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Amazon Buys Whole Foods

"Grocery Wars! Amazon and Whole Foods Crush Kroger,"[1] read the headlines on June 16, 2017, as Seattle-based e-commerce giant Amazon announced that it would pay $13.7 billion to purchase Austin-based Whole Foods Market (Whole Foods), the leading U.S. organic and natural foods supermarket.

News of the merger precipitated a broad sell-off in the shares of grocery retailers and suppliers. Shares in Kroger—the largest U.S. supermarket operator by both sales and store numbers—lost 14.5%.[a] Investors unloaded other grocery shares too. Supervalu declined by 17%; organic Sprouts Farmers Market by 12.7%; Costco by 7%. Shares in Whole Foods' primary supplier, United Natural Foods Inc. (UNFI), declined by over 15%. General merchandisers with grocery revenues wilted as well: Target by 10% and Wal-Mart, the largest seller of grocery items in the U.S., by 7%.[2]

Behind the precipitous declines lay recognition that Amazon's bold move into brick and mortar assets offered transformational opportunities. For Amazon, Whole Foods offered expertise in perishable product sales and procurement, plus access to Whole Foods' 30 million[3] well-off shoppers and 463 physical store locations in key U.S. markets. For Whole Foods, opportunity lay in absorbing Amazon's technology and process expertise to modernize and to reduce operating costs.[4] Under co-founder and CEO John Mackey, Whole Foods had one of the industry's highest cost structures. Whole Foods also advocated for healthy eating and environmental stewardship. For Amazon, Whole Foods' physical stores and their employees imposed costs and capital investments that founder and CEO Jeff Bezos had historically tried to avoid. For grocery retailers and suppliers, the deal portended increased competitive pressures in a saturated market that for several years had been unable to pass on cost increases to consumers. As 2018 dawned, all parties were assessing the deal's implications.

[a] Just one day earlier, Kroger's stock had plummeted another 20% when the company announced a steep drop in quarterly earnings, its third consecutive quarter of declining same-store food sales, and a reduced annual earnings target. (Source: Maggie McGrath, "Kroger Sinks 17% as First Quarter Sales Fall and Forward Guidance Is Slashed," Forbes.com, June 15, 2017, https://www.forbes.com/sites/maggiemcgrath/2017/06/15/kroger-sinks-16-as-first-quarter-sales-fall-and-forward-guidance-is-slashed/#7a50892f726d, accessed December 2017.)

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The U.S. Retail Grocery Business

In 2017, the $800 billion U.S. grocery retailing business was more competitive than ever, amid heavy discounting, consolidation of major grocery chains, expansion of hard discounters, the explosive growth of food sales in dollar stores, continued growth of food sales in drug stores, growing market share gains for grocery e-commerce, and consumer desire for convenient meal solutions.[5]

In recent decades, U.S. grocery retailing formats had proliferated. Joining traditional supermarkets, operated by firms such as Albertsons and Kroger, were general merchandisers and supercenters such as Target and Wal-Mart, membership-only discount warehouses such as BJ's and Costco, natural foods retailers such as Whole Foods, discounters such as Aldi, dollar stores such as Dollar General (over 13,000 locations), drug stores such as Walgreen's (over 8,000 locations), and online grocers such as FreshDirect and Peapod. (**Exhibit 1** shows comparative data for leading U.S. grocery retailers, plus Amazon.) As a result, in 2016 the amount of food retailing space per capita hit a record 4.15 square feet, almost 30 times the level of 1950.[6] The glut of space led Kroger to nearly halve its number of new stores planned for 2017; Wal-Mart expected to cut new store openings from 132 to 55 in 2017.[7] Many retailers were also closing stores and experimenting with new, smaller footprint formats.

For 2016, operating margins in the U.S. grocery retailing business averaged 3.4%, barely one-third the 10.4% average for all U.S. industries.[8] In part this was due to 2016 including the longest period of falling food prices since 1960.[9] In 2016, both food retailers (including Costco and Whole Foods) and distributors (including foodservice giants like Sysco and US Foods) publicly blamed their lower margins on food price deflation.[10] Stagnant real wages impeded retailers from raising prices, however. In 2016, the income of the bottom 60% of the U.S. population had not yet recovered to the level of 2007, before the Great Recession.[11] Between 1980 and 2016, real median household income in the U.S. had risen just 35% while GDP had grown 154% (see **Exhibit 2**).[12]

On the input side, farmers, suppliers, and ultimately grocers all faced oligopoly pressure. As early as 2005, three firms—BASF, Bayer, and Syngenta—controlled half of the world agrochemical market.[13] Nearly half of U.S. corn and 85% of U.S. soybeans grew from genetically modified seeds, and a single company, Monsanto, supplied the seed planted on 88% of the land growing genetically modified crops worldwide.[14] One company supplied over half of U.S. synthetic fertilizer; four firms supplied 80% of U.S. farm equipment.[15] Another four firms controlled 60% of U.S. grain terminal capacity; three firms handled 81% of U.S. corn exports and 65% of soybean exports.[16] Two massive mergers promised further concentration of control over inputs. In 2016, Bayer agreed to purchase Monsanto, though antitrust approval was still pending at the end of 2017.[17] Dow Chemical and DuPont merged in 2017, and pooled their seed and agricultural chemical businesses.

Some food suppliers responded with vertical integration. Cargill had become a leading global supplier of both processed grain and processed food,[18] and a top supplier of U.S. beef and poultry.[19] Smaller, private grocery suppliers too could successfully integrate across the value chain to maximize efficiencies and control costs. Spain's family-owned Muñoz Group, for example, initially supplied European supermarkets with fresh fruit and juice. In the 2000s the company integrated backward into fruit breeding and varietal development (patenting the new varietals), farming, and logistics.[20] In fresh tomatoes, the San Antonio, Texas-based firm NatureSweet was vertically integrated from seed development through to category management of product in supermarkets.

Technology

From bar codes and scanners to digital coupons, technological innovation had long offered grocery and other retailers new opportunities to monitor and manage information to optimize supply chains, assortments, and pricing. The digitization of commerce and transactions gave firms access to vast troves of new data to mine for patterns, information, and insights. Amazon was one of the greatest beneficiaries of these advances.

Online retail carried massive cost advantages that brick and mortar retailers could not replicate. E-commerce firms avoided the need to carry the cost of physical stores on the balance sheet, or to incur the corresponding labor costs on the income statement. Online grocery retailers had no need to display merchandise in wide, well-lit aisles accessible to customers both tall and short. Their distribution centers were far more efficient—at the extreme they could be unlit warehouses in which robots picked and packed orders. By eliminating stores, online retailers also ended the need to transfer perishables from their distribution centers to a new location for display and consumer selection. Although consumers often preferred to select their own fresh food, online retailers could theoretically deliver fresher and more pristine perishables by entirely omitting the need for product to enter and exit stores and by accumulating demand over the equivalent of dozens of stores. The lower costs online retailers could enjoy allowed them to gain market share by passing savings on to consumers in the form of low prices.

With centralized distribution rather than a network of stores, online retailers also could offer a larger assortment of merchandise in a greater diversity of package sizes than brick and mortar counterparts could. One example of this phenomenon was the success of the pure-play online grocery retailer Ocado, which operated in the U.K. Lacking a physical presence allowed Ocado to aggregate demand not in store-by-store catchment areas, but from across an entire nation. Such centralization made it economically viable for Ocado to carry even obscure imported and artisanal food items and deliver them to customers' homes during a one-hour window, at lower prices than Tesco, the U.K's largest supermarket operator.[21] Squeezed by German discount markets Aldi and Lidl from one side, and by Ocado on another, Tesco gave up 10 points of market share over seven years. Meanwhile, the proportion of U.K. consumers buying groceries online had reached 8% and was headed toward 10%.

