressure on margins. On the other hand, Walmart enjoys a stronger market position in the US, where the retail sector is less competitive than in most of Europe.
Segment Analysis

Western Europe accounts for more than 70% of Carrefour's annual sales, with a strong presence in Italy, Spain and Belgium. While Carrefour has divested non-core overseas assets in order to focus on reviving sales in its domestic market, it still has a strong presence in some emerging markets such as China, Brazil and Argentina. Below we analyse Carrefour's operations by geography.
Diversified But Heavily Exposed To Western Europe

Carrefour - Sales By Geography In FY14 (%)

- France: Improving Operations In A Still Challenging Economic Environment

Following several years of negative same-store sales in France, Carrefour put the emphasis on reviving sales in its domestic markets from 2012. In 2013, the company launched a wave of renovations at its stores in order to make its offering more in line with customers’ needs. Carrefour has also invested in its convenience store network in France, as the format is set to outperform hypermarkets and supermarkets over the next five years (see chart below), on the back of busier lifestyles and smaller households. Carrefour has also focused on streamlining its operations, in order to boost operating margins.

Source: Bloomberg, BMI
Convenience Investment Positive For Carrefour

France - Mass Grocery Retail Sales Growth (%, Local Currency)

Reflecting this positive transformation, same-store sales have returned to positive territory since the second half of 2013. In a competitive and challenging French retail environment, this solid performance was driven by convenience stores, while hypermarkets continued to underperform (see chart below). Margins also improved in recent years, as a result of Carrefour's efforts to streamline its operations. Carrefour has strengthened its market share in quarters, and controlled 21.7% of the French MGR sector in the 3 months ending in August 2015. The acquisition of the French operations of Spanish retail discounter Dia in August 2014 will reinforce this position, although Carrefour has already announced its decision to sell around 100 outlets.

f = BMI forecast. Source: National sources, BMI
While Carrefour has successfully revived sales in its domestic market and steadily improved its margins over the past three years, we expect margins to remain under pressure over our forecast period to 2019. Limited income gains for households - with the exception of the top 10% - combined with continued pressure from discount retailers to keep prices low, will limit opportunities to expand margins (see 'Limited Gains For Households Will Keep Retailers Under Pressure', August 19). In 2014, Lidl announced ambitious investments in France to adapt its stores and product offerings to consumer preferences. About half of Lidl stores in the country will be renovated by 2017, and the retailer is expanding its range of fresh fruits and vegetables and bread, as well as improving the quality of its alcoholic drinks portfolio. While we do not expect the discount format to become ubiquitous in France, it will limit Carrefour's ability to raise its prices and improve margins.
Limited Income Gains With The Exception Of Top 10%

France - Household Income By Decile (USD Per Household)

- Spain The Bright Spot In Western Europe

As is the case in France, we believe that a weak consumer outlook across Western Europe will limit Carrefour's opportunities in the region. Carrefour's key markets in Western Europe are Spain (10.4% of Carrefour's total sales in 2014), Italy (6.3%) and Belgium (5.3%). In Italy and Belgium, we forecast real private consumption to remain weak over the next five years, growing at a compound annual rate of 0.7% in Italy and 1.3% in Belgium over 2014-2019. On the other hand, we believe that Spain will offer the greatest rewards for Carrefour in Western Europe. We hold a positive outlook for the Spanish food retail sector, driven by an improving economy and a fragmented market structure by European standards, leaving room for consolidation (see ‘Spain And Discount Win In Eurozone Food Retail Comparison’, August 28). While the discount segment will be the main beneficiary, we also see room for Carrefour to benefit from this positive environment, and an acquisition in the country is not out of question.
Spain To Drive Carrefour's Growth In Western Europe

Selected European Countries - Real Private Final Consumption Growth (%)

![Graph showing real private final consumption growth for Belgium, France, Italy, and Spain from 2013 to 2019f.](image)

*f = BMI forecast. Source: National sources, BMI*

- **Latin America: Resilient Operations So Far**

Carrefour's operations in Brazil and Argentina have so far proved resilient, given the region's weak macroeconomic environment. The Latin America unit has been the main driver of organic growth over the past few years, and was the main recipient of capital expenditures (relative to sales) in 2014, illustrating the strategic importance of the region for Carrefour. In addition, Carrefour reports relatively high margins in the region, at 4.9% in FY14, which compares with 3.2% for the group.
We see several factors behind Carrefour's strong performance in Brazil and Argentina, despite the challenging macroeconomic environment. **First**, while the consumer outlook is relatively weak in both countries, food retail sales will be fuelled by elevated inflation. Our Latin America Country Risk team forecasts consumer price inflation to reach 9.1% in Brazil by the end of 2015 and 18.0% in Argentina, which will be a boost for headline food retail sales. **Second**, Carrefour is well positioned in Brazil's weak macroeconomic environment, as food accounts for more than 80% of its sales in the country. Food retail has so far been more resilient than non-food items, as illustrated in the chart below. Therefore, we believe that Carrefour will outperform rival Casino over the coming months, as Casino has a greater exposure to non-food categories, especially consumer electronics. **Third**, in both Argentina and Brazil, there is still a lot of room for retail formalisation, leaving room for growth despite the weak consumer environment.
Food Retail Relatively Unscathed Until Now

Nonetheless, we see tougher times ahead for Carrefour in Brazil. The economic outlook will remain weak over the coming quarters, which will eventually push consumers to cut on staple purchases. In Argentina, we expect the consumption outlook to gradually improve in 2016 and 2017. In both countries, Carrefour will continue to be affected by negative foreign exchange movements, which will weigh on reported earnings.

- China: Challenging Environment For Brick-And-Mortar Retailers

While Carrefour remains committed to China, we believe that the retailer will continue to face challenges. Carrefour reported double-digit contractions in same-store sales in the first quarters of 2015, which illustrates the difficulties faced by bricks-and-mortar retailers in China. First, the MGR sector is close to saturation in top-tier cities, and expanding to second- and third-tier cities has proved difficult for foreign retailers including Carrefour. Second, retailers are being affected by rising rental and personnel expenses, driven by hikes in the minimum wage. Third, bricks-and-mortar retailers are facing severe competition from e-commerce pure players, especially for purchases of specialised products like infant formula.
While Carrefour remains committed to the Chinese market - investing heavily to adapt its stores to the preferences of Chinese consumers - we believe that it will take some time to revive sales. In June, Carrefour launched its online store, delivering grocery products and other online items in Shanghai. Nonetheless, we believe that Carrefour is still lagging behind peers such as Sun Art Retail and Walmart in terms of online offerings. A positive step taken by Carrefour is the rapid expansion of its convenience store network, a category which is set to outperform over our forecast period to 2019.
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<th>Table: Carrefour’s Main Financial Highlights</th>
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<td><strong>Sales revenues, EURmn</strong></td>
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<td><strong>Sales growth, %</strong></td>
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<td><strong>Profit margin, %</strong></td>
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<td><strong>EPS, EUR</strong></td>
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<td><strong>PE ratio</strong></td>
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Source: Bloomberg, BMI
**Companhia Brasileira de Distribuição**

**Strengths**
- CBD operates under a range of formats and thus caters to a broad group of consumers.
- Casino taking full control of CBD has streamlined operations and provides solid financial backing.
- A number of cost-reduction programmes have increased operating efficiency.

