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Amazon.com, Inc.

It was late on a dreary winter day in Seattle in early January 2017. As Jeff Bezos studied the report for final quarter in 2016, he hoped investors would be pleased with the results. Amazon's share price was up 43% compared to the same time last year, and market cap had grown almost 12% from $318 billion to $356 billion over the same time.[1] **Exhibit 1** depicts Amazon's revenue, net income, and operating expenses from 1996 to 2016.

As Amazon evolved with technology, traditional boundaries between hardware and software, products and services, and online and bricks- and-mortar stores had become increasingly blurred. As a result, Amazon found itself engaged in a fierce competitive battle for control of the emerging digital ecosystem, pitted itself against technology giants such as Alphabet (Google's parent company), Alibaba, and even Microsoft and Apple.

Throughout this digital transformation, Amazon's investors remained focused on the long-term, because consistent profitability continued to elude the company. Sales, however, increased quarter after quarter, fueling optimism in what the long-term projects the company invested in could mean for future profitability and growth. Investors are by now quite familiar with the three pillars of Amazon that Bezos likes to talk about: the e-commerce marketplace, the Prime membership program, and Amazon Web Services (AWS). But will this be enough going forward? While Amazon was starting to post some profits, its stock was down 7% after the last quarterly results were posted in 2016.[2]

As Bezos gazed out of the office window into the darkness, he could not help but ask himself that very question: What should be the fourth pillar of Amazon? After all, Amazon had launched a smartphone, a set-top box for video streaming, a music streaming service, in-house video programming, and expanded same-day delivery services. Bezos immediately thought of the AWS unit that had been the one shining star, generating substantial margins and showing clear potential for continued stellar growth. But even for AWS, trouble seemed imminent: Talk among investors about a pending AWS spin-out loomed, and Bezos anticipated heightening pressure for a breakup. Could he confidently rely on AWS to drive the profitability until he found the next growth engine? How could he and his lieutenants mitigate any pressure to spin-out AWS? Or, should he divest AWS, and create a stand-alone unit?

And what about the company's growing competition with the likes of Microsoft, Alphabet, and Alibaba? What would Amazon need to do for its international business, mainly in India and China? For Bezos, the technology and industry convergence he had experienced in the last few years was

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unprecedented. How would such a dynamic affect profits and shape the company's investment fortunes? And then, of course, there was the potential threat that Alibaba, and now even Walmart, posed to Amazon's bread-and-butter online retailing. Struggling to make sense of it all, Bezos got up to grab a much-needed can of Monster Energy Lo-Carb drink out of his office fridge. He opened the can, took a sip, sat back down, took out a legal pad, and began to jot down some talking points for the upcoming investor call.

A Brief History of Amazon

Jeff Bezos started out as a computer specialist at D. E. Shaw, a hedge fund company in New York. In the early 1990s, he noticed the rapid growth of the internet and was drawn to its potential for a new era of retail services. Still, he needed a product that would lend itself easily to online sales in order to break ground in this new arena. After brainstorming many possible ideas, Bezos settled on books, which are easily sourced and warehoused. Books are also an ideal commodity because they are identical products regardless of where they are purchased (in a brick-and-mortar bookstore or online). This in turn reduced customer uncertainty about transacting online, which was new at the time. Also, an Internet store can carry a significantly larger inventory of books than typical bricks-and-mortar establishments. Placing all bets on his new business plan, Bezos moved from New York City to Seattle, Washington. When Jeff Bezos started Amazon.com out of a garage in a Seattle suburb in 1994 to sell books online, he furnished his makeshift office with discarded wood doors for desks. In less than 25 years, Amazon morphed from a fledgling start-up into one of the world's most valuable companies, active in far-flung businesses from e-commerce and cloud computing to media entertainment. As of December 31, 2016, Amazon employed more than 341,000 employees. Yet, wood doors turning into desks remain a staple at Amazon, where strict cost control is paramount to this day. **Exhibit 2** shows Amazon's key events and market capitalization over time.

Amazon's First Decade, 1995–2005. Amazon's website officially went live in July 1995.[3] It was an instant success with book lovers everywhere. The online startup set itself apart from other Internet merchants by pioneering one-click shopping, customer reviews, and order verification via e-mail. Early on, customer service representatives wrote personalized emails to each customer after orders were placed.[4] These innovations made it easy and convenient for online shoppers to adopt Amazon's services and continue to use them. By September 1995, the company was already generating $20,000 in sales per week. As a result, the startup rapidly outgrew its 400-square-foot office (which was actually a garage) in Bellevue, Washington. Over the next few years, Amazon moved to new warehouses several times to accommodate its growing volume of business.

With revenue of $15.6 million by 1997, Amazon's book sales far exceeded those of even its largest bricks-and-mortar bookstores. Riding high on consistent growth each quarter, Amazon completed a successful initial public offering (IPO) on May 16, 1997. By 1998, Amazon had become the sole book retailer on AOL's and Netscape's commercial channels. Later that same year, Amazon hit a momentous benchmark when its market capitalization exceeded that of both Barnes & Noble and Borders, its two largest bricks-and-mortar competitors.[5]

Exhibit 3 depicts Amazon stock performance relative to the NASDAQ-100 Index since its initial listing. Over the last decade, Amazon's stock appreciated by close to 2,000 percentage points, while the NASDAQ-100 Index appreciated 200 percentage points.

Amazon executed a series of strategic alliances as well as acquisitions to rapidly expand its product and service offerings. For example, Amazon bought junglee.com, an aggregation and comparison-shopping service provider, and incorporated its technology directly into Amazon's own website.[6] The service tracked users as they browsed products on Amazon.com or affiliated websites, and displayed related or complementary products that might interest each user based on the information collected. The resulting user experience resembled a process of "spontaneous discovery," as though each individual customer was walking the aisles of a traditional store. Based on the browsing history, the online store was individualized to the user's preferences and choices. Similarly, Amazon entered online video sales through the purchase of IMDb (Internet Movie Database) and expanded into Europe with the acquisition of online booksellers BookPage and Telebook.[7]

In 1999, Amazon partnered with Sotheby's, a fine arts auction house, to offer online auctions.[8] Later, it added several more dot-coms to its portfolio using $1.25 billion raised through a bond offering. Among the companies acquired were HomeGrocer.com, Pets.com, and Living.com, as well as catalog businesses Back to Basics and Tool Crib of the North. In addition, Toys"R"Us and Amazon brokered a deal to form a co-branded toy and video game store. Although the contract was intended to last ten years, the deal came to an early end when Toys"R"Us accused Amazon of violating the contract by selling toys from other vendors. Amazon spent $51 million to settle the litigation.

Internationally, Amazon added warehouses as well as country-specific sites in 1998 in the United Kingdom (amazon.co.uk) and Germany (amazon.de) to accommodate its growing popularity in Europe. In addition, for $75 million, Amazon purchased Joyo.com, China's largest online book, music, and video retailer as a way to gain footing in the world's largest internet market.[9] French (amazon.fr) and Japanese (amazon.co.jp) Amazon sites debuted in 2000. After the internet bubble of the late 1990s burst, Amazon went through a large restructuring effort in 2001, resulting in a $150 million charge and a 15% reduction in its work force.

This proved to be only a temporary setback, as the company quickly entered a new phase of product and service proliferation. In that same year, Amazon was contracted by Borders to provide inventory, fulfillment, content, and customer services. It also became an accredited internet domain name registrar through the Internet Corporation for Assigned Names and Numbers (ICANN), a privilege that only 160 entities could claim. The company expanded its presence in consumer product segments by partnering with hundreds of clothing retailers in 2002 to initiate a clothing sales department.

Amazon launched its "search inside the book" feature in 2003, permitting customers to search the contents of more than 120,000 books prior to purchase. Shortly thereafter, Amazon launched another site called askville.com. It was designed to connect users by allowing them to ask each other questions about anything.

Amazon launched its premium subscriber service, Amazon Prime, in 2005. Subscribers paid $79 (now $99) a year and received free two-day shipping on Prime products from Amazon.com, as well as access to Amazon's Instant Video service. In an attempt to boost Prime membership, Amazon acquired rights to exclusive content from Discovery Communications and other content providers, providing Prime customers with access to unlimited instant streaming of more than 18,000 movies and some 2,000 TV titles.[10, 11]

Amazon's Second Decade, 2006–2016. Amazon Web Services (AWS) is Amazon's full-feature, cloud-based service that includes computing and storage capacity, content delivery, data management, software, networking, payment and billing systems, and other applications.[12] Launched in 2006, the unit came about as Amazon struggled in the early 2000s with slow software development processes. To accelerate this, the company built a set of in-house infrastructure services that would allow its retail business to move more quickly. Amazon, however, only needed its full capacity for about six weeks of the year, during each holiday season. Amazon quickly realized that such on-demand web services and computing power would be valuable and useful for other companies and formed a business around the infrastructure. Subsequently, entities ranging from tech startups to government agencies (such as the CIA) have rented server space, storage, and computing capability from AWS. For a time being, even the infamous WikiLeaks was hosted on AWS, until Amazon ended the relationship in 2010. Given its early lead, by 2016, AWS had the largest market share in this space with 31%, before Microsoft's Azure (9%), IBM's Cloud (7%), Google and Salesforce (each 4%), with the remaining market share held by other providers. In 2016, AWS revenues were $12 billion, but bringing in $1 billion in profits (**Exhibit 4**).