In the U.S., those who preferred to avoid the supermarket shopping experience could choose from an array of services that reduced or eliminated time spent in stores.[22] In 2017, several companies were vying for traction with dedicated grocery delivery service. Peapod, the U.S. subsidiary of international grocery company Ahold Delhaize, was a home grocery delivery service founded in 1989 that serviced most of the eastern seaboard and Chicago, Illinois. FreshDirect, founded in 1999, sourced its own products for delivery in and around the greater New York City metropolitan area, Philadelphia, and Washington D.C. Instacart, an on-demand grocery shopping and delivery company founded in 2012, used shared economy contractors who often visited multiple supermarkets and specialty food shops to fill individual users' orders sent via mobile phone. Many supermarkets, plus Wal-Mart, were experimenting with hybrid services that allowed consumers to order online and then come to the store for order pickup. This so-called "Drive" model already accounted for about 5% of all grocery sales in France.[23] Analysts estimated that there were 40 U.S. cities in which grocery delivery firms could break even with just a 5% market share, and another 26 markets that would break even with a 7% share. Key variables affecting break even included population density, local price levels, and average ticket size.[24]

Consumption Trends

The proliferation of retail formats for groceries, snacks, and meal substitutes coincided with changing consumer shopping preferences, eating habits, and demographics. In 2016, Americans ate more than half of their meals alone, due in part to the fact that 27% of the population lived alone.[25] This encouraged snacking, especially among millennials (those born between 1981 and 1997), in contrast with Baby Boomers (born 1946-1964), who tended to prefer three traditional meals each day.

By 2015, millennials outnumbered Baby Boomers and comprised nearly 25% of the U.S. population.[26] About 90% of millennials used multiple devices each day to access the Internet and were active on social media. In contrast, only 35% of those over age 65 owned smartphones.[27] This meant that millennials were often more comfortable interacting with corporations and with each other via social media rather than by phone or letter. Despite this, millennials generally placed less trust in others than either Generation X (born 1965 to 1980) or Baby Boomers. Only 19% of them agreed that, "generally speaking….most people can be trusted," compared with 31% of Generation X and 40% of Baby Boomer respondents.[28] Perhaps as a result, millennials tended to gravitate toward what they perceived as the authenticity of smaller and local business over corporate food manufacturers.[29]

For Generation X, work and parenting commitments sometimes deterred home-cooking in favor of takeout food. In fact, 2015 became the first year that Americans spent more on food away from home than on food at home.[30] Yet grocery stores were slow to see beyond their historical role of providing ingredients rather than healthful and affordable meals that could be quickly prepared. Not until after 2000 did grocery stores act to install hot and cold food buffets and offer prepared foods to retail customers. More than a few such measures and specialty stations were pioneered by Whole Foods and other upscale grocers.

A more recent innovation was the meal kit, a home delivered package that contained all the ingredients necessary to make a featured dish, along with step-by-step preparation instructions, thereby obviating the need for food shopping, recipe planning, and eating out.[31] At approximately $10 per person, meal kits were more expensive than the $4 average cost of a home-cooked meal, but cheaper than the $17 average per person cost of restaurant dining.[32] As of late 2017, the 100 firms in the U.S. meal kit industry generated an estimated $2.2 billion in annual revenues, and expected 25% annual sales growth over the next five years.[33]

In September 2017, Albertsons became the first U.S. supermarket chain to acquire a meal kit maker, in what observers interpreted as a quick response to Amazon's purchase of Whole Foods. For an estimated $175 million to $200 million, Albertsons bought the number five maker of meal kits in the U.S., New York-based Plated.[34] Plated operated 18 manufacturing plants to assure national distribution of its kits, which sold for $10 to $12 per serving.[35] Other supermarket chains, including Kroger and Publix, sold their own meal kits.[36] Blue Apron was the only publicly listed meal kit provider, but had lost half of its value within three months of its June 2017 IPO due to high customer turnover and problems in an East Coast production facility.[37] During the first three months of 2017, however, Blue Apron customers averaged 4.1 orders, each order averaging $57.23.[38]

In addition to prepackaged meal kits, grocery operators expected sales of prepared foods to grow at a 4.5% annual rate through 2019.[39] Sales of foods that were both convenient and healthful were booming too. Pre-cut fruit and vegetables sales, for example, increased at respective annual rates of 65% and 49% between 2009 and 2014.[40] More broadly, snack sales increased at an annual rate of 3% after 2008, much faster than the growth rate for packaged staple foods.[41] Millennials led both trends: they consumed an average 5.12 daily servings of fruit and vegetables, compared to 4.71 for Generation X and 4.43 for Baby Boomers. Millennials also consumed the most snacks, at 3.05 items per day, compared to 2.26 for Generation X and 1.53 for Baby Boomers.[42] Nonetheless, 60% of millennials enjoyed cooking, and 44% said they would like to cook more often, despite a preference for spending no more than 30 minutes on all food preparation.[43] Perhaps unsurprisingly, millennials ate out 9.7 times each month, compared to 8.4 times for Generation Xers and 8.2 times per month for Baby Boomers.[44]

Whole Foods Market

John Mackey and three colleagues founded Whole Foods in 1980 and grew it into the leading global retailer of organic foods. During the 1980s and early 1990s, Whole Foods became the largest supermarket-style natural foods chain by acquiring existing natural foods stores nationwide.[45] In the late 1990s and early 2000s, the company rapidly began building and opening new stores of its own.[46] In 2002, Whole Foods expanded internationally, first into Canada, and then in 2004 via acquisition in the U.K.[47] To supply its growing numbers of stores at a time when large quantities of organic produce were not readily available, Whole Foods buyers sought out relationships with farmers and suppliers, and often needed to think creatively to assure stores of adequate supplies.

Mission-Driven

As CEO, Mackey encouraged Whole Foods employees to view the company not just as a grocer, but as a vehicle to apply principles emphasizing health and sustainability (see **Exhibit 3**). Doing so imposed costs and affected both strategy and execution. The company donated 5% of after-tax profits to charities supporting societal and environmental sustainability, for example.[48] To uphold its commitment to healthy eating, Whole Foods banned the use of 120 food ingredients, and excluded from its body care products 75 ingredients it deemed harmful to human health and the environment.[49] Whole Foods also claimed to sell no foods that included artificial flavors, colors, preservatives, or sweeteners, and it barred high-fructose corn syrup and hydrogenated fats from its products.[50] All fresh meat came from animals that had not consumed hormones or antibiotics; all eggs came from cage-free chickens, all seafood from sustainably managed sources.[51,b] In 2013, Whole Foods had announced that by 2018 it would require suppliers to label all products containing genetically modified organisms.[52] In some cases, Whole Foods developed its own quality standards and helped suppliers meet them. The poultry and beef suppliers with which Whole Foods partnered, for example, were then able to offer other grocers product adhering to the same enhanced standards.[53]

Whole Foods chose to pay staff above-market wages, but set limits on executive salaries. In 2013, the company started new hires at $11 an hour. The company imposed a salary cap on executive pay equal to 19 times the average company wage, which had risen from $18.89 per hour in 2013 to $20.15 in 2016.[54] Staff wages in the rest of the industry were significantly lower, averaging about $10 an hour for cashiers, deli clerks, and produce clerks, whose maximum pay seldom exceeded $13 an hour.[55] Mackey summarized:

