

State of the Industry: Commercial Bakeries in the U.S.

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Drivers of Industry Growth

- The U.S. commercial bakeries industry continued to grow at a moderate rate in 2016. Improving economic conditions have led to an increase in consumer spending over the past few years, particularly for indulgent food and beverage products. Although the lingering effects of the economic recession are still prevalent, U.S. apparent consumption of commercial bakery products grew by 3.5% in 2016, with solid growth estimated for 2017. In fact, several trends point to steady industry growth through 2021. Some of the key trends that will drive industry sales over the next few years include consumers growing infatuation with whole grains, fiber, protein, and other healthy ingredients such as nuts and seeds; the elimination of unhealthy trans fats; reduced sugar, sodium, and cholesterol bakery products; upscale and artisanal baked goods in smaller portions; more frequent and indulgent snack and meal occasions; the growing popularity of organic and natural bakery products that are free of GMOs (genetically modified organisms) and additives/preservatives; the move toward “greener” practices; growing transparency and traceability of ingredients; more convenient packaging; an increase in digital and traditional promotional activities; and an overall attraction to baked goods that is no longer excluded from popular diets.
- The emergence of gluten- and allergen-free bakery products will also boost sales over the next few years, along with new ethnic-inspired flavors and ingredients, especially from the Latin, Middle Eastern, Asian, and Mediterranean cultures. Unusual pairings of popular flavors, such as savory and sweet combinations, will provide excitement in the bakery industry, as well as limited edition and seasonal flavors. Consumers’ palates are changing and they are looking for

bolder, more intense flavors. An overall trend toward upscale or gourmet foods is evident in many industries, including cheese, chocolate, coffee, wine, and beer. This is also affecting the bakery industry, particularly for artisan breads, doughnuts, cookies, cakes, cupcakes, and other sweet baked goods. Although the economic recession negatively affected consumers' spending habits during that period, many are still willing to pay more for an upscale baked good because it is seen as a value-added, high quality product that is an affordable luxury.

- One of the biggest upscale trends is healthfulness. To health-conscious consumers, no preservatives, ancient and whole grains, and all natural add value to a bakery product. Upscaling products with smaller portion sizes is proving to be very successful, as consumers become more concerned with wasting food and money. While it seems odd to promote higher priced, upscale bakery products in the wake of a recession, health is a relatively economy-proof concern among consumers. An upscale, value-added baked good can also help create excitement and the feeling that consumers are getting a quality product, further alleviating the worries of paying more.
- While overall food and beverage expenditures are rising steadily, the consumption of these products away from home passed the level of at home consumption in 2015 and continued to grow at a considerable rate in 2016. Americans seem to always be on-the-go. With dual income households becoming the norm, there is less time available to prepare meals at home. The shrinking availability of time, along with extra income, has led consumers to eat out or on-the-go more than ever before. The recession did cut the growth rate of food expenditures away from home in 2008 and 2009, but this was short-lived as expenditures have bounced back over the past few years and will continue to rise at a solid rate through 2021. Convenience, portability, and price will continue to be the most important factors in determining food choices away from home, in addition to quality and health benefits. Innovations in

portion control packaging and expanding snack occasions will also affect food and beverage expenditures away from home.

- A few negative factors that will affect the commercial bakeries industry through 2021 include volatile ingredient and energy prices, rising payroll and healthcare costs, and competition from retail bakeries, in-store bakeries, and fast-casual restaurants. Nonetheless, commercial bakeries that offer innovative and healthy products made with high quality ingredients will be most successful over the next few years. Consumers also want to know the story behind the bakery and production process and are willing to pay a premium for an original, higher quality product.

Health and Dieting Trends Reshape the Industry

- While whole grains are now prevalent in many baked foods, it has had the most impact on the bread market. After the decline of low carb diets, new bread products flooded the market with an emphasis on healthier whole grains. Consumers are now embracing whole grains and other healthy bakery products as long-term components of better eating. Trans fat free products are also in high demand because of the health concerns regarding this type of fat. As the Food and Drug Administration (FDA) prepares to institute a ban on partially hydrogenated oils (PHOs), there will likely be more claims related to trans fat content in baked goods. Furthermore, calorie counts and servings, as well as the level of added sugars, will be more prevalent on packaging thanks to the updated design of the Nutrition Facts panel.
- Now that manufacturers have successfully incorporated grains and more fiber in baked goods, many are experimenting with the inclusion of other healthy ingredients, such as Omega-3 and -6 fatty acids, protein, vitamins, minerals, prebiotics, and probiotics. Probiotics are live cultures that exist naturally in the digestive system and are useful for healthy digestive functions. Since 60 to 70

million Americans experience some type of digestive health issue, the market for baked goods with probiotics can be very lucrative. Meanwhile, prebiotics, which are nondigestible food ingredients that may beneficially affect the host by selectively stimulating the growth and/or the activity of a limited number of bacteria in the colon, will also be added to some bakery products in an effort to stand out in this competitive industry.