**Weaknesses**
- Increased competition and aggressive pricing put pressure on profit margins.
- Competition makes a policy of expansion through acquisitions expensive, as all of the three leading retailers are looking to acquire smaller chains, forcing prices up.

**Opportunities**
- Further expansion would take advantage of low mass grocery retail penetration in many Brazilian regions via both organic expansion and acquisitions.
- Increased focus on non-food ranges that post stronger growth than food lines.
- Resilient performance by the food retail segment, despite the macroeconomic environment's significant impact on household consumption.

**Threats**
- Strong competition predominantly fought via prices.
- Macroeconomic conditions in 2015 seeing slowdown in y-o-y growth rates.

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**Company Overview**
CBD is the largest mass grocery retailer in Brazil and has five formats, with almost 2,000 stores: Pão de Açúcar and Sendas (supermarkets), CompreBem and ECON (discount stores), Assai (cash-and-carry), Extra (hypermarkets) and Extra Eletro (electronics and home appliance stores). Since June 2012, CBD is fully controlled by France’s Groupe Casino with which it has had a strategic partnership since 1999. Over the past few years, Casino had been steadily increasing its stake in CBD.

**Strategy**
Over the last few years, CBD has successfully adapted its model to appeal to the diverse nature of the Brazilian population. The firm’s Pão de Açúcar supermarkets have
always successfully attracted comparatively wealthy middle-class consumers. However, the firm had been losing out to rival retailers when it came to attracting lower-income consumers. This was addressed by a new policy of 'clusterisation', which ties each store's product offering to the socio-economic profile of its region, combined with more specialised marketing geared towards the specific consumer needs and income levels of each region.

Although CBD’s operating margins have increased steadily over the last five years, the company remains a relatively unprofitable operation. This can be attributed to the significant level of competition in the Brazilian sector, with CBD (partly owned by France’s Casino), Walmart and Carrefour battling ferociously for market share. The results of all three suggest that they have been prepared to sacrifice margins to fund expansion, and the massive potential of the high growth Brazilian market suggests that this is probably a sensible strategy. That said, Walmex has also been expanding very rapidly and doing much more profitably. BMI believes the lower margins can also be attributed to the difficult logistics in Brazil, with transportation and distribution more expensive.

Considering the difficult logistics of Brazil, it cannot be assumed that margins will automatically start to rise once the pace of expansion starts to moderate. However, as the sector starts to mature it seems likely that CBD’s profitability will start to rise, as it focuses on extracting the maximum shareholder value from its large store base and high customer loyalty. CBD’s acquisitions also seem to suggest that profitability is coming into greater focus, with the firm diversifying into durable goods with the acquisition of a 51% stake in Casa Bahia and the purchase of a 70% stake in electronics retailer Globex Utilidades. In this sector, margins are higher, so this move should be a boost to the company’s operating results.

**Developments 2015**

For 2015, the company’s target is to open: 70 Proximity stores, 10 to 12 Assaí stores and 5 Pão de Açúcar stores. It also plans to maintain the pace of renovations in the Food segment during the year, while strengthening initiatives of the "Crescer Mais" project for Via Varejo.

**2014**

The company posted strong sales growth of 13.3% y-o-y in 2014. During the period, CBD also opened an additional 212 stores. Net income increased by 20.1% over the course of the year, reaching BRL2.1mn and generated strong cash flows.
Financial Data

- 2010 revenue: BRL32bn (USD17.9bn)
- 2011 revenue: BRL46.6bn (USD24.5bn)
- 2012 revenue: BRL50.9bn (USD26.2bn)
- 2013 revenue: BRL57.7bn (USD26.9bn)
- 2014 revenue: BRL65.5bn (USD27.9bn)

Operational Data

- Almost 2,000 stores in 20 states
Embotelladora Andina

Strengths
- Andina is a manufacturer and distributor of leading soft drinks brands.
- It has strong financial backing through The Coca-Cola Company and Freire Inversiones.
- 61.7% market share as of Q315.

Weaknesses
- The challenges of operating a logistics and distribution network in Brazil.
- It remains a relatively small player in the market.

Opportunities
- Expansion of distribution coverage beyond Brazil's largest cities.
- Stronger focus on non-carbonates, which offer high growth opportunities.

Threats
- Brazil's underdeveloped infrastructure network slows down distribution outside the country's major cities.
- Increased health consciousness may threaten sales of carbonated soft drinks.

Company Overview
Embotelladora Andina manufactures and distributes soft drinks, including Coca-Cola, bottled water and lager, with its headquarters in Chile. It is 51% owned by investment group Freire Inversiones and 11% owned by The Coca-Cola Company. In Brazil, the company operates two plants and 11 production lines through Rio de Janeiro Refrescos, and it has a market share of 53%. Brands manufactured and distributed include Coca-Cola, Fanta, Sprite, Guarana, Schweppes, Kapo, Burn, Nestea, Kaiser, Heineken and Bonaqua mineral water.

Strategy
A key strategic focus for Embotelladora Andina’s Brazilian operations is the achievement of distribution efficiencies, enabling the company to operate in regions with high growth potential. Furthermore, strategic decisions are likely to focus on obtaining greater territory coverage by expanding beyond the largest cities, redefining formats in the supermarket channel and reinforcing price leadership. The further development of activities in the non-carbonates sector has been a key focus of
operations over recent years, which overall have been characterised by growing sales volumes and values on the back of economic improvements in the company’s three countries of operation: Chile, Argentina and Brazil. Investments are predominantly channelled into the diversification of the brand and format portfolio and, in Argentina and Brazil in particular, on achieving greater territory coverage.

Developments 2015

In its Q315 results, the company claimed its soft drinks market share in Brazil reached 61.7%, 80 basis points higher compared to Q314.