> We're a mission-driven company. It's hard for many people to understand that Whole Foods wasn't created to make money *per se*. It wasn't created as an MBA project to meet some unmet market need. It's something I was very passionate about. We're not like every other corporation. Whole Foods Market doesn't primarily care about money. It primarily cares about fulfilling its purpose. And so do I.[56]

Customer Perceptions

While core consumers bought into the mission and accepted paying a premium for Whole Foods products, high prices led others to tag the firm with the moniker "Whole Paycheck." **Exhibit 4a** maps customer perceptions of Whole Foods and other grocery retailers as of 2008. It suggests that consumers appreciated Whole Foods for having one of the most appealing offerings in the industry while offering

[b] Such claims were absent from the 10-K for the year ending September 2017, however. See Whole Foods Market, 2017 Form 10-K (filed November 17, 2017), accessed November 2017.

poor value (pricing and promotions). **Exhibit 4b** revisits these perceptions for 2015 and illustrates the degree of competitive disruption one consultancy believes that leading retailers face.

Occasionally the company itself cemented this reputation. In 2014, Whole Foods paid $800,000 in penalties for overcharging consumers in California.[57] In 2015, New York City investigators discovered that Whole Foods had improperly priced pre-packaged foods and frequently overcharged shoppers there.[58] Whole Foods agreed to pay a $500,000 fine and to require employees to measure rather than estimate package weights.[59] Sanitation and operational issues also forced Whole Foods to close its Everett, Massachusetts commissary kitchen, which supplied its stores with many ready to heat/eat items.[60] Poor operating practices and antiquated systems were largely to blame for these and many other issues at the company.

More broadly, low-income shoppers came to avoid Whole Foods. In 2004, for example, the proportion of Whole Foods shoppers with incomes below $25,000 slightly exceeded the proportion of low-income shoppers patronizing the average U.S. supermarket. In 2016, however, only 2.1% of consumers with incomes below $25,000 shopped at Whole Foods, two-thirds less than the average for all supermarkets.[61] Between 2004 and 2016, Whole Foods lost both millennial and senior citizen shoppers as well,[62] instead adding adults aged 35-49. The company maintained a strong presence in the U.S. Northeast, Northwest, in the 25 largest urban markets, and among college graduates and individuals with household income greater than $100,000.[63] Such core Whole Foods customers sustained the business by spending three times what new customers did.[64]

The Fruit of Success

While it was impossible to know how much Whole Foods' efforts to educate consumers and suppliers had made the difference, by 2017 the sale of organic and natural foods was becoming commonplace in conventional supermarkets at much lower prices than at Whole Foods. Supermarkets had begun to add organic products to their conventionally grown produce and packaged foods in the early 2000s. Sales of U.S. organic foods grew at a compound annual growth rate of nearly 15% between 1997 and 2015, compared to a 4% annual CAGR for total food sales.[65] By contrast, the top 25 makers of consumer packaged goods lost $18 billion in market share between 2010 and 2015.[66] In 2016, 56% of grocers planned to add to or update their private label organic products in the coming year.[67] Supervalu, which operated 2,450 stores under multiple names, introduced a private-label line of organic products in 2008, promising to beat competitors on organics prices by up to 15%.[68] By 2015, organic and natural products generated over 10% of Kroger revenues.[69] Even hard discounter Aldi was adding organic foods to its U.S. assortment, and had followed Whole Foods in eliminating artificial colors, hydrogenated oils, and MSG from its private label products, which made up 90% of its assortment.[70] In fact, Costco became the top U.S. purveyor of organic foods in 2015, selling over $4 billion in organics to Whole Foods' $3.6 billion.[71]

Consumers too were better educated about the merits of healthy food. By 2006, for example, demand for organic products already had grown by 10% to 15% annually over the previous 15 years.[72] In 2016, 28% of shoppers surveyed sought out minimally processed foods, and 25% preferred food products made with fewer ingredients.[73] Half of Americans surveyed believed that their diets could be better, 36% worried about chemicals in their food, and 13% actively purchased foods advertised as "all-natural."[74] Over half of them sought out locally grown foods, primarily for their freshness and taste relative to supermarket offerings.[75] The number of U.S. farmers' markets had increased by 35% annually since 2010 to reach an estimated 8,000 by 2016.[76]

Whole Foods Responds

In 2012, Whole Foods announced plans to grow from 317 to 1,000 stores over the better part of a decade, expanding outward from cities into suburbs and secondary markets at the rate of several dozen new stores each year.[77] Initial results were positive. After one year of operations, the new and smaller stores had increased revenues per square foot by nearly 30%.[78] However, unlike the customers of most other supermarkets, about 75% of existing Whole Foods customers were willing to drive beyond the grocer that was most convenient to them in order to shop at a Whole Foods store (see **Exhibit 5**). As a result, the new Whole Foods stores caused significant unanticipated cannibalization of sales at existing Whole Foods stores. Desperate to attract shoppers from lower-priced rivals, Whole Foods began offering price promotions and discounts in 2012. In some instances the company absorbed suppliers' price increases to keep retail prices steady.[79]

In 2015, Whole Foods partnered with enterprise software firm Incor to improve the effectiveness of its supply chain and merchandise management, some aspects of which Whole Foods still handled manually, although most grocery retailers had automated them more than a decade earlier.[80] Eventually the system would be able to capture hundreds of data points about perishables, not simply units in inventory but such attributes as produce water consumption and harvest date. Data on product origins and growing conditions would facilitate traceability, thereby offering Whole Foods greater accountability for inventory quality, consistency, and freshness, and better aligning Whole Foods operations and values. In spring 2016, Whole Foods moved to centralize its non-perishables purchasing, replacing its reliance on buyers spread across 11 different regions of the U.S. While the decentralized model promoted creative and rich product assortments, it was complex, poorly coordinated, and therefore costly.[81]

In May 2016, in an effort to target millennials, Whole Foods opened the first line of value-oriented stores called "365 by Whole Foods Market."[82] Additional stores in California, Ohio, Oregon, Texas, and Washington followed. These stores carried a limited product assortment of the company's "365 Everyday Value" private label products, but added innovations such as digital-only price tags to more easily and efficiently update prices, electronic-only payment to expedite checkout, and a customer loyalty program.[83]

Whole Foods also began experimenting with a customer loyalty program for its traditional stores in 2014, testing two options in Philadelphia and Dallas locations. In December 2016, the company decided against the points-based loyalty scheme piloted in Philadelphia, opting instead to roll out a mobile application (app) offering digital coupons in January 2017.[84] After downloading Whole Foods' mobile app, shoppers would receive digital coupons, plus discounts and special offers based on their spending levels.[85]

Whole Foods revenue and earnings growth declined each year between 2012 and 2016 (see **Exhibit 6**).[86] In July 2016, Goldman Sachs issued a "sell" rating on Whole Foods shares, arguing that "the company is experiencing a competitive barrage, losing share in its core natural and organic business to a variety of players."[87] In November 2016, Whole Foods announced that Mackey's co-CEO, Walter Robb, would step down from that role, though he would remain a director and lead two Whole Foods foundations.[88] Between early 2015 and spring 2017, Whole Foods shares lost almost half their value.[89] In April 2017, activist hedge fund Jana Partners took an 8% stake in Whole Foods to force management turnover and push to sell the company. One aspect of its plans was to "internalize grocery distribution and limit the influence of [Whole Foods'] primary wholesale distribution partner," UNFI.[90] UNFI supplied 33% of Whole Foods purchases,[91] and had been its leading supplier since 1988.[92] In turn, Whole Foods generated 35% of UNFI's $9.3 billion in FY2017 revenues.[93] UNFI's contract with Whole Foods ran through September 2025.[94]

Amazon

E-commerce pioneer Amazon.com began as an online bookseller in 1995. Rapid success led to its IPO in 1997, at $18 per share. At the time, the company offered 2.5 million book titles.[95] In 2000, Amazon's revenues exceeded $1 billion, but the company had yet to turn a profit,[96] choosing instead to add product categories and reinvest retained earnings in logistics and distribution expertise.