- Intense media coverage of the obesity epidemic has resulted in new dieting trends and a wave of health-conscious consumers. According to the Centers for Disease Control and Prevention and the United Health Foundation, 29.4% of adults (aged 20 years and over) were obese in 2014, up from 27.6% in the previous year. Meanwhile, more than 60% of adults were overweight or obese. Americans are not taking the news lightly, as the obesity rate actually dipped in 2013 before rising again in 2014. Improving economic conditions are resulting in more food consumption away from home, a possible reason for the uptick in the national obesity rate in 2014. Nonetheless, only Colorado and Hawaii had obesity rates under 22%, while eighteen states had obesity rates of more than 30%. West Virginia and Mississippi led all states with an obesity rate of 35.1% each. By region, the South had the highest prevalence of obesity (30.2%), followed by the Midwest (30.1%), Northeast (26.5%), and West (24.9%) regions. Furthermore, childhood obesity continues to be a major problem in the U.S., as the childhood and adolescent obesity rate has more than tripled in the past two decades to approximately 17.0% in 2014. Perhaps a result of the obesity epidemic, more than 25 million people are also dealing with diabetes in the U.S.
- In 2016, nearly 30% of U.S. consumers were on some type of diet, while approximately 40% were trying to lose weight. The majority of dieters believe that whole grains are most important for their health and weight management, followed by high fiber, and ingredients that help the heart. Consumers are now shifting their choices to wellness and nutritionally enhanced foods. Consumers do not feel they have to cut out their favorite foods in order to lose weight.

Many are taking a balanced approach to their diets and are focusing on their overall well being, not overanalyzing each item they eat. This has led to a rise in more indulgent, upscale food consumption, as consumers often treat themselves to more indulgent foods despite dieting trends.

Organic Bakery Product Sales

- A significant trend encompassing both healthy and better quality foods is the skyrocketing popularity of organic and natural foods and beverages. Organic and natural foods and beverages are becoming a part of the American mainstream, as they are being found in more and more retail outlets, as well as restaurants and other foodservice establishments. Not only do consumers prefer organic foods and beverages because they are free of agricultural chemicals and other unnatural elements, they also feel organics are more authentic and of better quality. This has been the case with organic bakery products, where organic and gourmet trends have come together.
- In 2016, total organic food and beverage sales in the U.S. grew by an estimated 10.5% to \$50.0 billion, following a 10.9% increase in the previous year, according to Sundale Research's "Organic Foods and Beverages" report. Prior to the last six years of double-digit growth, poor economic conditions, high unemployment rates, and slower consumer spending did not have an overwhelmingly negative impact on the organic foods and beverages industry, as sales grew at a moderate rate during this time, especially when compared to the overall food and beverage industry. While some consumers traded down to cheaper organic products, switched to private label brands, or temporarily eliminated organics from their budgets, many others did not change their buying habits or even increased their spending on organic foods and beverages. Nonetheless, as the U.S. economy continues to strengthen over the next few years, sales are expected to grow at an average annual rate of approximately

9.0% per year through 2021. Companies that offer locally sourced organic products from sustainable farm programs will be most successful.

- More specifically, sales of organic breads and grains grew by an estimated 8.4% to \$4.34 billion in 2016, while sales of organic snack foods advanced by an estimated 12.0% to \$2.45 billion. Sales for both categories are expected to grow significantly through 2021. Although organic foods tend to have a higher price tag than non-organic products, the rising price of wheat and other ingredients for non-organic foods has closed the gap in price. Growing demand for organic wheat flour and other organic ingredients is leading to an increase in production, and ultimately, lower prices. In late 2015, for example, Ardent Mills launched an organic initiative committed to helping U.S. wheat growers double organic wheat acres by 2019.

Greener Practices Can Increase Profits and Sales

- The commercial bakeries industry is making an effort to adopt environmentally responsible business practices. Consumer demand for green products is creating more awareness among bakery companies, as they may be able to attract more customers by reducing their carbon footprint. The rising cost to produce baked goods can also be offset by using environmentally friendly practices, not to mention the positive affect it will have on the planet's natural resources. The green movement is only expected to grow over the next several years, as consumers become more and more eco-conscious. If the exceptional growth in the natural and organic products industry is any indication, sales of environmentally-friendly baked goods will grow through 2021 and beyond.
- Many commercial bakeries are implementing greener practices by using alternative sources of power and packaging materials, sourcing local and sustainable ingredients, and building structures based on standards set by the LEED (Leadership in Energy and Environmental Design) program of the U.S.

Green Building Council (USGBC) and the Green Restaurant Association (GRA). In general, there are a few other key steps commercial bakeries can make to achieve greener business practices. Some of the most important and feasible actions include increasing energy efficiency, conserving water, reducing packaging, using less paper, and sourcing sustainable ingredients. The overall strategy for becoming greener can start by simplifying day-to-day operations and assessing the impact of each step of the baking process. While only a modest percentage of consumers are willing to pay more for a green product, this figure is growing, particularly among Millennials (consumers 21 to 38 years old in 2016). When the price of green products is similar to that of conventional options, environmental concerns often provide the tiebreaker that leads consumers to go green.