Embotelladora Andina reported its financial results for Q414 (ending in December 2014) in February 2015. The company reported volume sales growth of 2.1% year-on-year and net sales growth of 22.2% in Brazil. The carbonated soft drinks segment posted a solid performance, as the roll-out of returnable formats partially offset weak consumer sentiment and accelerating inflation. On the other hand, its fruit juices and waters segment was affected by the unavailability of some products, due to supply chain management issues.

2013

In September 2013, the company announced plans to offload USD600mn in international bonds due in 2023. This issuing financed Ipiranga’s acquisition. The process of consolidation in the Brazilian bottling industry is following a similar trend in the rest of the region, especially in Mexico.

Embotelladora Andina purchased Ipiranga in 2013 for BRL1.22bn (USD548mn) via its Rio de Janeiro Refrescos subsidiary. Ipiranga operates in the Sao Paulo and Minas Gerais states and reported volume sales of 89.3mn unit cases in 2012. The transaction was supposed to help Andina consolidate its position in the bottling business in Latin America.
Walmart

Strengths

- By some distance the world's largest retailer by annual sales and market capitalisation.
- Market leader in the US mass grocery retail sector.
- Very strong international presence, with Brazil, China and Mexico among its core markets.
- Strong interest coverage ratio relative to some of the other big global retail players suggests Walmart is well placed to pursue growth in the US and abroad.

Weaknesses

- US growth opportunities within Walmart's core big-box retail business are slowing down.
- Although Walmart is stepping up efforts to increase its presence in upmarket products and convenience stores, it continues to face competition from upmarket retailers in those categories.
- Ongoing difficulties to adapt to consumer preferences in China.
- Weak consumption outlook in Brazil will weigh on Walmart's sales in the country.

Opportunities

- Greater focus on convenience and e-commerce could open up new growth opportunities in the US, although competition will be strong in these segments.
- With its partnership with Wild Oats to enter the organic food segment, Walmart will aim to capitalise on rising health-consciousness and growing demand for natural products.
- The improving private consumption outlook in Mexico bodes well for Walmex, Walmart's subsidiary in the country.
- Very well placed to pursue acquisition-led entries and organic growth in frontier markets, especially in Africa, considering its low level of debt and its size.

Threats

- Slow growth in emerging markets could affect financial performance in operations in some countries, including foreign exchange weakness against the dollar in many emerging markets.
- Growing competition for emerging market assets from some of Walmart's global rivals.
- High investment required to increase its presence in e-commerce, combined with the decision to increase its minimum wage, will weigh on margins over the coming years.
Company Overview

With annual sales of USD486bn in FY15 (ending January 31 2015), Walmart is the world's largest retailer by some distance. While the majority of its operations are located in the US and UK, it has developed a strong emerging market business, with international sales now accounting for more than a quarter of its annual sales. Established in 1962, Walmart operates more than 6,200 stores in the US, with an extra 5,100 internationally. As well as the UK, Walmart has international operations in Africa, Central and Latin America, China, India, and Japan.

Latest Results

Walmart's revenue growth came flat in H216 (6-month period ending in July 2015). Organic growth came in at 3.2% y-o-y, but was offset by the negative impact of foreign currency movements of the same magnitude. Walmart's operating income fell by 9.2% y-o-y, driven by Walmart's decision to increase the minimum wage at its US stores.

Sales continue to benefit from a strong performance in Mexico, where net sales grew by +7.2% over the period. Operations in North America (US and Canada) also performed strongly, while Walmart continued to be impacted by poor results in Brazil, China and the US. In China and Brazil, the deteriorating macroeconomic environment is weighing on retail sales, while in the UK, increased competition from discount retailers is affecting legacy retailers such as Asda, Walmart's subsidiary in the country.

Well-Placed To Maintain Global Leadership

In our view, Walmart is by some distance the most efficient global retailer, and is well positioned to maintain its global leadership. Walmart has one of the most efficient supply chain management systems globally and traditionally secures very advantageous deals on its large orders, keeping prices very competitive for its customers. Reflecting the efficiency of its operations and the more favourable structure of the US retail market compared to Western Europe, Walmart's margins have traditionally been higher than its global competitors. Walmart also has a strong track record of creating value for its shareholders, as illustrated by its ROIC/WACC ratio of 1.9 in FY15 (return on invested capital relative to the cost of capital - a ratio above 1 indicates that the company is creating value for shareholders).
In addition, with the US retail market becoming increasingly challenging and a slowdown in key emerging markets such as Brazil and China, we believe that Walmart will seek to further expand its activities in frontier markets such as India or Africa where it has great potential. Due to the low-margin nature of the food retail industry - operating margins are usually between 3 and 6% - and the large amount of fixed assets required to open retail units, profitability can be hard to achieve in frontier markets. Great financial capabilities are essential, and we therefore believe that Walmart is well positioned to continue its expansion in Sub-Saharan African markets and/or India. Walmart’s amount of net debt relative to EBITDA is low compared to its global peers (see chart below), which will enable it to expand geographically. Through its South African subsidiary Massmart, Walmart is gradually expanding its presence in SSA, most recently in Kenya. Walmart is also committed to expanding its wholesale business in India despite regulatory burdens for foreign retailers, while Carrefour exited the country in July 2014.
US Food Retail Increasingly Challenging Despite Improving Consumer Outlook

While the improving macroeconomic conditions in the US bode well for the mass grocery retail (MGR) sector, we expect the retail environment to become increasingly challenging for legacy retailers such as Walmart. A tightening labour market combined with consumer confidence reaching pre-crisis levels will encourage retail sales growth over the coming quarters. Nonetheless, despite efforts to adapt to shifts in consumer preferences, we expect challenging times ahead for Walmart.
Favourable Consumer Outlook Does Not Offset Challenging Retail Landscape

United States - Real Private Consumption Growth & Inflation

Amid changing consumer preferences and intensifying competition, we believe that the US grocery retail sector will become increasingly difficult to navigate for mainstream retailers. While the US MGR sector has traditionally been less competitive than Western European markets, competitive rivalry is intensifying as a result of consolidation. We believe that this trend will continue, especially as German discounters Aldi and Lidl have rolled out aggressive expansion plans in the country. In addition, while American consumers have traditionally favoured large, out-of-town hypermarkets, demand for convenience is driving the popularity of smaller stores (see chart below) and e-commerce services.
We do not believe that Walmart is well positioned to take advantage of changes in the US food retail sector, despite ongoing efforts to adapt its model. Walmart's strategy has traditionally relied on large, out-of-town hypermarkets and low prices. However, demand for convenience, and the growing presence of dollar stores and hard discount offering even lower prices, has challenged its business model. The chart below shows that Walmart's share price has underperformed other US-based retailers over the past year.
While Walmart is taking positive steps to adapt to changing consumer preferences, we believe that there is still much to be done. We list below measures taken by Walmart to adjust its operations:

- **Convenience Stores**: Walmart is investing in its smaller store formats, under the banners Neighborhood Markets and Walmart Express, and is planning around 160-170 store openings in FY16.