Over time, Amazon's revenue stream shifted from an emphasis on media content—books, videos, and music generated 79% of its revenues in 2001—to technology products (electronics comprised 66% of revenues in 2013).[97] Amazon's status as the leading online bookseller, for example, did not dissuade its management team from launching the Kindle e-reader in 2007. By 2014, Amazon had sold an estimated $5 billion worth of the devices.[98] In 2010, Amazon launched Amazon Studios to develop television shows and films.[99] Following Apple's 2010 launch of iPad, Amazon introduced a tablet of its own in 2012.[100] In 2014, Amazon entered the streaming audio and video market, and launched a smartphone that was discontinued the following year.[101] In 2015, Amazon launched the Echo, a home digital assistant that could play music, order items to buy from Amazon, control home appliances, and included voice-controlled artificial intelligence.[102]

Amazon made itself irresistible to corporate customers too. In 2006, the company launched what became Amazon Web Services (AWS), selling capacity on its own information technology (IT) infrastructure as cloud-based computing, digital storage, and offering IT services. By 2016, AWS was the world's most successful subscription service for cloud computing, its 30% market share exceeding the combined share of Google, IBM, and Microsoft.[103] Observers attributed its success in part to being an early mover, but perhaps more importantly, AWS customers appreciated its lean and efficient architecture, which was first designed to handle the rapidity of Amazon's online sales growth.[104]

Just as AWS built a business by charging for access to Amazon's IT infrastructure, Amazon materially increased the scope and scale of its online marketplace, opening it up to other sellers, who paid the company to host their product listings and, if desired, to fulfill customer orders on this larger "Amazon Marketplace." By 2017, two million independent and third-party sellers generated nearly $23 billion in revenue for Amazon and provided more than half of all the items available for sale on Amazon's website.[105]

Amazon also capitalized on its logistics and delivery infrastructure to increase the stickiness of its customer relationships. Innovations such as Amazon's Prime membership service, introduced in 2005, offered consumers something they did not know they needed—two-day shipping. In 2017, Amazon's estimated 90 million U.S. Prime members[106] paid $99 a year to receive unlimited two-day delivery of millions of products, plus streaming movies, TV, and music.[107] In many U.S. cities, Prime customers could receive their orders in one day, in some cities within two hours.[108] Prime customers stayed loyal and outspent other Amazon customers. Only 20% of Prime members had cancelled their original accounts,[109] and in 2017 95% of current Prime customers pledged that they would renew their membership.[110] On average, Prime members spent an annual average of $1,300 on Amazon products, nearly twice as much as Amazon's other customers' annual spend of $700.[111] **Exhibit 7** indicates how Amazon made Prime membership an increasingly powerful part of its value proposition.

As it grew, Amazon transformed the industries it entered. As an online retailer freed from the costs of building and operating stores, Amazon was able to offer a product assortment unlimited by store capacity. It maintained low prices by passing on the benefits of its asset-light cost structure.[112] In books, Amazon sourced supply from distributors and resellers as each customer order arrived, holding as inventory only top-selling titles on which it received volume discounts and refunds on unsold copies.

Physical bookstores purchased and warehoused publisher book shipments, resulting in a higher cost structure and lower inventory turnover.[113] Unable to rival Amazon's costs and discounted pricing, many independent booksellers went out of business, as did Borders, a leading national chain. A similar dynamic operated in consumer durables, where Amazon forced electronics retail chains such as Circuit City out of business.

In the process, Amazon built out a massive but flexible supply and fulfillment chain that emphasized customer focus, innovation, operational excellence, and frugality.[114] Amazon's distribution centers differed from physical stores in important ways that enhanced Amazon's efficiency and cost advantages. Unlike retail stores, distribution centers had no obligation to display products attractively or ensure easy access to them. In contrast, supermarkets were obliged to provide wide aisles for customer access, shelving corresponding to customer height, and attractive display to encourage impulse purchases. Also unlike retail stores, Amazon was not reliant purely upon register receipts and loyalty programs for insights into consumer behavior. Amazon recorded every webpage on its site that a customer browsed, the time spent there, items placed into and removed from the shopping cart, the music a potential customer sampled and the customer product reviews she read. In addition to customer names and credit card numbers, Amazon also owned customer addresses, which could be compared to other sources of geographically-focused consumer data that allowed the company to build and benefit from customer profiles that were orders of magnitude more detailed than what supermarkets could access.[115]

By 2017, Amazon operated over 80 distribution centers worldwide[116] to speed delivery service and enhance customer satisfaction.[117] The 2012 acquisition of Massachusetts-based robot developer and manufacturer Kiva Systems improved warehouse efficiency by automating order picking, and cut Amazon's fulfillment costs by 20% to 40%.[118] Amazon had also invested in its own fleet of delivery vehicles and leased dozens of Boeing 767 cargo aircraft.[119] Distribution centers were only one aspect of the company's fulfillment model, however. Amazon also had the flexibility of routing orders to drop-shipment partners to handle shipment and delivery. For particularly large suppliers, such as consumer packaged goods manufacturers, Amazon employees would fulfill customer orders on-site at the manufacturer's warehouses. Amazon would either hold third-party seller inventory and ship from their own distribution centers for a fee, or simply notify the merchant of an Amazon Marketplace order and leave fulfillment to the merchant.

Sources of Competitive Advantage

Accumulation and analysis of customer data was one way Amazon used technology and infrastructure efficiencies to beat traditional retailers on price, selection, service, and execution. Awareness of customers' online browsing patterns and purchasing behavior allowed Amazon to impose dynamic pricing by product and by customer. Proprietary algorithms allowed Amazon to quickly and easily adjust the prices a user saw based on consumer demand, competitor pricing, purchase behavior, and external market factors.[120] Brick and mortar retailers lacked the time and staffing to make frequent or rapid price changes viable for all but a small selection of the inventory in their brick and mortar stores.[121]

Amazon also benefited by imposing payment terms that allowed it to delay payment on inventory until after it had been sold (refer to **Exhibit 1**).[122] The funds generated by this negative cash conversion cycle were put to use funding Amazon's expansion. As Amazon's accounts payable grew, so did its ability to fund further investment. **Exhibits 8** and **9** show Amazon balance sheet and cash flow data.