- Clif Bar & Company is making an effort to reduce material use, work with suppliers who are reducing their own environmental footprints, and deal with suppliers that are in closer proximity to their bakeries. In September 2016, Clif Bar opened the company's first owned and operated bakery in Twin Falls, Idaho. The new sustainable, 300,000 square foot bakery will help the company meet growing demand for organic energy and nutrition bars. Aiming to achieve the highest possible LEED certification, the bakery utilizes state-of-the-art processes and packaging systems, natural light, LED lighting, and a "cool roof" to maximize energy efficiency and reduce greenhouse gas emissions. The "cool roof" is designed to reflect more sunlight and absorb less heat than a standard roof. Meanwhile, Clif Bar is generating 100% of its electricity from green, renewable energy through the purchase of Renewable Energy Credits (RECs) from an Idaho wind farm. Hybrid cooling towers also help the bakery use about a third less water than most conventional bakeries. Lastly, the facility utilizes a biophilic design, a cutting-edge approach that connects people in buildings with nature.
- In another effort to conserve the environment, Clif Bar & Company unveiled its new 115,000 square foot energy-efficient headquarters located in Emeryville,

California back in 2011. Solar technology, a new on-site childcare center, reused materials (from shipping container wood to blue jeans), and a 40-foot bouldering wall are some of the features that support the company's sustainability mission and company culture. The solar array on its headquarters' roof and parking structure provides nearly 100% of the office electricity needs. Additional solar thermal panels on the headquarters' roof provide 70% of the heat needed for hot water.

- Pepperidge Farm has also invested in sustainability with the installation of fuel cell energy for its bakery in Bloomfield, Connecticut. The bakery utilizes a state-of-the-art 1,400-kilowatt fuel cell for the on-site generation of electricity that has a near-zero pollutant profile. Based on its success, the company is adding a second fuel cell to go along with its one-megawatt solar installation that will provide all of the facility's required energy. Pepperidge Farm estimates that the company will save \$7.2 million in energy costs over the 15-year expected lifespan of the fuel cells.

Gluten- and Allergen-Free Products Boost Demand

- Sales of gluten-free bakery products are growing at a significant rate. Gluten-free diets contain no ingredients derived from gluten-containing cereals, such as oats, barley, rye, and wheat. Those who suffer from Celiac disease, for example, are limited to gluten-free foods, but many advocates believe that gluten negatively affects a larger demographic by contributing to many diseases. In addition to the increased awareness of Celiac disease, gluten intolerance, and gluten ataxia, improvements to the taste and texture of gluten-free foods is sparking demand. These improvements have also helped expand the diversity of gluten-free product offerings. Today, gluten-free baked goods encompass everything from brownies to coffeecakes to bagels. The fastest-growing gluten-free bakery categories include cookies, bread, rolls, cakes and cupcakes, and bagels.

- The number of Americans following a gluten-free diet has tripled over the past five years, while the diagnoses of celiac disease remained stable. Nearly 30% of consumers are now purchasing foods labeled as gluten-free, as consumers increasingly shift toward healthier lifestyles and believe gluten-free products are healthier. Sales of all gluten-free foods (excluding those that are naturally gluten-free) reached \$12.5 billion in 2016, increasing by an average of nearly 25.0% per year over the past five years. Sales are expected to grow at an average annual rate of about 14.0% per year through 2021, totaling \$24.0 billion at this time. The gluten-free food industry will be driven by clean and transparent labels, plant proteins, and ancient grains.
- Because the number of food allergy and intolerance sufferers in the U.S. ranges from 10 to 15 million people, the market for allergen-free foods is also booming. This, along with a 2006 law requiring labeling for allergens, has prompted some manufacturers to use allergen-free ingredients to set them apart from the industry. Many retailers are responding with dedicated grocery departments for gluten-free and other allergen-free foods. Gluten- and allergen-free foods allow many consumers to lead a normal life and still enjoy their favorite foods. Consumers with food allergies are not the only ones seeking out allergen-free foods. Many others perceive these products as being of higher quality and better for them compared to conventional varieties, expanding the niche market for gluten- and allergen-free foods. As the quality of these foods continues to grow, so will the product offerings and overall market size.
- Other popular allergen-free baked goods include dairy-, nut-, soy-, and sugar-free (diabetes) varieties. The fastest-growing dairy-free bakery categories are cookies, bread, rolls, cakes and cupcakes, and pastries. Small to midsize companies typically have more flexibility and have been at the forefront of the gluten- and allergen-free movement, but larger diversified bakeries are listening to consumers' demands and are offering a targeted mix of gluten- and allergen-free options as well.

U.S. Apparent Consumption

- U.S. apparent consumption of commercial bakery products grew by 3.5% to \$50.7 billion in 2016, following a 1.0% increase in the previous year. Improving economic conditions have led to an increase in consumer spending for discretionary items over the past few years, including bakery products. Baked goods are an indulgence consumers do not want to live without. Even when money is tight, consumers spend more on little luxuries to reward themselves. Bakery products are perceived as a value product that provides the personal gratification consumers are seeking, particularly indulgent varieties and those fortified with healthier ingredients. From 2011 to 2016, apparent consumption for this mature industry advanced by an average of 2.6% per year. Similar growth is expected over the next few years, as consumers mix better-for-you varieties with indulgent offerings. In both cases, unique and innovative flavors and ingredients will help fuel commercial bakery product sales, along with the other drivers of industry growth discussed earlier. Including an estimated 2.0% increase in 2017, U.S. apparent consumption of commercial bakery products are projected to rise by an average of 2.6% per year from 2016 to 2021, totaling \$57.5 billion in the latter year.

Imports and Exports

- In 2016, U.S. imports of commercial bakery products jumped by 14.3% to \$4.17 billion, following a 10.7% increase in the previous year. Imports have been rising at a significant rate since 2009. In 2016, imports accounted for 8.2% of U.S. apparent consumption, up from 6.4% in 2011. Imports of commercial bakery products will continue to grow steadily through 2021, along with import penetration in the U.S. Including an estimated 5.1% increase in 2017, imports are expected to grow by an average of 5.4% per year from 2016 to 2021. In

2021, imports will total \$5.42 billion and account for 9.4% of U.S. apparent consumption.