On a local level, in 2006 Amazon started a dry grocery service in Seattle, expanding it in 2007 to include perishables. Amazon also continued its growth in the entertainment industry. In 2007, the company launched an MP3 site that sold audio files to users without copyright restrictions. It also acquired Brilliance audio, an audiobook publisher, and launched a video-on-demand service that allowed users to stream or download movies and TV shows. This included a social-networking site exclusively for book lovers called Shelfari. Amazon also launched Endless.com, a shoe and accessories e-tailer, in 2007, and later grafted it into its main site at Amazon.com/Fashion.

In 2007, Amazon also ventured into hardware development with the release of the first-generation Kindle, which sold out in less than six hours. This was not surprising because Amazon sells its Kindle devices at or even below cost.[13] This has enabled the company to penetrate the e-reader and tablet market where competitors such as Apple have a strong hold. Amazon's losses from sales of computer hardware more than made up for by the sales of e-books, movies, and other digital content sold through the Kindle. Subsequent editions incorporated new features such as a larger screen (DX), a keyboard (Kindle Keyboard), and a touchscreen (Kindle Touch).[14]

To provide a more seamless reading and educational experience, Amazon complemented the Kindle line of tablets and e-readers with the purchase of Audible, an digital audio books provider, for $300 million in 2008.[15] In 2013, Amazon also acquired the website Goodreads.com, a book-sharing social network that provides user-generated book reviews and reading lists, for an undisclosed amount.[16]

To take advantage of the anticipated popularity of e-books and e-readers, Amazon launched Kindle Direct Publishing (KDP) in conjunction with the Kindle in 2007, to make it easier for authors to self-publish books. An author can publish their work through KDP quickly and have it available around the world the next day via Kindle devices and the Kindle app. Independent publishers receive a 70% royalty while maintaining the flexibility to make changes to their work at any time. Paper-bound copies may be printed using Amazon's Create Space services. In 2011, sales from e-books surpassed paper book sales for the first time.[17] A subscription to Prime also provides users with access to more than 350,000 book titles through the Kindle Owners' Lending Library, making Amazon Prime an integral part of the Kindle experience. Sales of the Kindle itself were estimated at 20 million units in 2013.[18]

In 2008, Amazon acquired Zappos, an online shoe company known for exceptional customer service, for $1 billion. Amazon runs Zappos as an independent subsidiary with its own site (zappos.com). That same year, Amazon sold its European online DVD rental services to LOVEFiLM International for a 40% share in its business; it purchased the remaining shares in 2011 to complete the acquisition.[19] Amazon also became a major investor in The Talk Market, a user-created TV Shopping Channel.

The breadth of products and services on offer at Amazon helped insulate it from the worst of the fallout from the 2008–2009 global recession. In fact, online retail rose by 11% in 2009 despite the depressed economy as shoppers were looking for bargains online. Americans buying items online increased from 27% of all Internet users in 2000 to nearly 63% in 2014, and is projected to reach 68 percent by 2018, spurred at least in part by Amazon's rapid and continued growth.[20, 21] Amazon's growth has come from the company's traditional strengths (for example, books and retailing), as well as from other areas that the company continues to invest in and focus on. However, the focus on peripheral businesses has hit company profits because Amazon invests heavily in areas such as new fulfillment centers to improve shipment times, expansions of the Amazon Prime media service, and development of its smart devices.[22] See **Exhibit 5** for Amazon's financial performance over the past five years.

In 2009, Amazon introduced Amazon Basics or its own brand of products (e.g., phone charging cables, batteries, laptop stands, etc.). Amazon branding its own products further lowers costs and it also increases the percentage of sales that it retains. Amazon branded batteries have grown to be roughly one third of that category's entire sales, and Amazon is extending its brand into additional categories, ranging from electronics to kitchen products and even suitcases.

In 2012, the company launched AmazonSupply (now AmazonBusiness) to offer business clients products such as mechanical parts, janitorial supplies, and medical supplies. By 2014, the AmazonBusiness catalog of products features 2.2 million items, relative to the market leader's 1.2 million items.[23] In May 2016, Amazon announced that its wholesale unit, AmazonBusiness, had sold goods worth $1 billion in its first year of operation. Amazon in its bid to capture a pie of the $7.2 trillion large annual wholesale and distribution market has close to nine million items and is adding customers at a rate of about 20% per month.[24]

In 2013, Jeff Bezos announced that Amazon would start working on drone delivery of packages under the name of Prime Air. Drones are expected to pick up packages from the fulfillment centers, deliver them to the customer's doorstep, and return to the fulfillment center with no human involvement. On the trip, drones rely on GPS data to chart a course and drop packages. While this initiative was welcomed by customers, the project was delayed due to several issues including battery life of drones, weather, unreliable GPS data, and aggressive birds. Besides technical hurdles, Prime Air services were also hampered by Federal Aviation Administration (FAA) regulations (in the U.S.) for using drones commercially. Nonetheless, on December 7, 2016 Amazon Prime Air completed its first delivery using a drone. The package was delivered to a customer in the Cambridge area of England and made it to the customer's home just 13 minutes after the order was placed.[25] In early 2014, Amazon filed for a patent for an Airborne Fulfillment Center (AFC), indicating that Amazon expects a bigger role for drone deliveries than just local warehouse-to-doorstep delivery. The AFC is expected to essentially be an airship flying at altitudes of 45,000 ft. that would house the items Amazon sells. The patent explains a method for drones to fly into the warehouse, pick up the items to be delivered and deliver them, all while continually airborne.[26]

To complement the Kindle, Amazon has launched peripheral smart devices. In 2014, Amazon launched the Fire smartphone. The device boasted features that included hands-free scrolling, holographic images, and software that uses the phone's camera to detect merchandise in an effort to do "something different and better."[27] While the hardware competed with smartphones from Samsung, Google, and Apple, the differentiation lies in the potential for the phone's software to facilitate shopping, with some analysts likening the device to the one-click check out that the company introduced on its website in the late 1990s. Thus, the device's "Firefly" feature enables the user to point the phone at conceivably any item that can be purchased on Amazon, including music and television shows, and then order it online in seconds. This creates the opportunity for commerce at just about any moment for the consumer who carries the device. The device also offers unlimited photo storage via Amazon's cloud, circumventing a common issue by which users, who typically rely on their smartphone as their primary camera, have diminished storage space for apps or music due to the data drain of storing photos on the device itself.

Despite the promise and the launch fanfare, the device proved to be a major disappointment. Users gave the device an approval rate of just over 50%, and reviewers described the device as "forgettable" and "mediocre."[28] To entice consumers to buy the device, the company reduced the price from $199, to $0.99. But even this radical move failed to help gain share in the smartphone market against the likes of Apple, Google, and Samsung. Weak sales of the device meant that the anticipated added consumers funneled to Amazon's online store via the phone did not materialize. Overall, it is estimated that the company took a $170 million write-down and has sold less than 50,000 units (compared with over 20 million units for Apple's iPhone 6, a mere four months after launch).[29] [30] In short, the Fire phone was Amazon's first significant misstep for a company that has a habit of making diversification and expansion into adjacent businesses a success.

In April 2014, Amazon also launched Fire TV, a set-top box that streams video and games. This put Amazon in the market for consumer's living rooms, where the likes of Apple, Google, Roku, and even Comcast had their own devices already on the market for content streaming. Fire TV, as with the Fire phone, was introduced with an upfront price tag, which is contrary to Amazon's tradition of offering its hardware to consumers at cost, and charging for related services and/or content. Despite Amazon's assurances that the device was geared more toward entertainment as opposed to selling merchandise, the company admitted that the shopping aspect of the device was anticipated to "get in the way of the entertainment focus of the device."[31] However, consumer reception of the device was strong, very much unlike the Fire phone. Since launch, it is estimated that more than 10 million fire TV boxes have been installed.[32,] In October 2014, the company launched the HDMI stick version of the set-top box, which is not only more cost effective than the box iteration of the device ($39 versus the set-top box's $99), but makes integration between Fire TV, a [34] Fire phone, and a Fire tablet seamless and convenient for consumers who have compatible devices.

In addition to its e-book offerings, Amazon has been expanding the online content that is available to its customers (particularly those who use Amazon devices) in an effort to position the company as a central hub to its consumers. In 2014, Amazon Appstore, the company's virtual portal to apps and games for its mobile devices, offered more than 240,000 apps and games and is designed to directly rival Google's Play and Apple's App Store platforms (although the latter platforms offered consumers over one million apps).[35] Since June 2014, Amazon has been providing Prime Music, an online music streaming option that is free for Amazon Prime subscribers. The service is designed to rival the likes of Spotify and Pandora, but without the advertising that has long been an annoyance for consumers, yet which is vital as a revenue stream to music-streaming services.[36]

Similarly, and in conjunction with the launch of Fire TV, Amazon also began to offer video streaming as a means to compete with Google's YouTube and Netflix. Launched with Fire TV, the service gives subscribers a library of content to stream, which encompasses not only Netflix, Hulu, and ESPN, but also Amazon's own Prime Instant Video library.[37] In addition, Amazon has taken the initiative in streaming content by partnering with HBO. This marked the first time a player in traditional cable entered the online content-streaming space. The deal was seen as a significant blow to Netflix, given that it prevented HBO's parent company Time Warner from striking a similar deal with Amazon's competitors, including Netflix and Hulu.[38]

As a step further, Amazon created its own content for streaming, which has even garnered critical acclaim: the company's television series *Transparent* won a 2015 Golden Globe.[39] The independent movies are intended for theatrical release and will be available for digital streaming as part of the Prime library within two months of release—as opposed to three months or more with respect to typical theatrically-released movies.[40] "X-ray for Movies" was developed through Amazon's acquisition of IMDb, allowing users to interact with the video to obtain detailed information about the movie's characters, directors, writers, and other elements. This feature has been extended to most Amazon Videos offerings. There is also an "X-ray" product for books that offers the same features except that terms are linked from the books to YouTube and Wikipedia.