Amazon's size and scale also gave the company influence over suppliers. In 2016, according to one report, Amazon "captured nearly $1 of every $2 Americans spent online."[123] Wal-Mart, like Amazon, pushed suppliers for the lowest possible price. However, once the product was on its store shelves, Wal-Mart's interests aligned with its suppliers'—to sell as much of the stocked product as possible.[124] Without the physical limits of store size, Amazon could offer a far wider product assortment online, including multiple variants of each item, and was agnostic about consumer preferences among them because Amazon maintained low physical inventories, relying instead on producers and wholesalers to supply product as orders arrived.[125]

Amazon's Efforts in Groceries

Amazon entered the grocery category in 2007 with AmazonFresh, though as early as 1999 it had invested in HomeGrocer.com, an early online-only supermarket that made home deliveries.[126] The expansion into grocery was consistent with Amazon's strategy "to add products and services that offer the most value to its Prime members."[127] AmazonFresh was a membership-based online grocery retailer. For an additional $14.99 per month, Prime members could receive home delivery of produce, meats, frozen foods, packaged foods, and household items. Deliveries were made during scheduled time windows in insulated, returnable, containers. AmazonFresh initially launched in Seattle, and in 2013 began expanding, by 2017 operating in seven other U.S. cities, plus London and Tokyo.[128]

While AmazonFresh was growing, it remained hobbled by problems affecting the entire grocery delivery sector: mismatches between supply and demand that resulted in perishable product losses, the limited sensory appeal of selecting foods from a screen rather than in-person, and a persistently high cost structure related to last-mile delivery.[129]

The Amazon-Whole Foods Deal

By summer 2017, Amazon believed that buying Whole Foods was a way to mitigate those challenges. Amazon's all-cash deal to purchase Whole Foods for $13.7 billion valued the company at $42 a share,[130] a 27% premium to its previous day closing price.[131] While Whole Foods was Amazon's largest acquisition to date, its cost amounted to less than 3% of Amazon's market capitalization of $475 billion.[132] Unusually for an acquirer, moreover, on the day of the deal Amazon's share price closed up 3% at $987.71.[133] In return, Amazon took ownership of 11 distribution centers, 470 Whole Foods stores, and nearly 89,000 employees.[134] The news shook the grocery industry,[135] but analysts praised the merger for accelerating Amazon's move into grocery retailing. According to Deutsche Bank:

> Whole Foods brings instant credibility to AmazonFresh. Considering high-quality fresh produce, we see Whole Foods branding and product as more important than Whole Foods' store base to Amazon. The Whole Foods brand should help convert Prime members to Fresh customers in our view, and doing more in the high-frequency food category may help Amazon further build out its last-mile delivery infrastructure.[136]

In a letter to employees, Whole Foods CEO Mackey stated:

> We believe this partnership is going to create significant value for all of our stakeholders. This will enable us to be even more customer-centric and explore new ways to improve the shopping experience. Our Team Members will continue to see many opportunities for learning and growth. Most of our suppliers can expect to see increased business with us over time. [. . .] I want to assure you that Whole Foods Market's culture, mission and purpose are deeply valued by Amazon and the quality standards that we have pioneered over the past four decades will not be compromised.[137]

After the Merger

Amazon marked the deal's closing on August 28, 2017 with a handful of immediate changes. Whole Foods stores cut prices by up to 43% on key organic and conventionally grown perishables, including apples, bananas, chicken, eggs, ground beef, kale, and salmon.[138] The price cuts boosted Whole Foods traffic by 25% within two days.[139] Soon after, Whole Foods placed Amazon delivery lockers at the front of its stores for pickup and return of online orders. Over 100 Whole Foods stores began displaying and selling Kindle e-readers, Fire TV digital media players and tablets,[140] and the Echo smart speaker device.[141]

For its part, Amazon immediately added 2,000 products from the Whole Foods stable of 365 Everyday Value private label branded goods, and quickly sold out of all but 7% of the 100 most popular items.[142] Delivery options included use of AmazonFresh, PrimeNow (one- to two-hour urban delivery), and Prime Pantry (home delivery of individual packages of non-perishables for $6).[143] In its first week of ownership, Amazon sold $500,000 worth of Whole Foods products through the Amazon website.[144] More notable, said one industry insider, was the speed with which Amazon had made Whole Foods products available: brick and mortar retailers would have required several months to accomplish the same feat.[145]

As the deal closed, Amazon also announced that Amazon Prime would become Whole Foods' customer loyalty program,[146] replacing the company's limited efforts to create its own. By offering discounts and offers unavailable to other Whole Foods shoppers,[147] the move sought to encourage Prime customers to explore Whole Foods offerings, and to induce Whole Foods patrons to enroll in Prime. For the first time, moreover, Whole Foods would now receive data on customer shopping patterns to optimize in-store display, selection, layout, and sourcing. Amazon would gain the ability to overlay its online customer data with in-store shopping data from Whole Foods, improving its knowledge of its own and of Whole Foods shoppers.

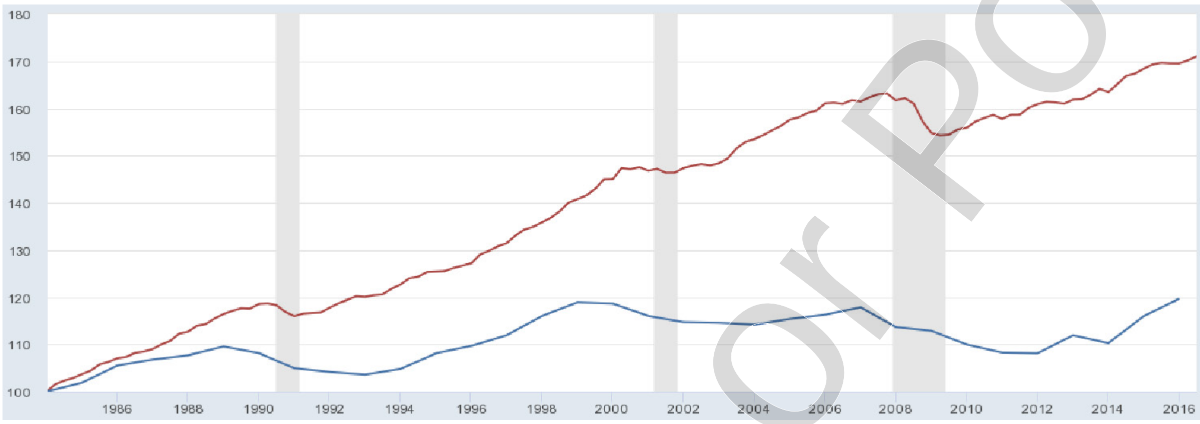
Analysts cautioned that it took time to alter consumer perceptions of prices and value,[148] but the price cuts encouraged some consumers to start immediately. As one 33-year old shopper said, "I usually buy my staples like toilet paper and paper towels at Target and Safeway. If I see lower prices at Whole Foods, I would start buying those basics here."[149] Such sentiments were ominous for other grocery retailers, few of which had the resources to survive a price war with Whole Foods' new owner. While Whole Foods prices remained higher overall than those at Kroger and Wal-Mart,[150] one analyst estimated that Whole Foods could cut prices on every product by 15% and still allow Amazon to break even.[151] In mid-November, Whole Foods announced further price cuts on Thanksgiving foods, and permanent price reductions on an array of organic merchandise.[152] As one industry association executive stated, "Price was the largest barrier to Whole Foods' customers. Amazon has demonstrated that it is willing to invest to dominate the categories it decides to compete in. Food retailers of all sizes need to look really hard at their pricing strategies, and maybe find funding sources to build a war chest."[153] As 2018 began, U.S. grocers had no choice but to re-examine their cost structures and look for new avenues of growth.