- Canada was the top U.S. import source for commercial bakery products in 2016. During this time, imports from Canada increased by 12.1% to \$2.05 billion, accounting for 49.0% of the total. Mexico was the second leading import source for commercial bakery products in 2016 with \$879.8 million in imports, representing 21.1% of the total. Imports from Mexico soared by 30.1% during this time. France, Germany, and Italy were the only other countries to account for more than 2.0% of U.S. imports of commercial bakery products in 2016. Imports from France skyrocketed by 33.6% to \$120.6 million during this time, representing 2.9% of the total. Meanwhile, imports from Germany grew by 1.9% to \$113.7 million, as imports from Italy decreased by 2.7% to \$96.9 million. These countries held 2.7% and 2.3% shares of the total, respectively. A few other countries among the top ten import sources for commercial bakery products exhibiting significant increases included Belgium (32.5%), India (15.4%), Thailand (13.5%), and China (11.4%).
- U.S. exports of commercial bakery products fell by 2.5% to \$1.42 billion in 2016, following a 1.5% decrease in 2015. Prior to the last two years of decline, exports rose in each of the previous five years. Exports represented 3.0% of U.S. shipments of commercial bakery products in 2016, up from 2.6% in 2011. Strong foreign demand will result in solid growth for U.S. exports over the next few years. Including an estimated 3.7% increase in 2017, U.S. exports are expected to rise by an average of 3.6% per year from 2016 to 2021, totaling \$1.69 billion in the latter year. Exports will be important to U.S. manufacturers during this time, as they account for an estimated 3.1% of total U.S. shipments of commercial bakery products in 2021.
- Similar to imports, U.S. exports of commercial bakery products are dominated by Canada. Exports to Canada decreased by 3.8% to \$902.9 million in 2016, accounting for 63.6% of the total. Mexico was the second leading destination

for these products during this time. Exports of commercial bakery products to Mexico dropped by 6.5% to \$143.3 million in 2016, representing 10.1% of the total. South Korea, the United Kingdom, and Japan were the only other countries to account for more than 2.0% of U.S. exports of commercial bakery products in 2016. Exports to South Korea rose by 13.7% to \$36.8 million during this time, representing 2.6% of the total. Meanwhile, exports to the United Kingdom plummeted by 16.4% to \$31.1 million, as exports to Japan decreased by 5.4% to \$29.7 million. These countries held 2.2% and 2.1% shares of the total, respectively. In addition to South Korea, a few countries among the top ten export destinations for commercial bakery products reporting increases included Australia (14.9%), the Philippines (9.4%), Panama (7.9%), and the United Arab Emirates (3.7%).

Overall U.S. Shipments

- U.S. shipments and apparent consumption of commercial bakery products have generally followed a similar pattern. In 2016, total U.S. shipments of commercial bakery products grew by 2.5% to \$47.9 billion, following 0.2% and 5.2% increases in 2015 and 2014, respectively. From 2011 to 2016, U.S. shipments grew by an average of 2.3% per year. Similar growth is expected over the next few years due to the drivers of industry growth discussed earlier, including better-for-you bakery product varieties, portion-controlled packaging, and allergen-free baked goods, as well as indulgent offerings with unique and innovative flavors. Including an estimated 1.8% increase in 2017, total U.S. shipments of commercial bakery products are expected to grow by an average of 2.3% per year from 2016 to 2021, totaling \$53.8 billion in the latter year. A few of the fastest growing bakery products will include hearth rolls; frozen pies and soft cakes; whole wheat, cracked wheat, multigrain, and other dark wheat breads; hamburger and wiener rolls; and sandwich cookies.

Bread and Bread-Type Rolls, Muffins, Bagels, and Croissants

- U.S. shipments of bread have made a solid comeback in the post-low carb era. In 2016, shipments inched up by 0.5% to \$12.5 billion, marking the fourth consecutive year of positive growth. From 2011 to 2016, U.S. shipments of bread grew by an average of 0.6% per year. Although the rate of growth has slowed a bit recently, demand remains strong. The trend toward healthy, whole grain/whole wheat ingredients, the elimination of trans fat, the introduction of lower sugar/sodium/calorie bread, and the popularity of organic and allergen-free bread are contributing to rising bread shipments. Furthermore, upscale and gourmet food trends have resulted in strong sales of hearth and artisan breads, such as French and Italian breads. This will continue over the next few years. Including an estimated 1.6% increase in 2017, U.S. shipments of bread are expected to grow by an average of 1.8% per year from 2016 to 2021, totaling \$13.6 billion in the latter year.
- White pan bread still accounts for the largest share of total U.S. bread shipments, however, its growth rate is being outpaced by other bread varieties. In 2016, shipments of white pan bread decreased by 1.4% to \$5.07 billion. Shipments are expected to increase by an average of 0.8% per year from 2016 to 2021, reaching \$5.27 billion in the latter year. White bread shipments will grow at a slower pace than the overall bread segment, but the category will get a boost from white bread varieties fortified with the fiber, vitamins, and minerals often found in wheat and multigrain breads. Flowers Foods' "Wonder" Whole Grain White, for example, mimics the taste and texture of traditional white bread, but offers eight grams of whole grains per serving.
- Shipments of whole wheat, cracked wheat, multigrain and other dark wheat breads have been growing at the fastest pace within the bread segment, a trend that will continue through at least 2021. In 2016, shipments of this type of bread increased by 4.5% to \$2.65 billion. From 2016 to 2021, shipments are expected to grow by an average of 3.9% per year, totaling \$3.21 billion in the

latter year. Shipments of white hearth bread are also growing at a significant rate. In 2016, shipments advanced by 2.4% to \$2.09 billion and are expected to increase by an average of 2.5% per year from 2016 to 2021. U.S. shipments of white hearth bread will reach \$2.37 billion in 2021.