In an extension of its video-streaming capability, Amazon has also expanded into the realm of video gaming through its acquisition of Twitch Interactive. Twitch broadcasts video of consumers playing a variety of video games, and it is the fourth largest source of internet traffic behind only Netflix, Google, and Apple. Amazon has made an active push into video gaming, expanding the number of programmers it employs and introducing several new video games as part of its Fire TV offering.[41]

In November 2014, Amazon introduced Echo, a new category of devices that are controlled solely by voice commands. The device equipped with a speaker system connects to the owner's Amazon account and allows purchases to be made using voice commands. It plays music from Amazon Music, Spotify, and Pandora accounts using voice commands. It allows users to control lights, switches, and thermostats with compatible smart home devices. Introduced with an upfront price tag of $179.99, it uses Amazon Web Services to constantly learn and add functionality over time. A few months after the launch, Amazon added the Tap and Dot devices as lower cost alternatives to the Echo. They contain the same proprietary digital voice assistant, Alexa, as the Echo. Within a few months of the launch, Echo devices have overtaken all Amazon hardware devices in sales dollar volume. In December 2016, Amazon was estimated to have sold 5.2 million units worldwide during the year, excluding holiday sales.[42]

Alexa, the voice service that is embedded in the Amazon Echo, Echo Dot, and Amazon Tap, enables customers to interact with devices in a more intuitive way using voice. The goal of Alexa was inspired by the computer voice and conversational system on board the starship Enterprise in science fiction TV series, Star Trek. Alexa runs on the cloud and adapts to speech patterns, vocabulary, and the user's preferences. Alexa allows app creators and developers to directly market services to customers ranging from ordering flowers to reading the daily news headlines as well as audio books from Audible. The Amazon Echo was the number one selling product across all $100+ products on Amazon.com on Black Friday 2015. Amazon has also created the Alexa Fund that provides up to $100 million in investments to fuel voice technology innovation. Alexa is one of the first breakthrough products and services using artificial intelligence and machine learning combined with a voice-activated interface. Many observers see this as the future of computing.[43]

Amazon continues to diversify at a relentless pace. Besides offering same-day delivery of groceries in some metropolitan areas and testing drones for even faster distribution, Amazon now plans to capture a large piece of the over $10 billion college bookstore market. In a pilot project, Amazon initiated a student-centered program at three large universities: Purdue University, the University of California, Davis, and the University of Massachusetts Amherst. The goal of Amazon Campus is co-branded university-specific websites that offer textbooks, paraphernalia such as the ubiquitous logo sweaters and baseball hats, as well as ramen noodles!

As part of this new campus initiative, Amazon offers its Prime membership to students at a 50 percent discount ($49 a year) and guarantees unlimited next-day delivery of any goods ordered online, besides all the other Prime membership benefits (free streaming of media content, loaning one e-book a month for free, discounts on hardware, etc.). To accomplish next-day delivery, Amazon is building fashionable delivery centers on campus, university co-branded such as "amazon@purdue." Once a package arrives, students receive a text message and can then retrieve it via code-activated lockers or from Amazon employees directly. The on-campus delivery facilities also serve as student return centers.

Amazon's new campus initiative allows it to bind a younger generation of shoppers ever closer into its web of products, services, and content. Next-day delivery makes students less likely to shop at traditional campus bookstores. Amazon also has a history of selling textbooks at a discount in comparison to old-line campus bookstores. All course materials automatically qualify for next-day delivery and do not require a Prime membership. The Amazon Campus initiative is predicted to save students $200 to $400 a year on textbooks and other supplies.

Another area of focus for Amazon is its supply chain. From the start, Amazon has been opening centrally-located warehouses to save on a key cost component–shipping. Shipping costs remain one of Amazon's main cost drivers, and the technology company is committed to continue lowering it. While Amazon lost close to $7.2 billion in shipping costs last year, it has also been able to achieve higher efficiency by building its own infrastructure. Even though Amazon has been offering free shipping on increasingly more items, it has still witnessed an uptick in percentage shipping costs being recovered in the form of shipping revenue from 34.6% in 2011 to 53.3% in 2016.44 According to a new study published by National Bureau of Economic Research this increased efficiency has allowed Amazon to reduce prices of products on its portal by as much as 40% over a 10-year time-frame. A 50% reduction in the free shipping threshold from $49 to $25 in last six months is another testimony to the immense pricing power which Amazon can draw from its robust supply chain infrastructure. 45 Walmart.com started in 2017 to offer free shipping for any order above $35.

Amazon is now making in-roads in the global logistics services. To benefit from the $1 trillion large cross-border trade, Amazon has initiated a global supply chain project code named "Dragon Boat." The underlying motive of this project is to allow seamless movement of goods from factories in the East (China and Southeast Asia) to its customers in the West.46 Another move in this direction was when in December 2016, Amazon launched a new cargo service, expanding its transportation from trucks to airplanes. Amazon leased 40 jets emblazoned with "Prime Air" to support their holiday season deliveries, which are usually shipped through FedEx and UPS. Amazon maintains that this fleet is to supplement the capacity of the shipping companies, rather than replace them.47

Amazon's Corporate Strategy

As the largest comparative-shopping website boasting "Earth's largest selection" of consumer goods, Amazon satisfies the desire of customers to find everything on their shopping list at one place without leaving home.[48] In addition to the products that Amazon carries directly, it provides a marketplace for customers to purchase goods from third-party vendors. The Amazon Marketplace is a platform on which any qualified seller can access Amazon customers globally. About 50% of Amazon's retail sales are conducted on its Marketplace. Pursuing its mission of being the "Earth's most customer-centric company," Amazon excels at customer service. Indeed, a recent survey ranked Amazon as the most well-regarded company in the United States.[49] The online retailer pioneered the recommendation system by which customized suggestions on shopping items, books, music, and so forth are made to customers based on their buying patterns, preferences, and characteristics of their shopping history as well as that of others with similar profiles. This creates a more personalized shopping experience, especially important when transacting online. As a consumer adds items to their online shopping cart, Amazon then suggests complementary products, frequently offering a bundled price at a discount.

Globally, only Alibaba, China's leading e-commerce conglomerate, is larger than Amazon. Besides offering a wide variety of products and services, Amazon also diversified geographically pretty much from the outset. Today, Amazon operates country-specific sites in more than a dozen countries, including in China (amazon.cn). Currently, Amazon is making a major push into India (amazon.in), where the domestic Flipkart—started by former Amazon employees—took an early lead.

In 2011, Amazon launched its own advertising network in order to generate targeted ads for its online customers. A customer browsing Amazon for a particular item but did not end up purchasing anything was tagged and then served an ad for that particular item when the customer returned to shop at a later stage. According to eMarketer, Amazon's network generated an estimated $870 million in ad revenue in 2014, and is forecast to bring in over $1 billion in 2017.[50] Amazon also has plans to ramp this program up to challenge Google for a larger piece of the $50 billion-per-year online advertising market. Under these plans, Amazon is set to use its customer data to expand its in-house ad platform (dubbed Amazon Sponsored Links) to ultimately replace the ads that Google currently supplies on its website.[51]

In order to better support online retailing's competition with brick-and-mortar retailing, Amazon recently deployed a pilot program of using robotic sorting in several of the company's fulfillment warehouses during the busy holiday season.[52] The initiative was the culmination of Amazon's acquisition of Kiva Systems in 2012 for $775 million and was aimed at helping Amazon reduce the time taken to sort and pack goods towards guaranteeing same-day or overnight deliveries of packages. The use of 10,000 robots might not only offer a competitive edge in terms of fulfillment, it also has the potential for Amazon to save between $400 and $900 million. Indeed, fulfillment costs amounted to $2.6 billion in the third quarter of 2014, up 30% on the previous quarter.