- **E-Commerce**: Walmart is also investing in its e-commerce services, in order to keep up the pace with competitors (both pure online players and traditional retailers), after Amazon and Target introduced same-day grocery delivery services.

- **Improve In-Store Services**: In order to improve its operations, Walmart has focused on renovating stores and increasing the quality of its customer service. In April 2015, Walmart increased its minimum wage, affecting half a million of employees, and a further hike is planned for February 2016. In our view, it will reduce employee turnover and increase employee satisfaction, which will have a positive impact on the quality of in-store service.

- **Greater Focus On Organic And Fresh Food**: Walmart is stepping up efforts to increase its offering of fresh food and organic products. In 2014, Walmart entered a partnership with organic food manufacturer Wild Oats. Thanks to its tremendous bargaining power, Walmart is able to negotiate favourable deals with suppliers and will therefore be able to offer organic products at lower prices relative to its competitors.
While these steps are essential for Walmart to adapt to the new retail landscape, it requires high levels of investment and we therefore expect margins to come under pressure over the next couple of years. On the back of higher personnel expenses, Walmart's margins have steadily declined in recent quarters (see chart below). As more wage hikes are planned, we believe that this trend will continue over the coming quarters. In addition, investment in e-commerce and new store openings require high amounts of capital expenditures, while the outcomes remain uncertain. Reflecting this, Walmart has revised down its earnings estimates for FY17.

**Margins Under Pressure**

Walmart - Operating Margins (%)

![Margins Under Pressure Chart](chart.png)

Source: Bloomberg, BMI

**Mexico Still Walmart’s Bright Spot**

We believe that Mexico will continue to be a strong driver of growth over the coming quarters. Walmex, Walmart's subsidiary in Mexico, will benefit from a solid consumer outlook and a favourable industry structure. Mexico is our favourite consumer market in the region, as strong job generation and low inflation levels continue to fuel household purchasing power. This will drive the expansion of the upper-middle class
throughout our forecast period to 2019, as illustrated in the chart below. This in turn will have a positive impact on Walmex's revenue growth, which has accelerated since early 2015.

Upper-Middle Class Expansion Favourable For Walmex

Mexico - Number Of Households By Income Bracket ('000 Households)

In addition, Walmex benefits from a highly favourable industry structure in Mexico. Walmex is the largest retailer in the country by some distance with more than 4,500 stores. The threat of new entrants is low and there is limited competitive pressure from rivals due to the company’s tremendous market power. As a result, Walmex is a highly profitable subsidiary for Walmart, reporting operating margins just below 8% in FY14, which is high by industry standards (see chart below).
**Slowdown In Brazil & China A Key Concern**

The economic slowdown in Brazil and China will continue to weigh on Walmart's results in these two markets. According to our Latin America Country Risk team, deteriorating labour market dynamics, combined with the ongoing depreciation of the real will impact household purchasing power and consumer confidence. As a result, retail sales growth has sharply decelerated in recent months, as illustrated in the chart below. While food retail sales were initially unscathed by the slowdown, households have now started to become more price-conscious when buying staple products (see ‘Growing Price-Consciousness Among Brazilian Consumers’, September 24).
Weakening Retail Sales To Impact Walmart

Brazil - Retail Value Sales Growth (BRL, % y-o-y)

While the situation is not as critical in China, consumer confidence has also declined in recent years and household spending is decelerating. Reflecting this deteriorating consumer outlook in Brazil and China, same-store sales growth entered negative territory in Brazil in Q216 (ending in July 2015), and continued to be negative in China, as illustrated in the chart below.

Source: IBGE, BMI
Brazil & China Operations Affected By Deteriorating Consumer Outlook

Walmart - Same-Store Sales Growth By Country (% y-o-y)

Source: Bloomberg, BMI

Combined with weakening macroeconomic fundamentals, we do not believe that Walmart is well positioned in these two countries. In Brazil, Walmart is the third largest retailer after Pão de Açúcar and Carrefour, and has lagged behind its competitors to establish strong ties with suppliers and increasing its market share. In the fragmented Chinese food retail sector, Walmart has struggled to adapt to the tastes of Chinese consumers, and repeatedly reported difficulties in the country. In late 2014, it was reported that many Walmart outlets, facing lower customer traffic, offered bulk sales at discounted prices to smaller retailers. Bulk sales translated into lower margins and managers increased prices to compensate, leading to even fewer customers. Nonetheless, Walmart remains committed to the Chinese market, as illustrated by the acquisition of the remaining stake in Yihaodian in July 2015, in order to boost its presence in e-commerce in the country. We previously argued that online food retailing will expand at a tremendous pace in China over the next five years, while the environment will remain challenging for brick-and-mortar retailers (see 'E-Commerce Will Durably Impact Food Retail Sector', August 21).
**Table: Walmart Financial Highlights**

<table>
<thead>
<tr>
<th></th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
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<tr>
<td>Sales Revenues, USDmn</td>
<td>421,849.0</td>
<td>446,950.0</td>
<td>469,162.0</td>
<td>476,294.0</td>
<td>485,651.0</td>
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<td>Sales Growth, %</td>
<td>3.4</td>
<td>6.0</td>
<td>5.0</td>
<td>1.5</td>
<td>2.0</td>
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<tr>
<td>Operating Income, USDmn</td>
<td>25,542.0</td>
<td>26,558.0</td>
<td>27,801.0</td>
<td>26,872.0</td>
<td>27,146.0</td>
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<td>Operating Margin, %</td>
<td>6.1</td>
<td>5.9</td>
<td>5.9</td>
<td>5.6</td>
<td>5.6</td>
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<tr>
<td>Net Income, USDmn</td>
<td>16,389.0</td>
<td>15,699.0</td>
<td>16,999.0</td>
<td>16,022.0</td>
<td>16,363.0</td>
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<td>Profit Margin, %</td>
<td>3.9</td>
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<td>Net Debt/EBITDA</td>
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<td>1.3</td>
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<td>PE Ratio</td>
<td>13.8</td>
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<td>13.9</td>
<td>15.4</td>
<td>16.9</td>
</tr>
</tbody>
</table>

*Source: Bloomberg*

**JBS**

**Company Overview**

**JBS** is the world's largest livestock producer, also manufacturing biodiesel, pet and cleaning products. The company has more than 140 production facilities on six continents. It has accumulated these facilities through acquisitions of smaller food companies and now has the world's highest daily slaughter capacity at more than 100,000 head per day. It purchases live cattle, poultry and hogs and processes them, selling them to supermarkets or directly to the consumer from wholesale warehouses.