Exhibit 1 Selected FY2016 Financial Data, Whole Foods and Select Competitors, plus Amazon

(in $ millions except as stated)	Whole Foods	Costco	Kroger	Wal-Mart	Amazon
Net sales	15,724	118,719	115,337	485,873	135,987
Cost of sales	10,313	102,901	88,785	361,256	88,265
Gross profit	5,411	15,818	26,552	124,617	47,722
Operating expenses	4,458	12,146	23,090	101,917	43,536
of which, SG&A:	4,391	12,068	20,750	101,853	27,284
Operating income	870	3,672	3,462	22,764	4,186
Interest and taxes	290	1,151	435	3,937	1,041
Net income	507	2,350	1,975	13,643	2,371
Receivables	242	1,252	1,649	5,835	10,557
Payables	307	7,612	5,818	41,433	26,075
Inventory	517	8,969	6,561	43,046	13,711
Invested capital	4,513	18,118	21,058	129,186	67,844
Total assets	6,341	33,163	36,505	198,825	83,402
Total liabilities	3,117	20,831	29,795	118,290	64,117
Number of employees	87,000	218,000	443,000	2,300,000	341,400
Number of stores	456	715	2,796	11,695	N/A
Total retail square footage ('000)	17,800	103,200	178,000	1,164,000	N/A
Same store sales growth	-2.5%	4.0%	1.0%	1.4%	N/A
U.S. grocery market share (%)	1.7%	5.1%	8.9%	17.3%	0.8%
Cash conversion cycle (days)	14.75	6.41	12.99	8.25	-34.84
Accounts payable (days)	11.19	28.44	23.54	41.53	104.07
Inventory turnover (x)	17.72	11.75	11.71	8.03	7.39
Return on assets (%)	10.94%	11.78%	9.19%	11.20%	5.84%
Return on invested capital (%)	13.4%	13.3%	10.9%	10.9%	7.4%
SG&A/Sales (%)	26.14%	9.94%	16.52%	20.52%	19.15%
Gross margin (%)	34.4%	13.3%	23.0%	25.6%	35.1%
Operating expenses/Sales (%)	28.4%	10.2%	20.0%	21.0%	32.0%
Free operating cash flow/Sales (%)	2.99%	3.34%	0.93%	4.56%	7.75%
Earnings per share ($)	1.55	5.33	2.05	4.38	4.90
Data for fiscal year ending	9/25/16	8/26/16	1/28/17	1/31/17	12/31/16

Source: Capital IQ, a division of Standard & Poor's, except U.S. market share data compiled from Statista, "Market Share of U.S. Food and Beverages Purchases in 2016, by Company," 2017, https://www.statista.com/statistics/240481/food-market-share-of-the-leading-food-retailers-of-north-america/; both accessed November 2017.

Exhibit 2 Real U.S. Median Household Income and Real U.S. GDP, 1984-2016 (1984=100)



Source: U.S. Bureau of the Census data, compiled by Federal Reserve Bank of St. Louis Economic Research, Federal Reserve Economic Data graph, n.d., https://fred.stlouisfed.org/graph/?g=caWq#0, accessed December 2017.

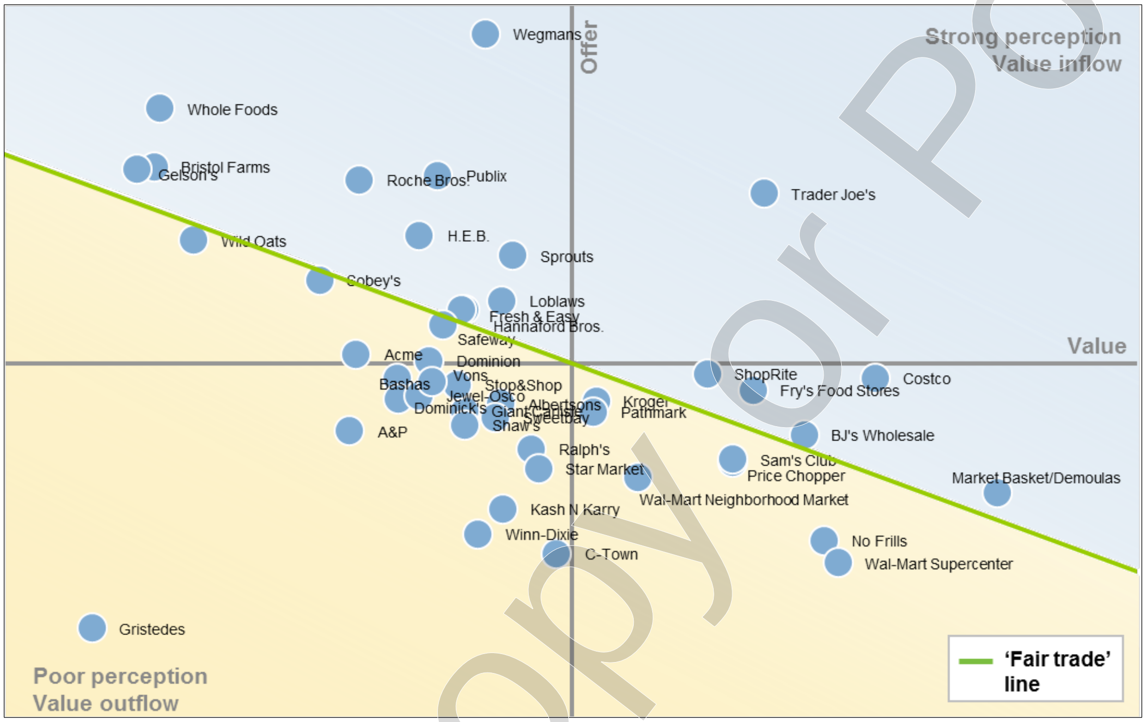
Note: Shaded verticals represent economic recessions.

Exhibit 3 Whole Foods Corporate Values

Our Core Values
We Sell the Highest Quality Natural and Organic Products Available
We Satisfy, Delight and Nourish Our Customers
We Support Team Member Excellence and Happiness
We Create Wealth Through Profits & Growth
We Serve and Support Our Local and Global Communities
We Practice and Advance Environmental Stewardship
We Create Ongoing Win-Win Partnerships with Our Suppliers
We Promote the Health of Our Stakeholders Through Healthy Eating Education

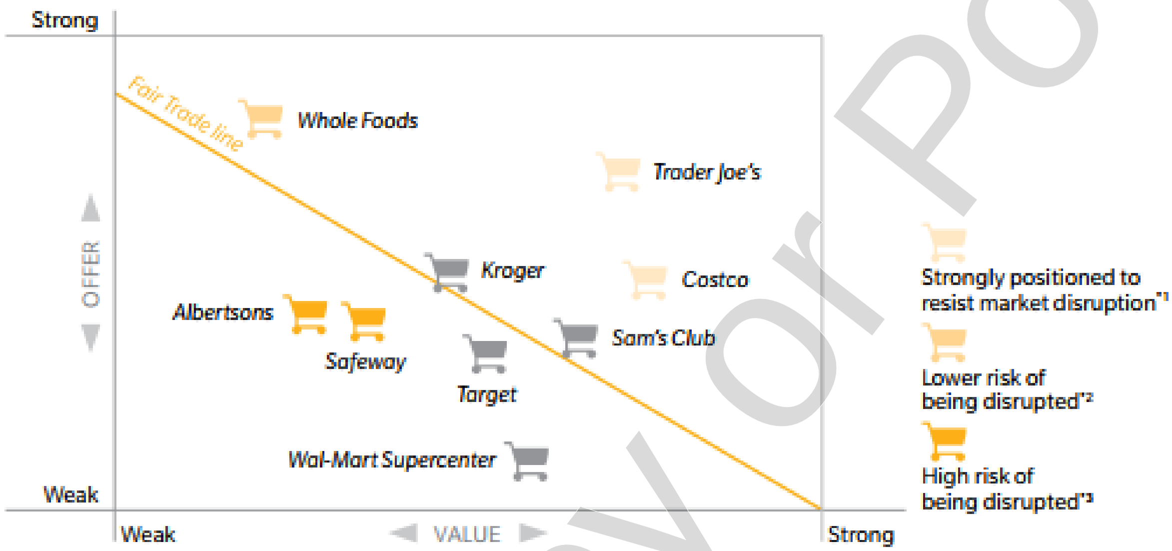
Source: Whole Foods Market, "Our Core Values," Whole Foods website, http://wholefoodsmarket.com/mission-values/core-values, accessed November 6, 2017.