In support of online retailing, Amazon recently opened several brick-and-mortar stores in the United States. These physical retail stores serve as yet another way by which Amazon can touch the customer. The retail locations enable next day delivery for many items, pickup of online orders, and exchange or return purchases.[53] In particular, the ability to return or exchange purchases in person becomes especially attractive to consumers. Such a service would negate potential frustration of having to repackage a purchase and drop it off for shipping where there is always the potential for it to be lost in transit. Moreover, these retail locations also offer lockers where customers can safely retrieve their purchases, overcoming the rampant theft problem of items left at the apartment doors, especially in metropolitan cities. With the bankruptcy filing of Radio Shack, there is speculation that Amazon may acquire Radio Shack's storefronts as a way to expeditiously launch into brick-and-mortar retailing in a widespread and cost-effective way.[54] Amazon also announced that they would open cashier-less grocery stores under the umbrella Amazon Go in Seattle in December 2016. As customers walk in, they scan their phones at a kiosk and walk out with items they wish to purchase which are automatically charged to their Amazon accounts. The technology relies on video streaming, computer vision, and sensors that identify and track customers. Deep-learning algorithms have faced issues when more than 20 customers are present, and this issue may set back the launch date for Amazon Go.[55]

The company has also moved further up the retail value chain into the wholesale and distribution market; a market worth $7.2 trillion. Amazon Business' ability to provide a client-friendly interface, 24/7 delivery, and low prices made it a significant competitive threat to incumbents that were composed primarily of family-run, regional businesses that emphasized personal interaction in the sales process.

AWS is viewed as having the potential to eclipse Amazon's retail business in revenue in the medium to long term[56] (**Exhibit 4**). Although exhibiting healthy growth at an estimated 35 to 40 percent per year, it is clear that AWS does not have the Infrastructure-as-a-Service (IaaS) market to itself. Competition has increased from companies with deep pockets; in particular, Microsoft's Azure cloud service and Google's Cloud Platform. Other notable competitors moving in on the IaaS space includes AliCloud, Verizon, Cisco, IBM, and VMware.[57] As a result of increasing competition, AWS cut prices for its services, which in turn hurt profits in a unit that has traditionally enjoyed substantial margins.[58]

Legal Challenges

In 2017, Amazon accounted for more than half of all online dollars spent in the U.S.[59] An increasing share of this is captured by its private-label brand of products including everything from batteries and phone chargers to cotton washcloths, under its Amazon Basics label. AWS is the world's largest cloud computing provider. In the same year, Amazon is planning to spend twice as much on movie and TV content than HBO, a premium cable and satellite TV network owned by Time Warner. (As of summer 2017, the U.S. Department of Justice is still reviewing the proposed $85 billion acquisition of Time Warner by AT&T.) Alexa, the virtual assistant powering Echo and other devices, is competing for dominance in the virtual reality space.

With ever increasing scale and scope, Amazon is more likely to face additional legal challenges in the future. As such, Amazon's dominance of the retail space has not gone without opposition from traditional retailers. In 2012, several U.S. states passed legislation mandating that state sales taxes must be collected for online purchases within state borders. As a result, Amazon lost part of its pricing advantage and was forced to start collecting sales taxes in Pennsylvania, Texas, and California. By 2017, the number of states requiring the company to collect sales taxes was up to 30, in addition to the District of Columbia.[60]

Amazon's presence in book retailing and publishing allowed it to lock-in even the largest publishing houses to multi-year contracts where Amazon serves as the portal through which books (print and digital) are marketed and sold.[61] This leverage, however, has not been without controversy, and is continually scrutinized by the EU Competition watchdog.[62] Publishing houses have argued that Amazon has set book prices below cost for many publishers (i.e., selling brand-new release of bestsellers as e-book for $9.99, while hardcover books of the same title were priced at $28.95 at other retailers such as Barnes & Noble). In particular, publishers argue that Amazon's discount pricing does not take into account the publisher's expenses in content development, editing, and marketing, resulting in much lower revenues to publishers and, correspondingly, lower royalties to authors.

A much bigger legal threat is looming on the horizon, however.[63] Amazon now accounts for roughly one half of all internet retail spending in the United States. In addition, with AWS, physical retail stores, and drone deliveries, Amazon is increasingly becoming a fully vertically- integrated enterprise. Many argue that Amazon is much like a utility, providing the backbone for Internet commerce, both in the business-to-consumer (B2C) as well as in the business-to-business (B2B) space.[64] This paints a future picture in which rivals are depending more and more on Amazon's products and services to conduct their own business. Amazon's tremendous scale can bring it increasingly into conflict with governments. Antitrust enforcers in the U.S. such as the Department of Justice might train their sights onto Amazon.

Competitors and Industry Convergence

Although Jeff Bezos claims to think of customers only, and as such, urges Amazon's employees to have an obsessive customer focus, the list of competitors included in the company's annual filings is getting longer and longer.[65] It features not only retailers in their various forms (online, offline, and multi-channels), publishers, film producers, distributors, but also online search engines and companies that design, manufacture, market, and sell telecommunications and electronic devices, as well as logistics and advertising companies.[66]

Amazon has continued to morph through vertical integration and continued diversification in products, services, activities, and geographies. Amazon started out as an online book retailer but has grown into a massive discount internet vendor, streaming multimedia, offering cloud computing services (AWS), and manufacturing its own electronics and telecommunication devices (e.g., Kindle and Alexa line of products). However, its ability to innovate and cultivate business around activities that are not necessarily traditional core competencies has also pitted the company against some formidable competitors. Indeed, Amazon's innovation and expansion into other lucrative areas of the technology industry has been part of a broader convergence of industries previously the sole domain of companies like Alphabet (Google's parent), Microsoft, and Apple.

Apple is the world's largest vendor of digital media (iTunes) and a highly successful mobile device manufacturer (iPhone, iPod, iPad). Likewise, Google began as a search engine, but has similarly branched out into hardware (smartphones, Google Glass—though this was abandoned in 2015), mobile operating systems (Android), content delivery (Google Play, YouTube), internet browsing and search (Chrome), web applications (Google suite of application programs, Google Drive), cloud computing (Google Cloud), and social networking (Google+), albeit hardly a success. Facebook is the world's largest social networking site (some two billion users globally), but it has also moved to a more mobile-oriented approach by developing advertising and apps specifically for mobile devices as well as live streaming video. Underscoring the innovation of these companies is the push to win the race to develop a truly integrative online ecosystem for consumers, which will grant them proprietary access to consumers' data—and their wallets and those of advertisers.[67]

Finally, added to this complex competitive dynamic is the meteoric rise of Alibaba, the Chinese internet giant that is able to compete directly with Amazon's online retailing.[68] **Exhibit 6** compares key 2016 financial data for Amazon, Alibaba, Alphabet, Microsoft, and Walmart. The first four are also among the top ten largest tech companies in the world by market cap (**Exhibit 7**). With a market cap of some $450 billion (in spring 2017), Amazon is one of the top-five most valuable technology companies in the world, besides Apple, Alphabet, Microsoft, and Facebook (in rank order). **Exhibit 8** depicts a comparison of the normalized share prices of Amazon, Alibaba, Alphabet, Microsoft, and Walmart over time.

ALPHABET

Under the Alphabet corporate umbrella, Google (GOOG), the search giant, has been a prominent competitor to as well as collaborator with Amazon. For instance, Amazon's tablets run on the Android operating system. Moreover, Amazon also sells Google products on its website (including Chrome Cast and Nexus devices).

Google, for its part, has made significant inroads into the mobile software technology space previously dominated by Apple. Since the company acquired the Android open-source mobile platform in 2005, it has iteratively improved on the operating system such that by 2017, Android was the operating system (OS) employed by more than 80% of phones worldwide.[69] The most popular of these by far has been the Samsung Galaxy line, whose brand recognition has eclipsed that of Android since 2011.[70] To be sure, the combination of Google software and Samsung hardware has produced a smartphone that has posed the greatest threat to Apple's traditional dominance of the smartphone space. Although Apple holds less than 20% market share with its iOS mobile operating system, it does capture most of the profits generated in the smartphone industry.

Google itself tried its hand in producing its own phone through its acquisition of Motorola Mobility for $12.5 billion in 2012.[71] [72] However, the endeavor lasted all of 22 months as Google offloaded the handset business to Lenovo in January 2014 for the modest price of $3 billion, while retaining Motorola Mobility's patents. In particular, Google was able to maintain control of the more than 17,000 patents that were acquired in the 2012 deal, protecting handset manufacturers using the Android operating system against patent infringement.[73] In October 2016, Google launched the Google Pixel XL, its second attempt at a smartphone, and is expected to sell nine million smartphones in the first year.[74]

Google has likewise made inroads in the tablet business. The company has adapted the Android OS for use in tablets; in July 2012, it launched the Nexus 7, manufactured in partnership with Asus, and in November 2012, the 10-inch version (Nexus 10), manufactured by Samsung.[75] Android-based tablets tend to be smaller and cheaper than their Apple counterparts, as well as more customizable to user specifications.[76] As a result, their popularity with consumers grew rapidly: By 2013, more than half of all tablets shipped were Android-based.[77] Consequently, Android tablets overtook the iPad in popularity by the end of 2013. Indeed, Android tablet sales were estimated at 120.9 million units for 2013, equivalent to almost 62% of the market, whereas iPad sales accounted for 70.4 million units, or 36%.[78] [79] With the addition of the Google Chromebook to the tablet family, Google has been able to make further gains on Apple. The laptop lookalike is affordable, boots up in seconds, and comes with Google's most popular apps pre-installed, which are free and remotely run. This cloud-based functionality limits the Chromebook in a home or business setting given that it requires perpetual connection to broadband internet. However, in an education setting, the Chromebook has quickly gained traction as a cost-effective alternative to iPads and laptops, both of which ideally require the student to have their own device, and for productivity software to be purchased. The cloud-based nature of the Chromebook means that students, particularly those at schools, can use any Chromebook to access their work, returning the device at the end of the class for the next student's use.[80] [81] Google's online portal, Google Play, rivals Apple's iTunes as a means by which to provide an ecosystem to Android users where games, apps, music, and much more can be accessed. The Play Store has 2.6 million apps on offer to customers as opposed to iTunes 2.2 million apps, and in 2013, for the first time ever, app downloads from the Play Store outstripped downloads from the Apple App Store.[82]