- Rye bread, including pumpernickel, continues to be a staple within the bread segment. In 2016, U.S. shipments of rye bread slipped back by 0.3% to \$709.7 million, with 0.7% average annual growth expected through 2021. At this time, rye bread shipments will total \$735.1 million. Meanwhile, shipments of other variety breads, such as raisin, potato, self-rising, unleavened, and salt-free, decreased by 0.9% to \$1.78 billion in 2016. Shipments are expected to rise at a modest rate over the next few years, fueled by the popularity of potato and salt-free varieties. From 2016 to 2021, U.S. shipments of other variety breads are projected to increase by an average of 1.2% per year, totaling \$1.89 billion in 2021.
- U.S. shipments of bread-type rolls, muffins, bagels, and croissants grew by 3.5% to \$9.10 billion in 2016, following a 2.7% increase in 2015. Shipments have increased each year since 2009, including a 16.8% spike in 2011. A solid 2016 was highlighted by considerable growth for shipments of hearth rolls and hamburger and wiener rolls, as well as slider-size buns. Overall, shipments are being fueled by strong demand for whole grain/whole wheat, organic and natural, and healthier rolls and similar products, including varieties with added fiber, vitamins, and minerals, and those with lower sodium. Calorie-controlled, allergen-free, and artisan varieties are also contributing to the segment's success, a trend that will continue over the next few years. Including an estimated 1.4% increase in 2017, U.S. shipments of bread-type rolls, muffins, bagels, and croissants are expected to grow by an average of 2.6% per year from 2016 to 2021, totaling \$10.3 billion in the latter year.
- Hamburger and wiener rolls account for the largest share of U.S. shipments of bread-type rolls, muffins, bagels, and croissants. In 2016, shipments of

hamburger and wiener rolls grew by 3.8% to \$5.12 billion. In addition to the availability of healthier rolls, growth is being fueled by consumers' renewed interest in eating affordable meals at home, primarily due to the economic recession, as well as the popularity of barbecues and tailgating activities. The explosion of cooking and traveling shows focusing on gourmet and upscale burgers and hot dogs is also contributing to the significant growth for this mature product category. Shipments of hamburger and wiener rolls are expected to grow by an average of 2.7% per year from 2016 to 2021, totaling \$5.84 billion in the latter year.

- The next largest clearly defined product category in terms of U.S. shipments is bagels. In 2016, U.S. shipments of bagels increased by 1.9% to \$985.0 million. Healthier bagel options, such as whole wheat and multigrain varieties, are providing the most growth, particularly in the frozen bagel segment. Thin-sliced bagels, which reduce carbohydrates and calories, are also growing in popularity. These trends will lead to steady growth over the next few years. From 2016 to 2021, bagel shipments are expected to grow by an average of 1.3% per year, totaling \$1.05 billion in 2021.
- Another large product category and the one providing the most growth is hearth rolls. In 2016, U.S. shipments of hearth rolls jumped by 7.6% to \$709.4 million. Hearth rolls, baked directly on brick or stone, provide a crispier crust and a chewy texture inside. This type of roll fits perfectly with today's artisan food craze. From 2016 to 2021, shipments are expected to grow by an average of 5.5% per year, totaling \$928.6 million in the latter year.
- Similar to bagels, English muffins are benefiting from multigrain and other healthier varieties. In 2016, U.S. shipments of English muffins increased by 1.4% to \$588.5 million. From 2016 to 2021, shipments of English muffins are expected to grow by an average of 1.2% per year, totaling \$624.3 million in 2021. Meanwhile, U.S. shipments of brown-and-serve rolls increased by 2.4% to \$261.0 million in 2016, as shipments of croissants grew by 2.7% to \$252.9

million. From 2016 to 2021, shipments of brown-and-serve rolls and croissants will both rise by an average of 2.0% per year. In 2021, U.S. shipments of these products will total \$288.9 million and \$278.6 million, respectively.

Soft Cakes and Pies

- In recent years, the popularity of more elaborate and indulgent cakes and cupcakes has risen dramatically. Cake and cupcake competitions and television shows have contributed to the category's success. Recently, smaller sized cakes and upscale cupcakes have been in high demand. In 2016, U.S. shipments of soft cakes rose by 1.9% to \$2.85 billion. Shipments will continue to grow at a moderate pace over the next few years, as it appears the cupcake craze is here to stay for a while. Overall, from 2016 to 2021, shipments of soft cakes are expected to increase by an average of 2.8% per year, reaching \$3.28 billion in 2021. Shipments will be driven by smaller sized cakes and creative and indulgent cupcakes in a variety of innovative and unique flavors, although these trends will likely benefit retail bakeries more than commercial bakeries.
- U.S. shipments of pies have fallen considerably over the past few years. From 2011 to 2016, shipments of pies decreased by an average of 5.4% per year. In 2016, shipments declined by 2.8% to \$270.5 million. Over the next few years, shipments will pick up a bit as consumers look for healthier and innovative pie options. Pies made with real fruit and natural and organic ingredients will be in highest demand, as well as mini, sliced, half, and handheld pies. Frozen pies, included under the frozen bakery products segment, will also provide solid growth. Nonetheless, from 2016 to 2021, U.S. shipments of pies are expected to rise by an average of 1.2% per year, totaling \$286.7 million in the latter year.