Exhibit 4a Customer Perception Map of North American Grocery Retailers, 2008



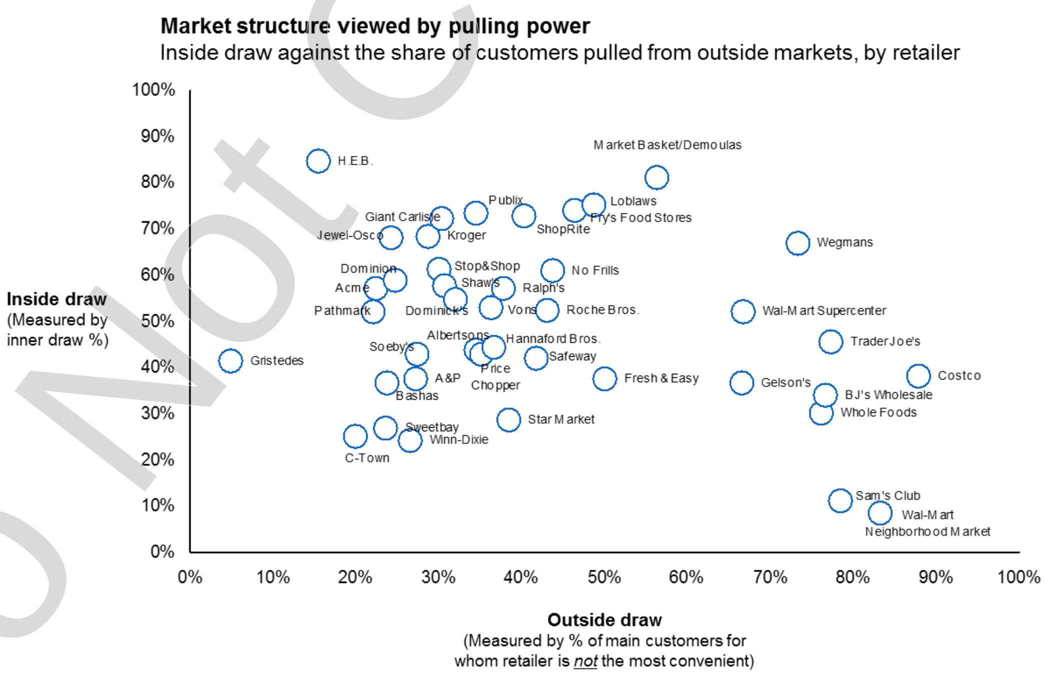
Source: Paul Beswick, et al., "Winning at Home: How Retailers Can Win a Greater Share of Their Natural Customers," Oliver Wyman, 2008, in Rajiv Lal, José Alvarez, and Daniel Greenberg, *Retail Revolution* (Boston: Harvard Business School, 2014), p. 196.

Exhibit 4b Customer Perception Map of Leading U.S. Grocery Retailers, 2015



Source: Oliver Wyman, "The Oliver Wyman Retail Journal," volume 4, November 2015, p. 20, http://www.oliverwyman.com/content/dam/oliver-wyman/global/en/2015/nov/2015_OliverWyman_Retail_Journal_Volume_4_US.pdf, accessed December 2017.

Exhibit 5 North American Grocers' Attractiveness Measured Customer Willingness to Travel, 2008



Source: Paul Beswick, et al., "Winning at Home: How Retailers Can Win a Greater Share of Their Natural Customers," Oliver Wyman, 2008, in Rajiv Lal, José Alvarez, and Daniel Greenberg, *Retail Revolution* (Boston: Harvard Business School, 2014), p. 196.

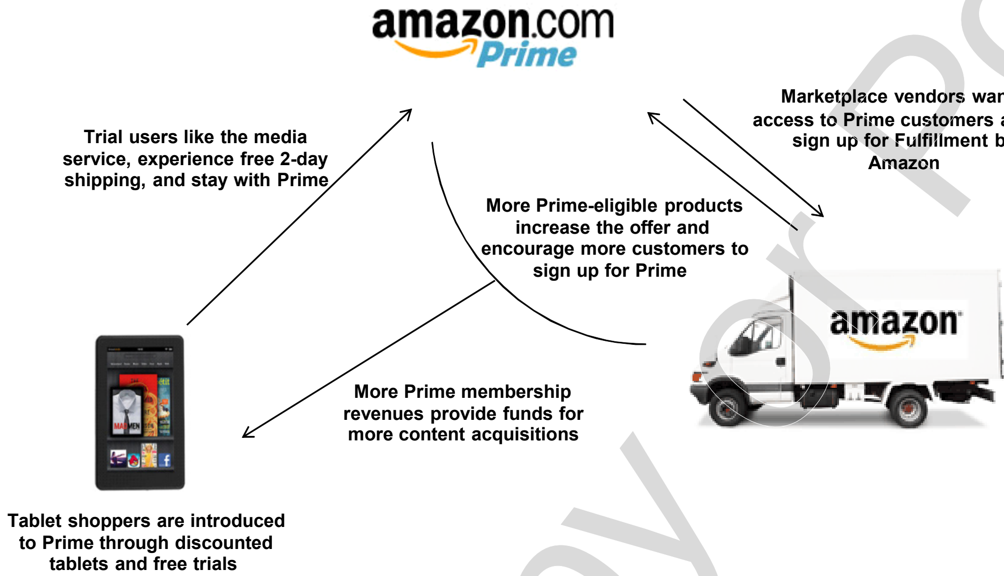
Exhibit 6 Whole Foods, Selected Financial Data, FY2011–FY2017 (in $ millions, except as stated)