Google has gone on to innovate on the use of its legendary search engine, evolving to offer more content for consumers. Traditionally, Google wanted users "out of Google and to the right place as fast as possible." Now, Google is offering reviews, photos, and other content that keep browsers on the Google page longer, transforming its core business into one that adds value via enhanced content. To better compete with Amazon, Google is also planning a deeper dive into online commerce with its "buy" button, a tool expected to behave much like Amazon's one-click ordering feature. Google is adding the buy button to its promoted mobile search results which will redirect customers to a purchase page. The merchants will still handle actual product fulfillment, although the page will be hosted by Google.[83] Such efforts are intended to streamline Internet shopping by deterring consumers from switching their searches from Google to Amazon.[84]

To further compete with Apple and Amazon, Google launched its own TV set-top box in mid-2014. The company already had Chromecast, its own dongle-based devices for TV, which allows users to stream content from the internet using smartphones, tablets, and computers—all while running Google Chrome and using the browser as a remote control.[85] The set-top box introduction was Google's attempt to gain a larger slice of the growing TV-streaming pie for which it competed with Apple and Amazon.

Finally, Google has signaled an ambition far beyond that of search engines, operating systems, cloud computing, mobile devices, and so forth. The company appears to be positioning itself to not only offer its current plethora of services, but also to have a major role in how those services are delivered through Google Fiber and its push to sell wireless service direct to consumers. Google Fi is the company's attempt to provide fast, cost-effective internet services and circumvent the traditional broadband providers. By rolling out high-speed internet services to the geographic areas that most demand it, the company is redefining how broadband internet services are offered. Traditionally, rollouts were completed by the likes of AT&T or Comcast by blanketing entire cities, not just distinct geographic areas where demand for such infrastructure was highest.[86] In the area of wireless, Google has struck deals with Sprint and T-Mobile to resell service on their networks, allowing the company to push wireless service under its own name. In addition, using proprietary technology, Google Fi stitches together free broadband wireless connection by leveraging complementary hotspots offered in places such as Starbucks and elsewhere. Google Fi is likely to not only improve speeds but also lead to price cuts in an industry that is already experiencing tremendous downward pressures on prices.[87]

ALIBABA

The Alibaba Group is China's largest e-commerce company, and one of the largest tech companies globally.[88] In particular, Alibaba is a family of e-commerce businesses, which *The Wall Street Journal* described as "comparable to eBay, Amazon, and PayPal all rolled into one, with a stake in Twitter-like Weibo thrown in to boot."[89] Alibaba's main trading platforms are Taobao and Tmall, which handle more transactions each year than Amazon and eBay combined.[90]

Alibaba was founded by Jack Ma, an English teacher in the city of Hangzhou (in close proximity to Shanghai), and struggled to gain traction and the attention of investors in its early days.[91] [92] Since then, the company has gone on to dominate Chinese e-commerce with more than 600 million subscribers, more than 80% share of the country's e-commerce market, and annual transactions to the tune of half a billion dollars. Despite all its success in China, the company is still largely unknown in the Western world. Its market leadership is intrinsically tied to the portal's success in breaking through the myriad of barriers that exist in China when it comes to trade and establishing a platform where buyers and sellers can confidently and efficiently transact.[93] For example, Alibaba was able to overcome China's low-trust business environment by introducing a set of country-specific innovations. As an example, Alipay, Alibaba's online payment platform, holds a buyer's payment in escrow until the buyer indicates satisfaction with the merchandise received.

On September 19, 2014, Alibaba went public on the New York Stock Exchange (NYSE). It had the most successful initial public offering ever, surpassing a stock market valuation of over $230 billion on its first day of trading. By summer 2017, Alibaba's market cap stands at a record high of $320 billion by summer 2017, making it one of the most valuable tech companies globally. In comparison, Amazon's market cap was some $465 billion at the same time. In 2017, Alibaba employed around 50,000 people, had $23 billion in revenues, and remained highly profitable, capturing more than 50 percent of its revenues as profits. In the same year, Alibaba's marketplaces in China reported sales of some $550 billion.

Exclusively a trading platform for third party vendors, Alibaba does not hold or own any inventory, unlike Amazon. Alibaba's main source of revenue is the transaction fees, listing fees, and the ad-revenues it generates from more than 10 million active sellers across its marketplaces. In contrast to Amazon, Alibaba does not carry nor own any inventory, it is an open online trading platform. This asset-light model of Alibaba means that it has more room to push down prices on its platform by reducing transaction costs for its sellers. As both Alibaba and Amazon focus on a cost leadership strategy, the agility of Alibaba to reduce prices due to its asset-light model could turn out to be a competitive advantage for the Chinese firm.

The Alibaba Group comprises four primary portals: Taobao, Tmall, Alibaba.com, and Aliyun (now AliCloud). Among the four portals are hundreds of millions of users accessing the sites, and millions of businesses relying on the portals to connect them with potential buyers. Taobao is Alibaba's flagship online marketplace, a consumer-to-consumer retail platform with seven million sellers offering over 800 million items.

The company's Q1 (first quarter) report of 2016 highlighted just how popular and successful Taobao is: It generated some $450 billion in gross merchandise volume.[95] Tmall, by contrast, is a business-to-consumer retail platform that was spun out of Taobao in 2011. This portal generated over $120 billion in gross merchandise volume, approximately half that of Taobao. Alibaba.com is engaged in wholesale business-to-business e-commerce, but it generates far lower transaction volumes than Taobao and Tmall.[96]

In 2009, Alibaba launched Single's Day, similar to Amazon Prime Day, held on 11 November (11/11) every year. Similar to Cyber Monday in the U.S. (the Monday following Thanksgiving, with exceptional online bargains), Alibaba offers special 24 hour sales online. In 2016, Single's Day generate $18 billion in revenue for the ecommerce giant.[97]

Critical to the success of Alibaba's e-commerce is the company's ability to engender confidence in transacting online. In particular, the company's Alipay service was instrumental in that it possible for consumers to put money in escrow, allowing buyers to verify any purchased goods before releasing money to the seller. In this way, the company overcame China's notoriously weak consumer protection laws and brought confidence to the online e-commerce market. Launched in 2004, and spun out of Alibaba as Ant Financial in 2011, the former Alipay has grown tremendously, and by 2014 controlled half of China's online payment market.[98] In China, Ant Financial offers a wide range of services including banking and investments as well as the country's first credit-scoring offering. In China, Ant Financial has some 500 million customers, and is rapidly expanding internationally.[99] Ant Financial is preparing to IPO in the near future with a valuation north of $60 billion.[100]

Alibaba's meteoric growth also includes significant investments in Sina Weibo (China's version of Twitter), Yoku Todou (China's version of YouTube), and Kuaidi Dache (a taxi hailing app similar to Uber).[101] AliCloud, the firm's lesser known cloud service offering, is Alibaba's alternative to Amazon Web Services. While it was only 3% of the 2016 total revenues, it has been experiencing some 130% year-on-year growth in 2016.[102]

As Alibaba tries to expand globally, AliCloud agreed to a 12-year partnership with the International Olympic Committee (IOC) in 2017 during Jack Ma's visit at the World Economic Forum in Davos, Switzerland. Following a meeting with President Trump, Jack Ma promised to create one million jobs in the United States and open up opportunities for small- and medium-sized U.S. firms to sell their products and services in China.[103] It is also worth noting that China's protectionist government, culture, and scale raises formidable barriers to entry for any foreign market entrants, such as Amazon.

MICROSOFT

Founded in 1975, Microsoft Corporation is headquartered in Redmond, Washington, a suburb of Seattle, and Amazon's home town. It also produces a wide range of software and hardware products ranging from its search engine (Bing), to tablet computers (Microsoft Surface), and video game consoles (Xbox, Xbox One, and Xbox 360). In the early decades of the PC revolution, Microsoft was the undisputed leader. With its Windows operating system, Microsoft set the standard in the world of personal computers. Some 90 percent of all PCs run Windows. Once users were locked into Windows, which generally comes pre-loaded with the computer they purchased, they then wanted to buy applications that run seamlessly with the operating system. The obvious choice for users is Microsoft's Office Suite (containing Word, Excel, PowerPoint, Outlook, and other software programs). Microsoft's business model was to create a large installed base of users for its PC operating system and then make money from selling application software such as its ubiquitous Office Suite.

Microsoft then went on to replicate with its corporate customers this hugely successful business model of setting the standard in operating systems combined with bundling discounted application suites. Once servers became ubiquitous in corporations, Microsoft offered IT department e-mail systems, databases, and other business applications that were tightly integrated with Windows. As a consequence, some 80 percent of Microsoft's revenues were either tied directly or indirectly to its Windows franchise.[104] Microsoft's strategy of focusing on setting the industry standard allowed it to create a strong strategic position and to extract high profits for many years. Microsoft's bundling strategy with Office, combining different application services that run seamlessly in one discounted product offering, allowed Microsoft to overtake IBM, once the most valuable tech company. By 2000, Microsoft was the most valuable company globally with some $510 billion in market capitalization.