**Strengths**

- One of the largest players in the global livestock market, providing it strong negotiating power with suppliers and customers.
- Obtains revenues from a wide range of products, including dairy, beef, poultry, pork and leather.
- Has high exposure to growing consumer bases in emerging markets, including Latin America and Asia.

**Weaknesses**

- Is directly and indirectly exposed to changes in cattle and grains prices respectively. For example, rising input prices in H210 and H112 contributed to a fall in net income.
Cattle processing remains a highly labour-intensive job, which leads to very low operating margins.

Affected by exchange rate movements, with only moderate hedging.

Relatively low free float percentage (32%) compared to US listed companies, with the state-backed Brazilian Development Bank (BNDES) a major shareholder.

Opportunities

- The company recently embarked on a significant marketing campaign, which is likely to promote revenues.
- Having made several acquisitions in recent years, the company now has operations in several large markets, such as the US and Latin America.
- The company has diversified from exclusively beef production and is now a major producer in both poultry and pork.
- More than 30% of the company's exports go to Asia, where beef and pork demand is growing considerably.

Threats

- Export restrictions are a key threat. Indeed, JBS has already closed some of its facilities in Argentina due to beef export restrictions.
- A return to high grains prices would reduce margins for the company's feedlots.
- Disease concerns among livestock are a major threat, particularly in emerging markets where meat consumption is more elastic.

Core Company View

We expect only market performance by JBS against the Bovespa over the coming months. Sales growth will continue over the coming quarters, but without additional acquisitions the pace of this growth is likely to slow. Lower retail meat prices in the US will hurt US-based sales, which constitute the majority of the company's sales. Moreover, the share price is expensive by some valuation metrics, which will most likely reduce investor interest. A key risk to this market performance view is a significant deterioration (and possible crisis) in Brazilian financial markets, which may cause the real to depreciate significantly and the Bovespa to decline considerably. JBS would outperform in this environment given that a significant proportion of sales come in US dollars.
Largely In Line With The Bovespa

JBS & Bovespa Index Rebased

Note: June 30 2015 = 100: Source: BMI, Bloomberg

Company Results

JBS recorded net revenue of BRL38bn in Q215, a 36% increase y-o-y and easily the highest ever first-quarter total. EBITDA grew by 47% y-o-y to BRL3.5bn. Sales from exports increased by almost 15% y-o-y. However, GAAP net income significantly undershot expectations, reaching only BRL80mn. Within the company's divisions, JBS Foods showed the strongest sales growth, at 44% y-o-y in Q215 (in BRL terms), due to acquisitions as well as significantly higher sales volumes. The company's US poultry unit sales showed a decrease of 6% in Q215 (in USD terms), while the US beef division saw an increase of sales of 11.5% (also in USD terms). EBITDA margins improved year-on-year for all divisions except for the Mercosul and pork divisions, which were impacted by much higher raw materials prices (cattle prices for Mercosul) and lower retail prices (US pork division). The weaker results are in line with a view we highlighted in our previous JBS Global Company Strategy, on March 25.
Going forward, we believe beef revenues will continue to see strong growth, mainly due to greater exports, which now comprise more than one-third of all sales. High retail meat prices in the US and Brazil will also help margins. As previously highlighted in our June 30 JBS profile, we believe sales in the US Pork and US poultry divisions will suffer in the coming months due to falling retail prices. In particular, pork prices will drop as the US pig herd recovers from PEDv concerns, while the poultry sector will suffer due to a supply glut on the market, leading to lower retail prices. This view played out, with poultry and pork sales both falling year-on-year in Q215. We continue to believe the laggard in terms of EBITDA growth in the coming quarters will be the Mercosul division, which will continue to suffer from high cattle prices due to droughts. This view, which we also highlighted on June 30, has played out as well.
Company Strategy

JBS’s strategy has changed somewhat in 2015. Previously, its strategic focus was broadly on cost control and product improvements throughout the supply chain. Now, however, its strategy is more broad-ranging. In particular, the company is largely focused on organic growth, cost of debt reduction and improving other financial metrics, such as return on equity. These also include continuous deleveraging, achieving an investment-grade corporate debt rating and lowering the company’s effective tax rate.

We generally agree with the company’s desire to improve its financial metrics, but argue that some of these goals may work at cross-purposes. The livestock industry is a highly consolidated industry with generally predictable consumer trends (particularly over a multi-year horizon) and intermittent supply concerns. Moreover, the livestock industry is very labour intensive, where animal processing must be completed by hand. Consequently, margins are very tight, requiring very strong operational efficiency. Higher margins will help the company achieve its goal of better return on equity. However, a desire to reduce debt levels
will act to decrease return on equity. Lower leverage will help the company move towards an investment grade corporate debt rating.

**Meat Industry Near The Bottom**

*Select Agriculture Sub-Sectors - Average Trailing 12-Month Operating Margins (%)*

![Graph showing operating margins for different sub-sectors]

*Note: List of companies is generated from our Agribusiness Sector Strategy Company Universe. A full list is available upon request. Source: BMI, Bloomberg*

The company's increasing ability to seamlessly integrate new acquisitions will be important in the coming quarters, as we believe more acquisitions will be pursued. Although JBS's management has stated in recent quarters that it is focussed on organic growth, the company consistently jumps at the chance to acquire smaller producers in any of the company's main segments (pork, beef and poultry). Moreover, we believe the company will need to continue its acquisitions spree if it wants to maintain its current sales growth rate. This is because we believe sales growth for both the pork and poultry divisions will remain weak over the next few quarters.

Sales growth in JBS's US Poultry unit (represented by Pilgrim's Pride, JBS's second largest division in US dollar terms) actually fell y-o-y in Q215 in line with a view presented in our previous JBS company profile from June 30. The US Chicken division's performance is a function of two factors: sales, which are affected by retail chicken prices, and cost, mainly in the form of grains prices. We believe sales will be negatively
affected by oversupply in the US poultry market as a result of the avian influenza outbreak (see 'Maintaining Poultry Forecasts Despite HPAI Outbreak', May 1).

Flooded With Chicken

United States - Monthly Broiler Chicks Placed For Meat Production, LHC (thousands) & Monthly Slaughter Weights (mn lbs)

Furthermore, we believe grain prices will eventually bottom out, which may increase input costs in the absence of sufficient hedging. Also, JBS’s USA Pork division will see weakened sales growth as a result of falling domestic pork prices. All of this means that JBS will have to rely on either acquisitions or improving performances from the beef, JBS Foods and Mercosul divisions to maintain strong sales growth. Although these divisions constitute the majority of company sales, beef sales growth may slow as well due to falling retail prices, while the Mercosul division will suffer from high input costs.