Cookies and Crackers

- In 2016, U.S. shipments of cookies increased by 2.7% to \$6.41 billion, following a 4.1% decrease in the previous year. From 2011 to 2016, U.S. shipments grew by an average of 1.2% per year. Stronger growth is expected over the next few years, driven by better-for-you cookie varieties, portion-controlled packaging, and allergen-free cookie products, as well as indulgent cookie offerings with unique and innovative flavors. Including an estimated 1.5% increase in 2017, U.S. shipments of cookies are expected to grow by an average of 2.2% per year from 2016 to 2021, reaching \$7.15 billion in the latter year.
- The largest clearly defined category of cookies in terms of U.S. shipments is sandwich cookies. In 2016, shipments of sandwich cookies increased by 3.6% to \$1.39 billion. “Oreo” is the most popular sandwich cookie in the U.S. The top-selling sandwich cookies include flavors such as vanilla, chocolate, and peanut butter, as well as fudge and fruit. Shipments of sandwich cookies are expected to increase by an average of 2.8% per year from 2016 to 2021, totaling \$1.59 billion in the latter year.
- Chocolate chip cookies represent the second largest clearly defined category of cookies in terms of U.S. shipments. In 2016, shipments of chocolate chip cookies grew by 2.7% to \$718.4 million. Cookies with higher quality chocolate and dark chocolate chips are providing much of the growth in this category, although “Chips Ahoy!” chocolate chip cookies continue to be a top-seller. From 2016 to 2021, shipments of chocolate chip cookies are expected to grow by an average of 2.1% per year, totaling \$797.1 million in 2021.
- Crème-filled (other than sandwich) and oatmeal cookies are also two important categories of cookies. In 2016, U.S. shipments of crème-filled cookies increased by 3.3% to \$348.3 million. Meanwhile, shipments of oatmeal cookies inched up by 0.5% to \$282.2 million. From 2016 to 2021, U.S. shipments of crème-filled cookies are projected to increase by an average of 2.3% per year, totaling

\$389.6 million in 2021. During this time, shipments of oatmeal cookies are expected to grow at an average annual rate of 1.2%, reaching \$300.2 million in 2021.

- U.S. shipments of marshmallow cookies, made famous by “Mallomars,” increased by 0.3% to \$72.0 million in 2016. Shipments of marshmallow cookies are expected to rise by an average of 0.8% per year from 2016 to 2021, totaling \$75.1 million in the latter year. The remaining cookie categories are significant in size, but include many products. In 2016, shipments of other cookies/wafers (excluding ice cream sandwich wafers) increased by 3.2% to \$2.64 billion. From 2016 to 2021, shipments are expected to grow by an average of 2.4% per year, totaling \$2.98 billion in 2020. The most popular cookies in this category will include sugar, butter, ginger, peanut butter, and Italian-style cookies not included in any of the other cookie categories. Those cookies with high quality and better-for-you ingredients, such as fruit and nuts, will be most successful. Unusual pairings of popular flavors, such as savory and sweet combinations, will be prevalent in this category as well.
- The last major category of cookies is toaster pastries, wafers for making ice cream sandwiches, and ice cream cones and cups. Shipments of these products increased by 1.1% to \$795.3 million in 2016. From 2016 to 2021, U.S. shipments of toaster pastries, wafers for making ice cream sandwiches, and ice cream cones and cups are expected to grow by an average of 1.5% per year, totaling \$857.8 million in 2021.
- In 2016, U.S. shipments of crackers increased by 4.7% to \$5.01 billion, after falling by 11.0% in 2015 and soaring by 15.7% in 2014. Steady growth is expected over the next few years as manufacturers introduce a variety of healthier options featuring vegetables and other healthy ingredients. More convenient packaging, such as flexible and stand-up pouches, will also spark consumer interest. Currently, most cracker products are sold in conventional bag-in-box packaging that is not conducive to travel and resealing. Including an

estimated 0.4% increase in 2017, U.S. shipments of crackers are expected to grow by an average of 1.9% per year from 2016 to 2021, totaling \$5.50 billion in the latter year. Cracker sandwiches, particularly those with cheese, and crackers made with savory ingredients will provide the strongest industry growth during this time.

Frozen Bakery Products

- Frozen bakery products, such as cakes, pies, and cookie/cracker varieties, have prospered over the past several years. From 2011 to 2016, U.S. shipments of frozen bakery products increased by an average of 4.2% per year. Consumers are particularly attracted to the flexibility of storing frozen baked goods until they are needed, which also cuts down on waste from expired foods. This is a major attribute in today's cost-cutting environment. Thanks to more innovative packaging, consumers can even remove a portion of the product and save the rest for another occasion. In 2016, shipments of frozen bakery products grew by 3.1% to \$5.93 billion. Including an estimated 2.1% increase in 2017, shipments are expected to rise by an average of 2.3% per year from 2016 to 2021. Shipments are projected to total \$6.63 billion in 2021.
- Soft cakes and pies account for a large share of U.S. shipments of frozen bakery products. In 2016, shipments of frozen soft cakes grew by 4.4% to \$1.48 billion, while shipments of frozen pies advanced by 5.3% to \$1.45 billion. From 2016 to 2021, shipments of frozen cakes are expected to grow by an average of 3.1% per year, totaling \$1.73 billion in the latter year. During this time, shipments of frozen pies will increase by an average of 3.4% per year, reaching \$1.72 billion in 2021. The next largest category of frozen bakery products based on U.S. shipments is cookies and cracker products. In 2016, shipments of frozen cookie and cracker products rose by 4.3% to \$539.9 million. From 2016 to 2021, shipments are anticipated to grow by an average of 2.9% per year, hitting \$623.4 million in the latter year. Frozen pastries is the only other