Given Microsoft's lackluster performance since 2000, however, the once dominant company has been in turnaround mode. In 2010, Microsoft marked its entry into the cloud computing business with Azure. Microsoft has been a known presence with corporations due to their standard offerings of Microsoft Office, SQL Server, and Windows Server. In 2014, Satya Nadella was appointed CEO to reposition Microsoft for future success. The new CEO did not waste any time. Satya Nadella's strategic focus shifted to move Microsoft away from its Windows-only business model to compete more effectively in a "mobile-first, cloud-first world," the mantra he used in his appointment e-mail as CEO. Holding a press briefing a few weeks later, Satya Nadella demonstrated new apps for Microsoft Office for the iOS and Android ecosystems powered by the cloud. The push for OneDrive – cloud storage of documents that can be accessed from any device – along with Office 365 is expected to grow the one billion Microsoft Office users by placing Azure at the center of the ecosystem.[105] What was once known as the cloud for running .NET applications, Azure has transformed itself into an open infrastructure service for enterprises.[106] Office 365, Microsoft's cloud-based software offering, is now available as a subscription service. Software applications can be accessed on any device, anytime, with online storage, combined with Skype's global calling feature. Windows and Office, however, are still generating 40% of revenues and some 75% of profits, but both continue to decline. The problem Microsoft faces is that the gross margin of "classic" PC-based Office is an astronomical 90% (due to Microsoft's "monopoly" position), while the gross margin for Office 365 is only around 50%. The cloud computing space with Amazon, Alphabet (Google), Apple, IBM, and others is also fiercely competitive.

As a direct competitor to Amazon Web Services, Azure's cloud computing business jumped 93% on a year-over-year basis and is expected to generate $14 billion annually.[107] Satya Nadella believes that Azure's key differentiator of providing Software-as-a-Service (SAAS) and Platform-as-a-Service (PAAS) offerings will help it combat rival AWS.[108]

WALMART

Walart Stores Inc., doing business as Walmart, is a multinational retail corporation that operates a chain of hypermarkets, discount department stores, and grocery stores. As of December 2016, Walmart operates some 12,000 stores in 28 different countries, with roughly one half of all stores in the U.S.[109] Walmart also owns and operates Sam's Club, which is a membership-only, retail warehouse club. With revenues of some $500 billion, the largest retailer in the United States competes head-on with Amazon's e-commerce business.

To compete with e-commerce vendors more effectively, Walmart launched Walmart.com that allows users to order products online, view availability at nearby stores, and get same-day pickup from stores. To compete with Amazon Prime, Walmart launched The Walmart Shipping Pass (in 2016) that provided free shipping on products with a $49 annual membership fee. The minimum amount for free shipping was set at $49 per transaction and shipping took anywhere from 5–7 days. In January 2017, Walmart announced that they are discontinuing the Shipping Pass program to provide free two-day shipping to all customers on qualifying orders of at least $35. The membership fee has been dropped and all existing customers of the Shipping Pass have been refunded their membership fee. The new program includes over two million items that local Walmart stores carry.[110]

In August 2016, Walmart acquired e-commerce startup Jet.com for $3 billion in cash and $300 million in Walmart shares. The acquisition will help build on and complement the foundation to serve customers better through the Walmart app, and position the company for faster e-commerce growth.

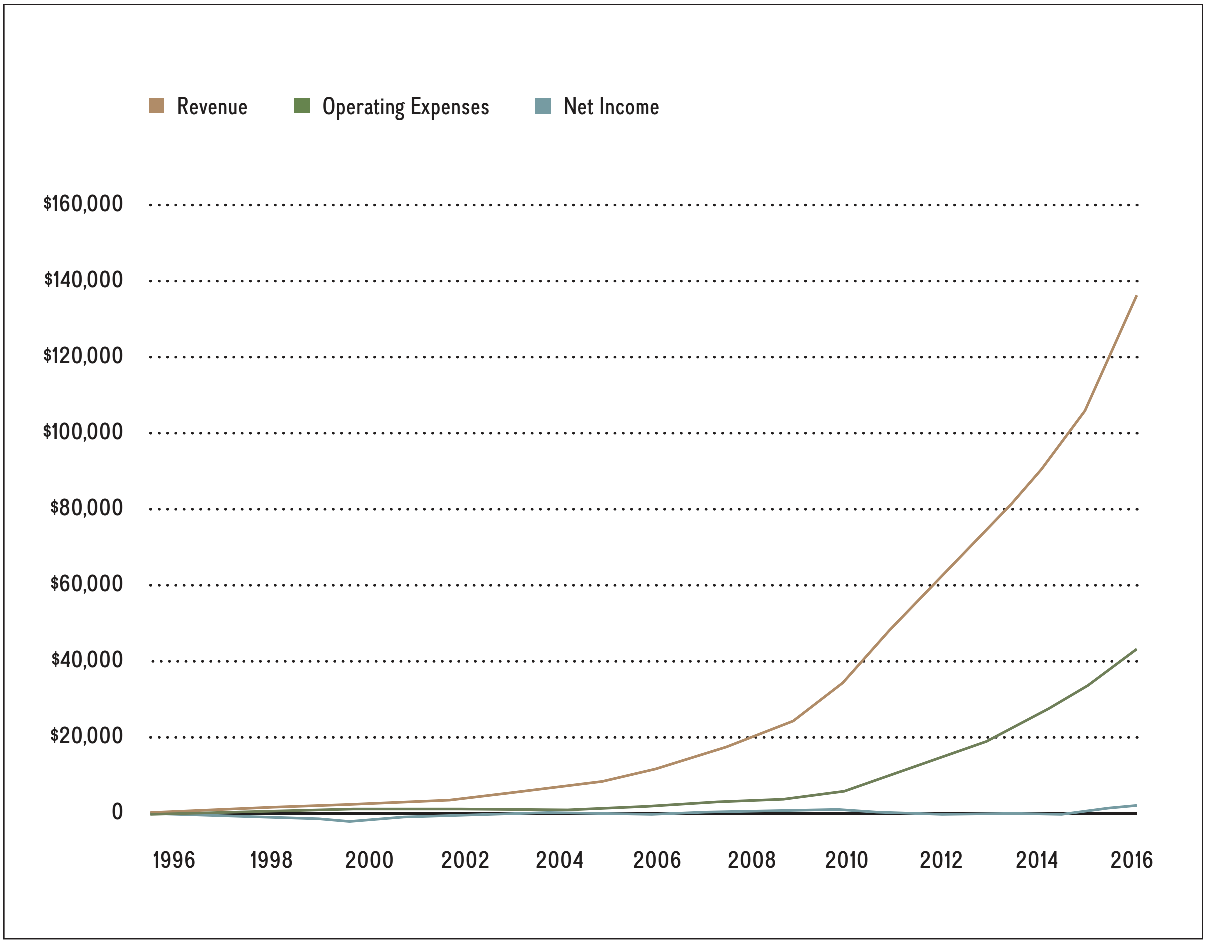
Jet.com is an e-commerce newcomer boasting two-day delivery for orders over $35. Their motto states that their "prices drop as you shop," providing discounts for larger purchases. All grocery items are available on Jet.com and they claim to appropriately pack frozen and perishable products to keep them cold even if the recipient isn't home for the delivery. Jet is expected to reach a $1 billion run rate within the first year, with an expected monthly user base growth of 400,000 customers and 25,000 daily processed order.[111]

Where to Next?

As Jeff Bezos prepared for the following day's meeting with executives and investors the following morning, he thought about Amazon's plans for the near future. Bezos knew what it was like both to disrupt business, and to be disrupted. He had no doubt that while short-term results were by no means stellar, long-term results would prove that Amazon's disruption of tech giants like Apple, Alphabet, and Microsoft was the right strategy. Moreover, he worried about international growth, and the impact of Alibaba. While Amazon was once a student of Walmart's logistic system, now the Arkansas-based retail giant seems to be on the rebound as it is investing heavily in its online offerings and is taking on Amazon directly. In addition, Walmart is experimenting with a hybrid, omni-channel approach (order online, pick up in store) that poses a potential threat to Amazon.