On a geographic level, we believe the company’s focus on Asia for export growth is the right one, since Asia will be one of the key markets for livestock demand going forward. In particular, we forecast average per capita regional meat consumption (including beef, poultry and pork) to show the second strongest growth globally, behind Africa. China in particular is a growing segment for the company’s exports and we see potential for this to continue over the long term, as we are expecting China to become a net meat importer over the coming years. The company will also benefit from the recent Russian import ban on

Source: BMI, USDA, NASS

All About Asia

Selected Regions - Meat Consumption (mn tonnes)

![Meat Consumption Graph]

Note: Meat includes beef, pork and poultry. Sources: USDA, BMI

Although it is not our core scenario, one key risk going forward relates to the Brazilian national development bank, BNDES. The bank owns a 25% share of JBS, among other companies. Given various financial scandals surrounding the Brazilian government (from which BNDES receives financing), the bank could be forced to liquidate some of its equity holdings. Because JBS has a very low free float of only 40% (most companies listed on the S&P 500 are around 99.5%), if BNDES were to sell a large portion of its JBS shares, this could result in a significant drop in the company's share price.
Valuation

We believe JBS's share price and enterprise value is cheap by long-term historical standards. Between early 2010 and mid-2012, JBS had one of the highest enterprise value multiples among the major livestock producers, with this peaking in early 2012. However, the difference between JBS and the rest of the industry has narrowed in recent months as JBS's ratio has declined. Although the company's enterprise value multiple is relatively cheap compared with other meatpackers, the price to book ratio is now near six-year highs. On a price/earnings (P/E) basis, JBS's P/E ratio is now below its regional competitors, although it remains higher than Tyson. JBS also compares favourably with the Bovespa index, with a lower P/E and Enterprise value multiple when traditionally JBS traded at a premium to the Bovespa, which we believe makes the company (and share price) relatively cheap.
 Shares Finally Cool Off

JBS - Share Price (BRL, weekly) & RSI (Below)

Note: Price as of September 7, 2015; Sources: Bloomberg, BMI

Technical Analysis

In our previous profile on June 30, we stated that we believed the share price was due a breather, having recorded highs around BRL16.50/share and as technical indicators, such as the daily RSI, showed a bearish divergence. This view played out well, as the share price fell by 14% between early August and early September. We also stated that the share price would hold the BRL14 level, which also played out. Looking ahead, we believe the share price will trade within the BRL14-17 range. On weekly indicators, RSI has held
the important 50 level, and looks poised for a brief move higher. However, a break below BRL14 would be a bearish signal.

Table: JBS Financial Results

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>Revenue, BRLmn</td>
<td>55,056</td>
<td>61,797</td>
<td>75,697</td>
<td>92,903</td>
<td>120,470</td>
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<tr>
<td>Sales Growth, %</td>
<td>57.7</td>
<td>12.2</td>
<td>22.5</td>
<td>22.7</td>
<td>29.7</td>
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<tr>
<td>Net Income, BRLmn</td>
<td>-302.7</td>
<td>-75.7</td>
<td>718.9</td>
<td>926.9</td>
<td>2035.9</td>
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<tr>
<td>Profit Margin, %</td>
<td>-0.5</td>
<td>-0.1</td>
<td>0.9</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Operating Income, BRLmn</td>
<td>2286.5</td>
<td>1780.6</td>
<td>2719.7</td>
<td>4148.6</td>
<td>7803.3</td>
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<tr>
<td>Operating Margin, %</td>
<td>4.2</td>
<td>2.9</td>
<td>3.6</td>
<td>4.5</td>
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<tr>
<td>Total Debt/EBITDA</td>
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<td>6.1</td>
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<td>5.3</td>
<td>3.9</td>
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<tr>
<td>Interest Coverage Ratio</td>
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<td>1.0</td>
<td>1.6</td>
<td>1.9</td>
<td>2.5</td>
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<tr>
<td>EPS, BRL</td>
<td>-0.1</td>
<td>0.0</td>
<td>0.2</td>
<td>0.3</td>
<td>0.7</td>
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<tr>
<td>PE Ratio</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>27.1</td>
<td>15.9</td>
</tr>
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</table>

*na = not available. Source: Bloomberg, BMI*
Demographic analysis is a key pillar of BMI's macroeconomic and industry forecasting model. Not only is the total population of a country a key variable in consumer demand, but an understanding of the demographic profile is essential to understanding issues ranging from future population trends to productivity growth and government spending requirements.

The accompanying charts detail the population pyramid for 2015, the change in the structure of the population between 2015 and 2050 and the total population between 1990 and 2050. The tables show indicators from all of these charts, in addition to key metrics such as population ratios, the urban/rural split and life expectancy.

Population
(1990-2050)

\[ f = BMI \text{ forecast. Source: World Bank, UN, BMI} \]
Brazil Population Pyramid

2015 (LHS) & 2015 Versus 2050 (RHS)

Table: Population Headline Indicators (Brazil 1990-2025)

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<tr>
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<tbody>
<tr>
<td>Population, total, '000</td>
<td>150,393</td>
<td>175,786</td>
<td>188,479</td>
<td>198,614</td>
<td>207,847</td>
<td>215,997</td>
<td>222,976</td>
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<td>Population, % y-o-y</td>
<td>na</td>
<td>1.5</td>
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<td>1.0</td>
<td>0.9</td>
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<tr>
<td>Population, total, male, '000</td>
<td>74,584</td>
<td>86,860</td>
<td>93,000</td>
<td>97,829</td>
<td>102,200</td>
<td>106,037</td>
<td>109,297</td>
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<td>Population, total, female, '000</td>
<td>75,808</td>
<td>88,926</td>
<td>95,478</td>
<td>100,784</td>
<td>105,646</td>
<td>109,959</td>
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<td>Population ratio, male/female</td>
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<td>0.97</td>
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Table: Key Population Ratios (Brazil 1990-2025)

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<td>Active population, total, '000</td>
<td>91,152</td>
<td>114,732</td>
<td>125,572</td>
<td>134,943</td>
<td>143,680</td>
<td>150,739</td>
<td>154,319</td>
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<tr>
<td>Active population, % of total population</td>
<td>60.6</td>
<td>65.3</td>
<td>66.6</td>
<td>67.9</td>
<td>69.1</td>
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<tr>
<td>Dependent population, total, '000</td>
<td>59,240</td>
<td>61,053</td>
<td>62,906</td>
<td>63,671</td>
<td>64,167</td>
<td>65,257</td>
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<tr>
<td>Dependent ratio, % of total working age</td>
<td>65.0</td>
<td>53.2</td>
<td>50.1</td>
<td>47.2</td>
<td>44.7</td>
<td>43.3</td>
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Source: World Bank, UN, BMI
### Key Population Ratios (Brazil 1990-2025) - Continued