FY ending September	2011	2012	2013	2014	2015	2016	2017
Net sales	10,108	11,699	12,917	14,194	15,389	15,724	16,030
YoY % Δ	*12.2%*	*15.7%*	*10.4%*	*9.9%*	*8.4%*	*2.2%*	*1.9%*
Cost of sales	6,571	7,543	8,288	9,150	9,973	10,313	10,633
YoY % Δ	*12.0%*	*14.8%*	*9.9%*	*10.4%*	*9.0%*	*3.4%*	*3.0%*
Gross profit	3,537	4,156	4,629	5,044	5,416	5,411	5,397
YoY % Δ	*12.8%*	*17.5%*	*11.4%*	*9.0%*	*7.4%*	*-0.1%*	*-0.3%*
Operating expenses	2,981	3,402	3,734	4,099	4,458	4,541	4,648
As share of sales (%)	*29.1%*	*28.9%*	*28.9%*	*29.0%*	*28.9%*	*28.9%*	*29.0%*
Operating income	556	754	895	945	958	870	749
As share of sales (%)	*5.5%*	*6.4%*	*6.9%*	*6.7%*	*6.2%*	*5.5%*	*4.7%*
Interest and taxes	213	294	354	379	359	290	130
YoY % Δ	*52.5%*	*38.0%*	*20.4%*	*7.1%*	*-5.3%*	*-19.2%*	*-123.1%*
Net income	343	466	551	579	536	507	245
As share of sales (%)	*3.4%*	*4.0%*	*4.3%*	*4.1%*	*3.5%*	*3.2%*	*1.5%*
Total assets	4,292	5,294	5,538	5,744	5,741	6,341	6,676
YoY % Δ	*7.1%*	*18.9%*	*4.4%*	*3.6%*	*-0.1%*	*9.5%*	*5.0%*
Total liabilities	1,301	1,492	1,660	1,931	1,972	3,117	3,246
YoY % Δ	*-24.0%*	*12.8%*	*10.1%*	*14.0%*	*2.1%*	*36.7%*	*4.0%*
Number of employees	61,500	69,500	75,200	84,200	88,800	87,000	89,000
YoY % Δ	*8.9%*	*13.0%*	*8.2%*	*12.0%*	*5.5%*	*-2.0%*	*2.3%*
Number of stores	311	335	362	399	431	456	470
YoY % Δ	*3.9%*	*7.7%*	*8.1%*	*10.2%*	*8.0%*	*5.8%*	*3.1%*
Total square footage ('000)	11,832	12,735	13,779	15,162	16,625	17,800	18,700
YoY % Δ	*5.1%*	*7.6%*	*8.2%*	*10.0%*	*9.6%*	*7.1%*	*5.1%*
Same store sales growth (%)	8.5%	8.7%	7.0%	4.4%	2.5%	-2.5%	-1.5%
YoY % Δ	*16.5%*	*2.4%*	*-19.5%*	*-37.1%*	*-43.2%*	*-200.0%*	*-40.0%*
Return on invested capital (%)	11.8%	13.8%	14.5%	15.2%	15.5%	13.4%	10.7%
YoY % Δ	*16.1%*	*16.9%*	*5.1%*	*4.8%*	*2.0%*	*-13.5%*	*-20.1%*
Earnings per share ($)	0.97	1.26	1.47	1.56	1.48	1.55	N/A
YoY % Δ		*29.9%*	*16.7%*	*6.1%*	*-5.1%*	*4.7%*	

Source: Capital IQ, a division of Standard & Poor's, accessed November 2017.

Note: YoY%Δ = year-on-year percentage change.

Exhibit 7 Amazon's Virtuous Cycle in Prime Membership Acquisition



Source: Rajiv Lal, Jose Alvarez, and Dan Greenberg, *Retail Revolution* (Boston: Harvard Business Publishing, 2014), p. 55.

Exhibit 8 Amazon Balance Sheet Data, FY2012-FY2017 (in $ millions, FY ending September)

	2012	2013	2014	2015	2016	2017
ASSETS						
Cash & short-term investments	11,448	12,447	17,416	19,808	25,981	24,310
Accounts Receivable	3,817	4,767	5,612	5,654	8,339	10,557
Inventory	6,031	7,411	8,299	10,243	11,461	13,711
Total Current Assets	21,296	24,625	31,327	35,705	45,781	48,578
Gross Property, Plant & Equip.	9,582	14,809	22,730	30,053	42,441	--
Accumulated Depreciation	(2,522)	(3,860)	(5,763)	(8,215)	(13,327)	--
Net Property, Plant & Equipment	7,060	10,949	16,967	21,838	29,114	45,335
Long-term Investments	-	-	-	16	223	455
Goodwill	2,552	2,655	3,319	3,759	3,784	13,271
Other Intangibles	725	645	764	992	854	-
Other Long-Term Assets	922	1,285	2,128	2,437	3,646	7,628
Total Assets	32,555	40,159	54,505	64,747	83,402	115,267
LIABILITIES						
Accounts Payable	13,318	15,133	16,459	20,397	25,309	26,075
Accrued Expenses	3,213	4,535	6,587	5,035	6,142	9,268
Current Portion of Long-term Debt	579	753	1,520	238	1,056	1,037
Current Portion of Capital Leases	-	-	-	3,099	4,141	5,539
Unearned Revenue, Current	1,892	2,559	3,523	5,118	7,168	5,153
Total Current Liabilities	19,002	22,980	28,089	33,887	43,816	47,072
Long-Term Debt	3,084	3,191	8,265	8,227	7,694	24,710
Capital Leases	746	1,990	4,224	5,948	7,519	11,900
Deferred Tax Liability, Non-Current	476	571	1,021	407	392	-
Other Non-Current Liabilities	1,055	1,681	2,165	2,894	4,696	6,927
Total Liabilities	24,363	30,413	43,764	51,363	64,117	90,609
Common Stock	5	5	5	5	5	5
Additional Paid In Capital	8,347	9,573	11,135	13,394	17,186	20,212
Retained Earnings	1,916	2,190	1,949	2,545	4,916	6,779
Treasury Stock	(1,837)	(1,837)	(1,837)	(1,837)	(1,837)	(1,837)
Comprehensive Income & Other	(239)	(185)	(511)	(723)	(985)	(501)
Total Common Equity	8,192	9,746	10,741	13,384	19,285	24,658
Total Liabilities and Equity	32,555	40,159	54,505	64,747	83,402	115,267

Source: Capital IQ, a division of Standard & Poor's, accessed November 2017.

Exhibit 9 Amazon Cash Flow Data, FY2012-FY2017 (in $ millions, FY ending September)

	2012	2013	2014	2015	2016	2017
Net Income	(39)	274	(241)	596	2,371	1,925
Depreciation & Amortization	2,159	3,253	4,746	6,281	8,116	10,277
(Gain) Loss On Sale Of Investments	(9)	1	-	-	-	-
Stock-Based Compensation	833	1,134	1,497	2,119	2,975	3,923
Tax Benefit from Stock Options	(429)	(78)	(6)	(119)	(829)	(829)
Other Operating Activities	142	124	(128)	486	(106)	(92)
Change in Accounts Receivable	(861)	(846)	(1,039)	(1,755)	(3,367)	(3,929)
Change In Inventories	(999)	(1,410)	(1,193)	(2,187)	(1,426)	(2,371)
Change in Accounts Payable	2,070	1,888	1,759	4,294	5,030	5,551
Change in Unearned Revenue	275	399	741	1,292	1,955	1,317
Change in Other Net Opg Assets	1,038	736	706	913	1,724	477
Cash from Operations	4,180	5,475	6,842	11,920	16,443	16,249
Capital Expenditure	(3,785)	(3,444)	(4,893)	(4,589)	(6,737)	(9,028)
Cash Acquisitions	(745)	(312)	(979)	(795)	(116)	(13,894)
Invests. Mrktble & Equity Securities	935	(520)	807	(1,066)	(3,023)	(7,039)
Cash from Investing	(3,595)	(4,276)	(5,065)	(6,450)	(9,876)	(29,961)
Long-Term Debt Issued	3,378	394	6,359	353	621	-
Long-Term Debt Repaid	(588)	(1,011)	(1,933)	(4,235)	(4,361)	-
Repurchase of Common Stock	(960)	-	-	-	-	-
Other Financing Activities	429	78	6	119	829	829
Cash from Financing	2,259	(539)	4,432	(3,763)	(2,911)	12,744
Foreign Exchange Rate Adjustments	(29)	(86)	(310)	(374)	(212)	79
Net Change in Cash	2,815	574	5,899	1,333	3,444	(889)

Source: Capital IQ, a division of Standard & Poor's, accessed November 2017.

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