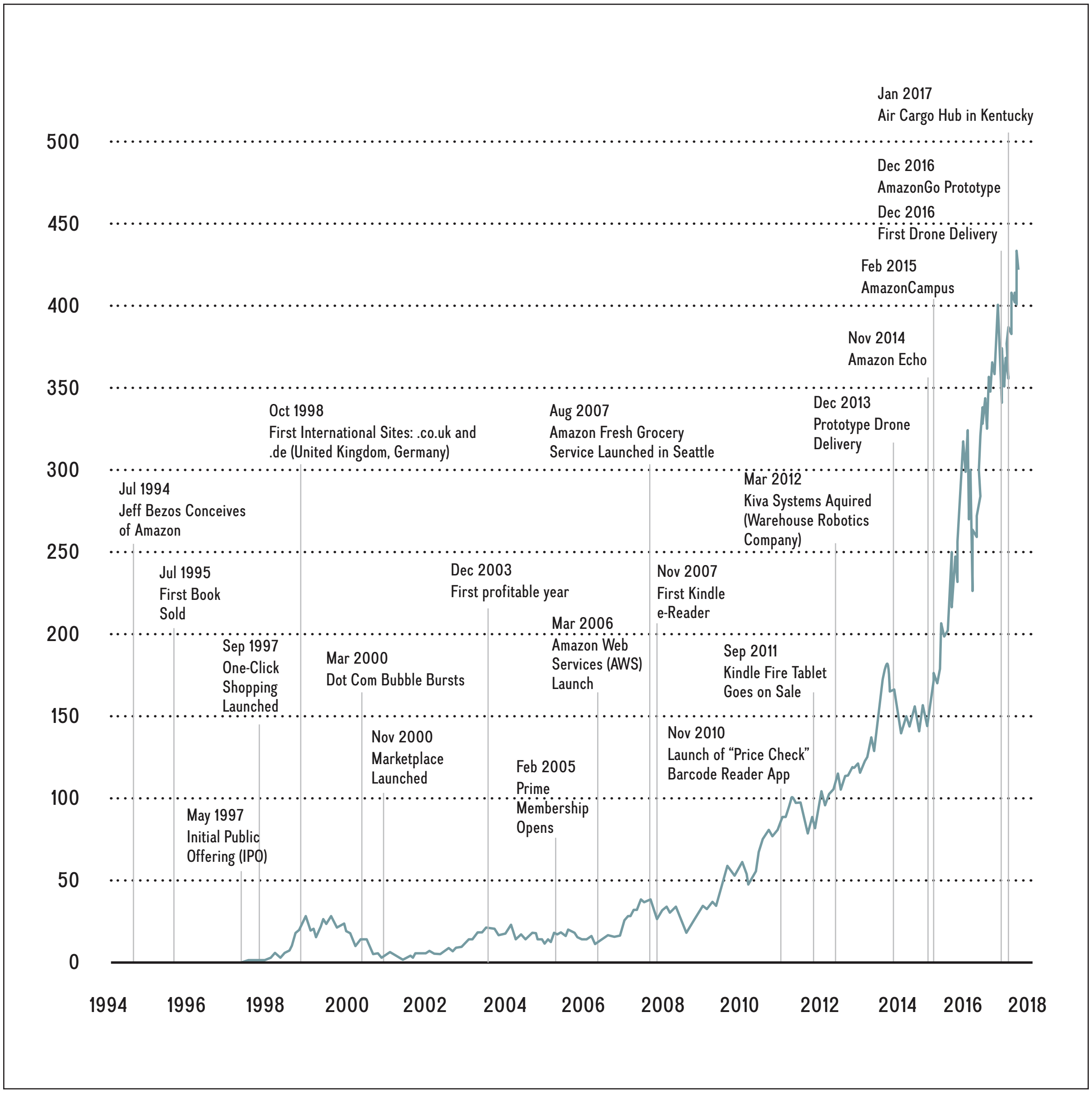
Yet, he still wrestled with the question of, where to next? And how would he and the executive team manage the expectations of investors who were pressuring the company to focus on profitability, and to consider spinning out AWS as a separate business. Bezos had always maintained, "If we [at Amazon] could find something differentiated that we thought customers would like, it would be super fun."[112] He had already started drone-based delivery, brick-and-mortar stores, and one-hour delivery, but how would Amazon fit all of its innovations in its product mix? How would Amazon's wide-ranging and powerful rivals respond to the company's innovations? And more importantly, would customers be receptive to the company's innovation and differentiation, and help calm investor skepticism of Amazon's strategy?

EXHIBIT 1 Amazon's Revenue, Net Income, and Operating Expenses ($ million), 1996–2016



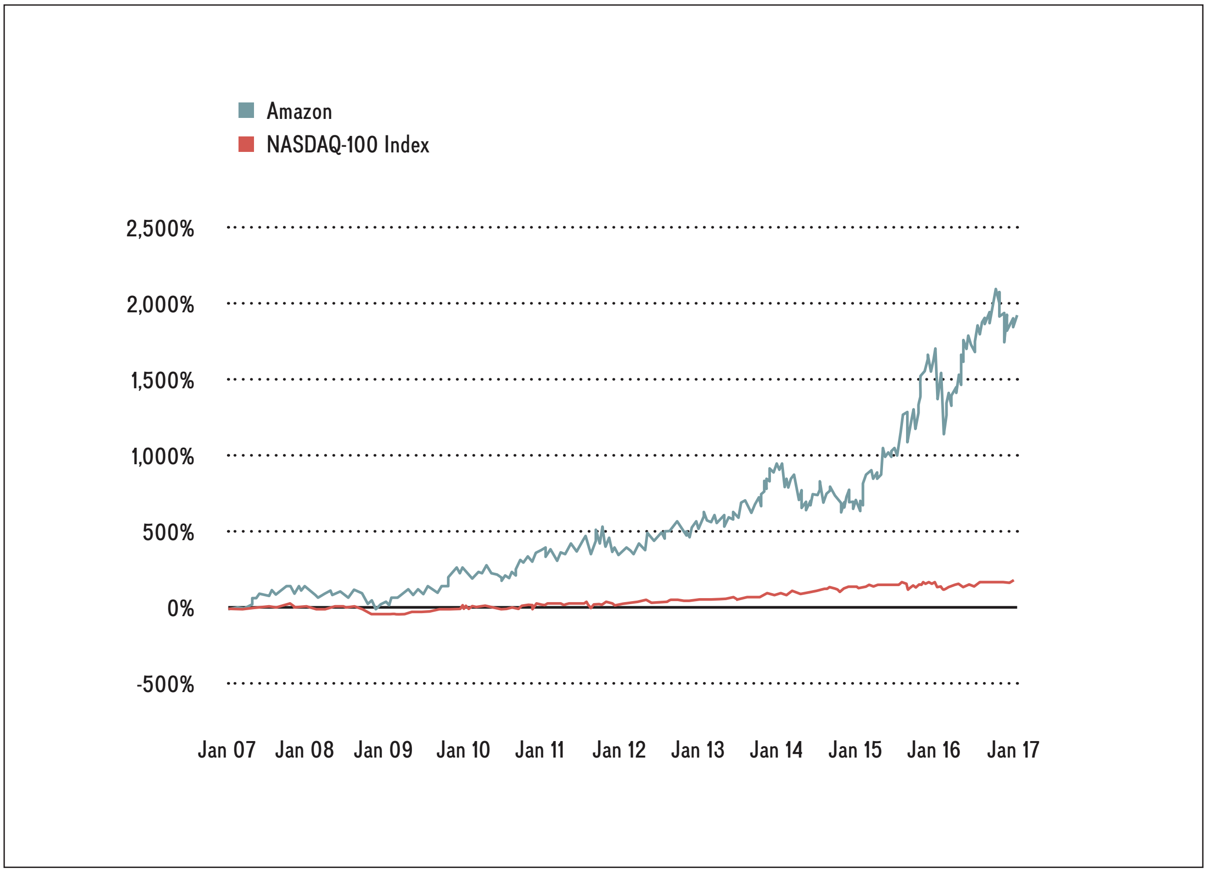
Source: Depiction of publicly available data.

EXHIBIT 2 Amazon Key Events and Market Capitalization ($ billion), 1994–2017



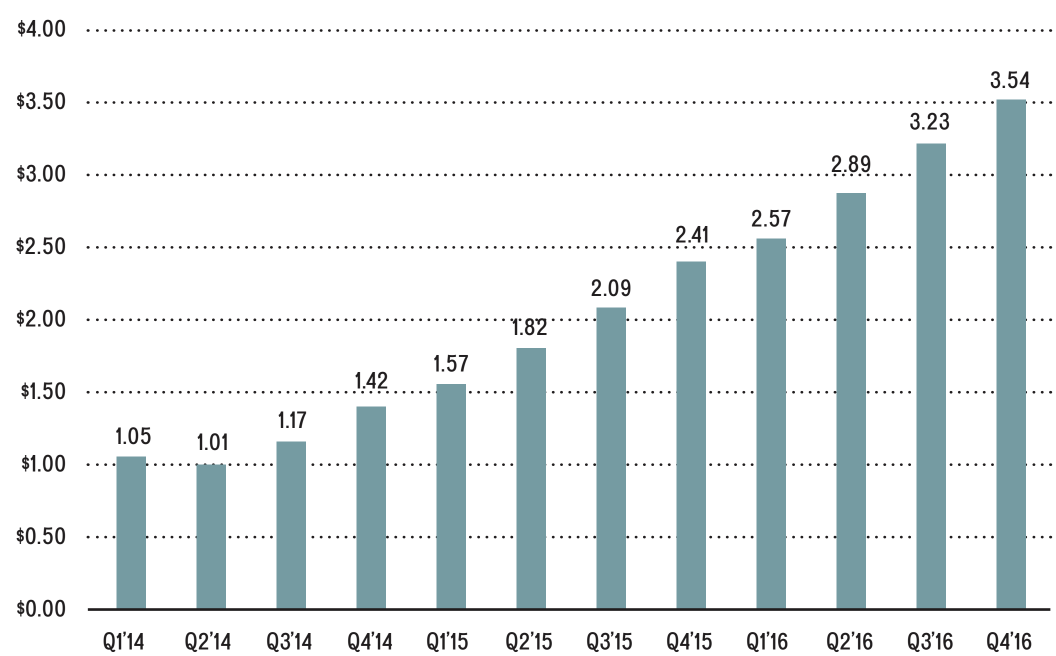
Source: Depiction of publicly available data.