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<td>Youth population, total, '000</td>
<td>53,201</td>
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<td>47,862</td>
<td>44,915</td>
<td>43,476</td>
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<tr>
<td>Youth population, % of total working age</td>
<td>58.4</td>
<td>45.5</td>
<td>41.3</td>
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<td>Pensionable population, '000</td>
<td>6,038</td>
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<td>11,041</td>
<td>13,259</td>
<td>16,304</td>
<td>20,342</td>
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<tr>
<td>Pensionable population, % of total working age</td>
<td>6.6</td>
<td>7.7</td>
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<td>11.3</td>
<td>13.5</td>
<td>16.3</td>
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*f = BMI forecast. Source: World Bank, UN, BMI*

### Table: Urban/Rural Population & Life Expectancy (Brazil 1990-2025)

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<td>Urban population, '000</td>
<td>111,173.6</td>
<td>142,724.5</td>
<td>156,124.9</td>
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<td>178,098.3</td>
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<td>Urban population, % of total</td>
<td>73.9</td>
<td>81.2</td>
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<td>Rural population, '000</td>
<td>39,219.5</td>
<td>33,061.9</td>
<td>32,354.3</td>
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*f = BMI forecast. Source: World Bank, UN, BMI*

### Table: Population By Age Group (Brazil 1990-2025)

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f = BMI forecast. Source: World Bank, UN, BMI

Table: Population By Age Group % (Brazil 1990-2025)

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<sup>f = BMI forecast. Source: World Bank, UN, BMI</sup>
Glossary

Food & Drink

**Food Consumption:** All four food consumption indicators (food consumption in local currency, food consumption in US dollar terms, per capita food consumption and food consumption as a percentage of GDP) relate to off-trade food and non-alcoholic drinks consumption, unless stated in the relevant table/section.

**Off-trade:** Relates to an item consumed away from the premises on which it was purchased. For example, a bottle of water bought in a supermarket would count as off-trade, while a bottle of water purchased as part of a meal in a restaurant would count as on-trade.

**Canned Food:** Relates to the sale of food products preserved by canning. This is inclusive of canned meat and fish, canned ready meals, canned desserts and canned fruits and vegetables. Volume sales are measured in tonnes as opposed to on a unit basis to allow for cross-market comparisons.

**Confectionery:** Refers to retail sales of chocolate, sugar confectionery and gum products. Chocolate sales include chocolate bars and boxed chocolates; gum sales incorporate both bubble gum and chewing gum; and sugar confectionery sales include hard-boiled sweets, mints, jellies and medicated sweets.

**Trade:** In the majority of BMI's Food & Drink reports, we use the UN Standard International Trade Classification, using categories Food and Live Animals, Beverages and Tobacco, Animal and Vegetable Oils, Fats and Waxes and Oil-seeds and Oleaginous Fruits. Where an alternative classification is used due to data availability, this is clearly stated.

**Drinks Sales:** Soft drinks sales (including carbonates, fruit juices, energy drinks, bottled water, functional beverages and ready-to-drink tea and coffee), alcoholic drinks sales (including beer, wine and spirits) and tea and coffee sales (excluding ready-to-drink tea and coffee products that are incorporated under BMI's soft drinks banner) are all off-trade only, unless stated.

Mass Grocery Retail

**Mass Grocery Retail:** BMI classifies mass grocery retail (MGR) as organised retail, performed by companies with a network of modern grocery retail stores and modern distribution networks. MGR differs from independent or traditional retail, which relates to informal, independent-owned grocery stores or traditional market retailing. MGR incorporates hypermarket, supermarket, convenience and discount retailing, and in unique cases cooperative retailing. Where supermarkets are independently owned and not classified as MGR, BMI will state so clearly within the relevant report.
Hypermarket: BMI classifies hypermarkets as retail outlets selling both groceries and a large range of general merchandise goods (non-food items) and typically more than 2,500sq m in size. Traditionally only found on the outskirts of towns, hypermarkets are increasingly appearing in urban locations.

Supermarket: Supermarkets are the original and still most globally prevalent form of self-service grocery retail outlet. BMI classifies supermarkets as more than 300sq m, up to the size of a hypermarket. The typical supermarket carries both fresh and processed food and will stock a range of non-food items, most commonly household and beauty goods. The average supermarket will increasingly offer some added-value services, such as dry cleaning or in-store ATMs.

Discount Stores: Although most commonly between 500sq m and 1,500sq m in size, and thus of the same classification as supermarkets, discount stores will typically have a smaller floor space than their supermarket counterparts. Other distinguishing features include the prevalence of low-priced and private label goods, an absence of added-value services, often called a no-frills environment, and a high product turnover rate.

Convenience Stores: BMI's classification of convenience stores includes small outlets typically less than 300sq m in size, with long opening hours and located in high footfall areas. These stores mainly sell fast-moving food and drink products (such as confectionery, beverages and snack foods) and non-food items, typically stocking only two or three brand choices per item and often carrying higher prices than other forms of grocery store.

Cooperatives: BMI classifies cooperatives as retail stores that are independently owned but club together to form buying groups under a cooperative arrangement, trading under the same banner, although each is privately owned. The arrangement is similar to a franchise system, although all profits are returned to members. The term is becoming more archaic, with fewer cooperatives remaining that conform to this model. Most cooperative groups now have a more centralised management structure, operate more like normal supermarkets, and are thus classified as such in BMI's reports.
Methodology

Industry Forecast Methodology

**BMI**'s industry forecasts are generated using the best-practice techniques of time-series modelling and causal/econometric modelling. The precise form of model we use varies from industry to industry, in each case being determined, as per standard practice, by the prevailing features of the industry data being examined.

Common to our analysis of every industry is the use of vector autoregressions. Vector autoregressions allow us to forecast a variable using more than the variable's own history as explanatory information. For example, when forecasting oil prices, we can include information about oil consumption, supply and capacity.

When forecasting for some of our industry sub-component variables, however, using a variable's own history is often the most desirable method of analysis. Such single-variable analysis is called univariate modelling. We use the most common and versatile form of univariate models: the autoregressive moving average model (ARMA). In some cases, ARMA techniques are inappropriate because there is insufficient historic data or data quality is poor. In such cases, we use either traditional decomposition methods or smoothing methods as a basis for analysis and forecasting.