clearly defined category to exhibit U.S. shipments of more than \$200.0 million in 2016. During this time, shipments of frozen pastries grew by 3.1% to \$255.1 million, with 2.7% average annual growth expected through 2021. At this time, shipments of frozen pastries will total \$291.8 million.

Producer Price Trends

- In 2016, producer prices for commercial bakery products grew by 0.8%, following 1.9% increases in both 2015 and 2014. Analyzing the last several years, U.S. consumer prices for bakery products jumped in 2008, as ingredient costs skyrocketed to historical levels. During this time, producer prices for bakery products rose by 11.7%, following a 4.9% boost in the previous year. Luckily, prices for flour, grains, and other ingredients stabilized a bit in 2009, resulting in a 2.9% increase in producer prices for bakery products. This trend carried over into 2010, as producer prices actually fell by 1.1% during this time. Unfortunately, this changed over the next few years, as prices for wheat, corn, soybeans, sugar, cocoa, and vanilla began to rise. In 2011 and 2012, producer prices for bakery products rose by 4.6% and 3.5%, respectively, before increasing by 2.4% in 2013.
- The use of higher quality ingredients and continued volatility in common ingredient prices will contribute to a modest increase in commercial bakery product prices through 2021. For example, vanilla bean prices skyrocketed in 2015 due to a poor harvest in Madagascar. Luckily, last year's crop bounced back and vanilla prices returned to a more stable level. Overall, producer prices for commercial bakery products are expected to advance by an average of 1.5% per year from 2016 to 2021, including an estimated 0.9% increase in 2017.
- U.S. producer prices for bread-type rolls, muffins, bagels, and croissants increased at the fastest pace in 2016, rising by 2.2%. On the other hand, producer prices for soft cakes decreased at the strongest pace in 2016, falling

by 2.6%. Over the next few years, prices for all bakery segments will trend upward. From 2016 to 2021, prices for bread-type rolls, muffins, bagels, and croissants will continue to advance at the fastest pace among commercial bakery products (2.1% average annual rate), followed by soft cakes (1.8%), bread (1.4%), pies (1.3%), other sweet goods (1.3%), frozen and refrigerated bakery products (1.1%), cookies (1.0%), and crackers (0.8%).

Demographic Trends for Expenditures on Bakery Products

- In 2016, the average U.S. household spent \$356.25 on bakery products. This figure is expected to increase to \$383.75 in 2021. Among all bakery products, the average household spent the most on bread in 2016. During this time, the average household spent a total of \$107.25 on bread, which is expected to rise to \$114.50 in 2021. Expenditures will continue to be highest for nonwhite bread. Meanwhile, average annual household expenditures on biscuits and rolls will grow from \$50.50 in 2016 to \$54.25 in 2021.
- Despite recent dieting trends, cookies were also a popular choice for U.S. households, as the average expenditures totaled \$50.50 in 2016. The average household is expected to spend \$54.00 on cookies in 2021. Average expenditures for cakes and cupcakes will grow at a solid rate during this period, increasing from \$39.00 to \$43.50, while expenditures for crackers advance from \$39.75 to \$42.25. Another category exhibiting moderate growth will be frozen and refrigerated bakery products. Household expenditures on these products will grow from \$29.75 in 2016 to \$32.00 in 2021. Lastly, average household expenditures on doughnuts, sweetrolls, and coffeecakes will increase at a considerable pace due to the popularity of doughnuts. Expenditures will grow from \$23.75 to \$26.00 during the 2016 to 2021 period, while expenditures for pies, tarts, and turnovers rises from \$15.75 to \$17.25.

- Consumers in the 35 to 44 year old age bracket had the highest average annual household expenditures on all bakery products in 2016 with \$424.00. Consumers in 45 to 54 year old bracket were close behind with \$393.00 spent on bakery products. This is not surprising since these consumers are generally parents with high disposable incomes. Consumers in the 55 to 64 year old age group were the only others to spend more on bakery products than the average household in 2016 (\$373.25).
- By region, consumers in the West spent the most on bakery products in 2016 with an average of \$375.50 per household. Consumers in the Midwest followed with average expenditures of \$368.25 on bakery products during this time. The Northeast and South regions were relatively far behind with \$357.00 and \$337.25 in average annual household expenditures on bakery products in 2016.
- Although bakery products are generally inexpensive, as household incomes rise so does the average spending. Consumers with a family income of \$100,000 and over had the highest average annual household expenditures on bakery products with \$543.75 in 2016. Consumers with a family income of \$80,000 to \$99,999 had the second most spending with \$445.75. In fact, consumers with family incomes of \$70,000 and above all had higher average annual household expenditures on bakery products compared to the average spending of all consumer units.
- White consumers had the highest average annual household expenditures on bakery products in 2016 with \$373.50. Asian consumers followed with average spending of \$346.50, while Hispanic consumers were close behind with average household expenditures of \$344.50 on bakery products in 2016. Hispanic consumers will be increasingly important to bakery producers over the next several years. Growing population and income figures will lead to more spending on bakery products. According to the 2010 U.S. Census, Hispanics account for approximately 16% of the U.S. population and is the largest and fastest growing minority group. The number of Hispanics grew from 35.3 million

to 48.9 million from 2000 to 2010 and the Hispanic population is projected to grow to more than 60.0 million in 2020. In 2015, one-third of the nation's 19 year old and under population was Latino. More ethnic flavors, including tropical fruits and spices, will become more prevalent in the marketplace. Lastly, African American consumers spent the least with an average of \$243.25 on bakery products in 2016.