EXHIBIT 3 Normalized Stock Performance of Amazon vs. NASDAQ-100 Index (in percentage points), 2007–2017



Source: Depiction of publicly available data.

EXHIBIT 4 Amazon Web Services (AWS) Quarterly Net Sales ($ billion), 2014–2016



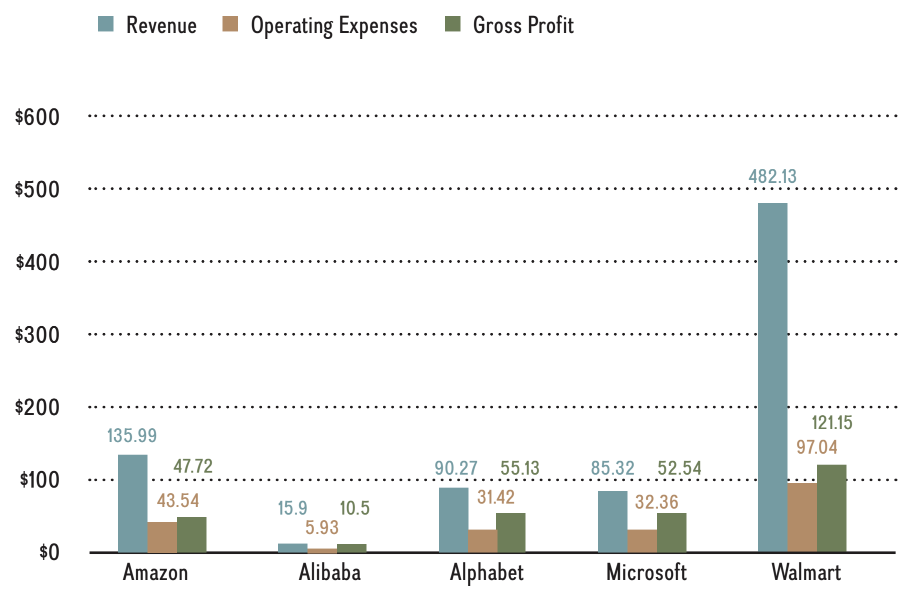
Source: Depiction of publicly available data.

EXHIBIT 5 Amazon's Key Financial Data ($ millions, except EPS data), 2012–2016

Fiscal Year	2012	2013	2014	2015	2016
Cash and short-term investments	11,448	12,447	17,416	19,808	25,981
Receivables (total)	3,817	4,767	5,612	5,654	8,339
Inventories (total)	6,031	7,411	8,299	10,243	11,461
Property, plant, and equipment (net total)	7,060	10,949	16,967	21,838	29,114
Depreciation, depletion, and amortization (accumulated)	2,522	3,860	5,763	8,215	13,327
Assets (total)	32,555	40,159	54,505	64,747	83,402
Accounts payable (trade)	13,318	15,133	16,459	20,397	25,309
Long-term debt	3,084	3,191	8,265	8,227	7,694
Liabilities (total)	24,363	30,413	43,764	51,363	64,117
Stockholders' equity (total)	8,192	9,746	10,741	13,384	19,285
Sales (net)	61,093	74,452	88,988	107,006	135,987
Cost of goods sold	45,971	54,181	62,752	71,651	88,265
Selling, general, and administrative expense	9,723	12,847	16,650	20,411	27,284
Income taxes	693	317	483	869	1,671
Income before extraordinary items	-39	274	-241	596	2,371
Net income (loss)	-39	274	-241	596	2,371
Earnings per share (basic) excluding extraordinary items	-0.09	0.6	-0.52	1.28	5.01
Earnings per share (diluted) excluding extraordinary items	-0.09	0.59	-0.52	1.25	4.9

Source: Tabulation of publicly available data from Amazon Annual Reports, multiple years.

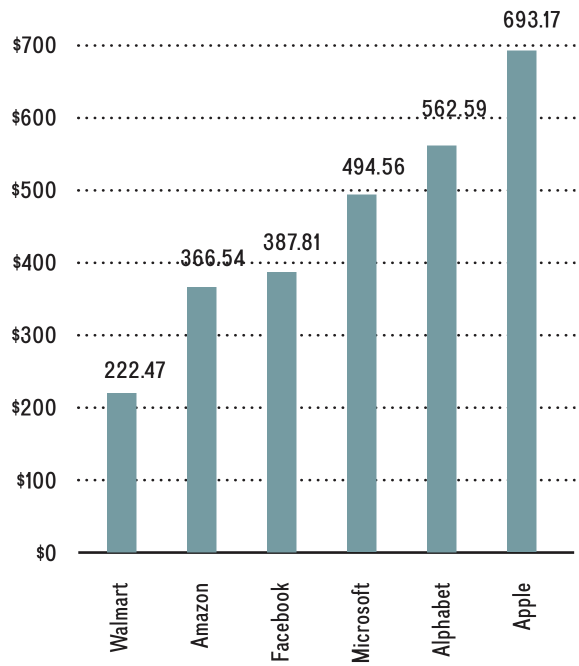
EXHIBIT 6 Key Financial Metrics of Amazon, Alibaba,* Alphabet, Microsoft, and Walmart ($ billion, as of December 31, 2016)



* Alibaba releases annual reports in March.

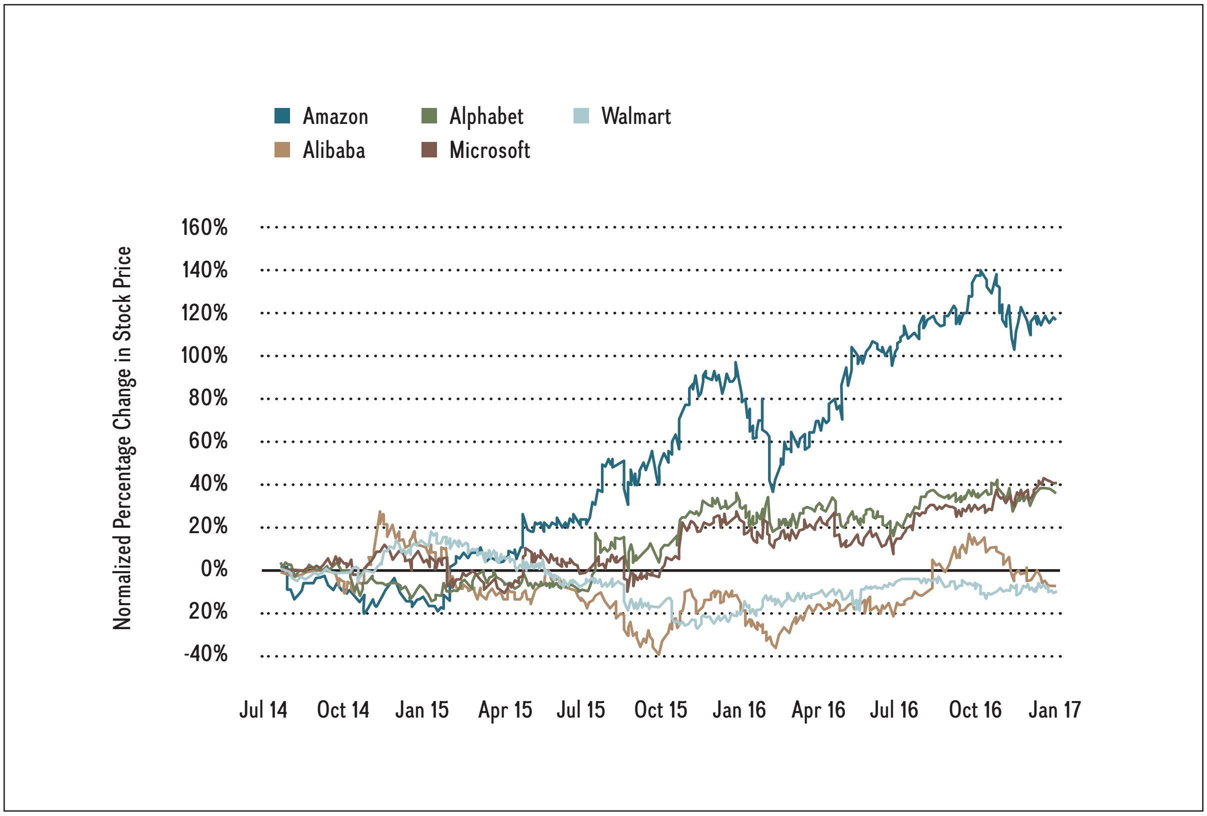
Source: Depiction of publicly available data.

EXHIBIT 7 Market Capitalization of Top-5 Tech Firms and Walmart
($ billion, as of December 31, 2016)



Source: Depiction of publicly available data.

EXHIBIT 8 Stock Price Comparison: Amazon, Alibaba, Alphabet, Microsoft, and Walmart (in percentage points), 2014–2017



Source: Depiction of publicly available data.

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