**BMI** mainly uses ordinary least squares estimators. In order to avoid relying on subjective views and encourage the use of objective views, **BMI** uses a 'general-to-specific' method. **BMI** mainly uses a linear model, but simple non-linear models, such as the log-linear model, are used when necessary. During periods of 'industry shock', for example when poor weather conditions impede agricultural output, dummy variables are used to determine the level of impact.

Effective forecasting depends on appropriately selected regression models. **BMI** selects the best model according to various different criteria and tests, including but not exclusive to:

- R2 tests explanatory power; adjusted R2 takes degree of freedom into account
- Testing the directional movement and magnitude of coefficients
- Hypothesis testing to ensure coefficients are significant (normally t-test and/or P-value)
- All results are assessed to alleviate issues related to auto-correlation and multi-collinearity
**BMI** uses the selected best model to perform forecasting.

Human intervention plays a necessary and desirable role in all of **BMI**’s industry forecasting. Experience, expertise and knowledge of industry data and trends ensure that analysts spot structural breaks, anomalous data, turning points and seasonal features where a purely mechanical forecasting process would not.

**Sector-Specific Methodology**

Within the Food & Drink industry, issues that could result in human intervention might include but are not exclusive to:

- Significant company expansion plans;
- New product development that might influence pricing levels;
- Dramatic changes in local production levels;
- Product taxation;
- The regulatory environment and specific areas of legislation;
- Changes in lifestyles and general societal trends;
- The formation of bilateral and multilateral trading agreements and negotiations;
- Political factors influencing trade;
- The development of the industry in neighbouring markets that are potential competitors for foreign direct investment.

**Example Of Food Consumption Model**

\[
\text{(Food Consumption)}_t = \beta_0 + \beta_1*(\text{GDP})_t + \beta_2*(\text{inflation})_t + \beta_3*(\text{lending rate})_t + \beta_4* (\text{foreign exchange rate})_t + \beta_5*(\text{government expenditure})_t + \beta_6*(\text{food consumption})_{t-1} + \epsilon_t
\]

**Sources**

**BMI** uses the following sources in the compilation of data, developments and analysis for its range of Food & Drink reports: national statistics offices; local industry governing-bodies and associations; local trade associations; central banks; government departments, particularly trade, agricultural and commerce ministries; officially released information and financial results from local and multinational companies; cross-referenced information from local and international news agencies and trade press outlets; figures from global organisations, such as the World Trade Organization (WTO), the World Health Organization...
Risk/Reward Index Methodology

**BMI's Risk/Reward Index (RRI)** provides a comparative regional ranking system evaluating the ease of doing business and the industry-specific opportunities and limitations for potential investors in a given market. The RRI system divides into two distinct areas:

**Rewards**: Evaluation of sector's size and growth potential in each state, and also broader industry/state characteristics that may inhibit its development. This is further broken down into two sub-categories:

- **Industry Rewards**: This is an industry-specific category taking into account current industry size and growth forecasts, and the openness of the market to new entrants and foreign investors, to provide an overall score for potential returns for investors.
- **Country Rewards**: this is a country-specific category, and the score factors in favourable political and economic conditions for the industry.

**Risks**: Evaluation of industry-specific dangers and those emanating from the state's political/economic profile that calls into question the likelihood of expected returns being realised over the assessed time period. This is further broken down into two sub-categories:

- **Industry Risks**: This is an industry-specific category whose score covers potential operational risks to investors, regulatory issues inhibiting the industry and the relative maturity of a market.
- **Country Risks**: This is a country-specific category in which political and economic instability, unfavourable legislation and a poor overall business environment are evaluated to provide an overall score.

We take a weighted average, combining industry and country risks, or industry and country rewards. These two results in turn provide an overall Risk/Reward Index, which is used to create our regional ranking system for the risks and rewards of involvement in a specific industry in a particular country.

For each category and sub-category, each state is scored out of 100 (100 being the best), with the overall index a weighted average of the total score. Importantly, as most of the countries and territories evaluated are considered by BMI to be 'emerging markets', our index is revised on a quarterly basis. This ensures that the index draws on the latest information and data across our broad range of sources, and the expertise of our analysts.

In constructing these indices, the following indicators have been used. Almost all indicators are objectively based.
# Table: Food & Drink Risk/Reward Index Indicators

## Rewards
### Industry rewards
- **Food and drink consumption per capita, USD**
  Indicator denotes overall breadth of market. Wealthier markets score higher.
- **Per capita food consumption growth, five-year compound annual growth, %**
  Lead Food & Drink growth indicator. Scores based on compound annual growth over our five-year forecast period.
- **Market fragmentation**
  Subjective score reflecting how relatively developed the industry is. Higher score reflects a more fragmented industry.

### Country rewards
- **Population size, mn**
  Indicator denotes size of market.
- **GDP per capita, USD**
  Proxy for wealth. Size of population is important but needs to be considered in relation to spending power. High-income states receive better scores than low-income states.
- **Youth population, %**
  The size of the 0-15 age group as a percentage of the total working age population. Younger populations are generally considered to be more desirable.

## Risks
### Industry risks
- **Mass grocery retail penetration, %**
  The proportional contribution of the organised food retailing sector; higher scores reflect better developed routes to consumers and more efficient internal trade systems.
- **Regulatory environment**
  Subjective score based on the industry-specific regulatory environment and the presence of potentially restrictive legislation.

### Country risks
- **Short-term economic growth**
  Score from BMI’s Country Risk Index (CRI). It evaluates likely growth trajectory over a two-year forecast period, based on BMI’s forecasts and projections of business and consumer confidence.
- **Income distribution**
  Middle 60% of population as % of total spending. Higher score is an indicator of incomes being spread more equitably.
- **Lack of bureaucracy**
  From CRI. It evaluates the risks to business posed by official bureaucracy, the broader legal framework and corruption.
- **Market orientation**
  Subjective score from CRI to denote predictability of openness to foreign investment and trade.
- **Physical infrastructure**
  From CRI. Poor power/water/transport infrastructure act as bottlenecks to sector development.

*Source: BMI*
**Weighting:** Given the number of indicators/datasets used, it would be inappropriate to give all sub-components equal weight. Consequently, the following weights have been adopted:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rewards</strong></td>
<td></td>
</tr>
<tr>
<td>- Industry rewards</td>
<td>30%</td>
</tr>
<tr>
<td>- Country rewards</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Risks</strong></td>
<td></td>
</tr>
<tr>
<td>- Industry risks</td>
<td>20%</td>
</tr>
<tr>
<td>- Country risks</td>
<td>20%</td>
</tr>
</tbody>
</table>

*Source: BMI*
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