- Not surprisingly, the average consumer in households with a husband, wife, and children overwhelmingly spent the most on bakery products in 2016 (\$521.25). Consumers in households with just a husband and wife had the second highest average annual expenditures on bakery products with \$379.75. Meanwhile, single parents had average annual household expenditures of \$339.75, while single consumers only spent \$252.25 on average.

Economic Trends Impact Sales

- The economy plays a moderate role in U.S. commercial bakery products industry. Consumers will always spend money on food and beverages, however, the types of products they purchase can vary. During poor economic conditions, consumers generally cut back on more expensive products. They also curtail spending on foods and beverages away from home. One of the few positive factors during the recession was consumers' willingness to treat themselves with a relatively inexpensive indulgence like a baked good. As the economy continues to strengthen, solid growth rates are expected for the commercial bakery products industry through 2021. While the economy has gone from having a negative to a positive impact, volatile ingredient and energy prices will continue to be a challenge for the commercial bakeries industry, along with rising payroll and healthcare costs.
- Analyzing long-term economic trends, the U.S. economy struggled greatly in 2001 and 2002, as the gross domestic product (GDP) grew by only 1.1% and

1.8% (in chained 2005 dollars) during this time, respectively. The economy began to recover in 2003, as the GDP grew by 2.5%. In 2004, a full economic recovery was in place and the GDP grew by 3.6%. The economy was strong again in 2005 and 2006, with slightly less GDP growth of 3.1% and 2.7%, respectively. In 2007, the economy slowed down and there was 2.1% growth for the year. Less growth was reported in 2008 (0.4%), as the economy was plagued by a poor housing market, financial turmoil and tighter credit restrictions, high energy costs, and weakening consumer spending. Most of these negative factors accelerated in 2009, as the GDP declined by 3.5%.

- In 2010, the economy rebounded with 3.0% growth in the GDP, as the housing market experienced a modest recovery, financial institutions stabilized, and consumer spending increased considerably. Unfortunately, slower GDP growth occurred in 2011 (1.8%), as the lingering effects of the economic recession were prevalent. Nonetheless, the GDP picked up in 2012 with a 2.8% increase, which was followed by a growth rate of 2.2% in 2013. Stronger growth occurred in 2014 (2.4%), despite a contraction in the first quarter due to harsh winter weather. In 2015, the GDP rose by 2.6%, with a 1.6% growth rate reported in 2016. After an anticipated 2.3% increase in the GDP in 2017, steady economic expansion is projected through 2021.

Social Media a Vital Marketing Tool for Commercial Bakeries

- Commercial bakeries that become more tech-savvy will not only be better off during an economic downturn, they will be in a good position to capture more sales when the economy rebounds. Millennials are not shy about researching and purchasing items online and this group is catapulting social media marketing. An effective web site, Internet and social media (Facebook, Twitter, Instagram, Pinterest, etc.) marketing, and mobile device applications will be crucial in attracting this customer base in the future. More than 80% of Millennials are using smart phones and relying on these devices when shopping.

- Most consumers are interested in convenience and price so the Internet is a perfect fit. A web site and Facebook page enables consumers to view products online, educate themselves about certain types of bakery products, search for stores that offer these products, read reviews, participate in contents and giveaways, and become more price conscious, all from the luxury of their own home or mobile device. Other social media sites, such as Tumblr, Pinterest and Instagram, can also provide a lot of free advertising for commercial bakeries. Pinterest and Instagram, in particular, are two social media sites that allow companies to post detailed pictures of their businesses and the products they offer, as well as provide bakery product ideas and announce special events and other important news. Pinterest recently overhauled its design, making images larger and offering similar items from a particular source when viewing a pin in a single format.
- Coupon use, which is at an all-time high, is also going virtual as many food and beverage companies are now using coupon sites, such as Groupon. In the food and beverage business, coupon sites are a great way to encourage trial of a new concept or flavor. By 2021, more than 600 million consumers worldwide will use mobile coupons, resulting in nearly \$42 billion in savings. Currently, mobile couponing is most prevalent in the Far East and China, with North America and Western Europe quickly gaining ground.
- Social media and the Internet have become a core component of bakeries' operating strategy, as they help build brand awareness, boost interactions with customers, allow companies to monitor what people are saying about their products, and provide information about promotions and contests. Social media also has an advantage in directly targeting specific demographic groups compared to traditional media marketing that is less focused. QR codes (quick response codes) can also be placed on items and scanned by customers' mobile devices to provide additional company and product information. Therefore, many bakery companies are shifting their marketing budgets to digital

advertising. Nonetheless, when combined with traditional advertising techniques, social media and web marketing can propel commercial bakeries to new heights.