



2019

U.S. Online Retail Forecast

AN FTI CONSULTING REPORT

HAS ANYONE NOTICED THAT ONLINE SALES GROWTH IS SLOWING?

Would you believe us if we said the growth rate of U.S. online retail sales has slowed notably over the last three quarters? It seems improbable given the ongoing carnage in store-based retailing in 2019, but it's true. For the first time since the end of the recession, online retail sales growth has decelerated for a considerable stretch of time. It's hard to know exactly what to make of this abrupt growth slowdown, as overall retail sales growth has slowed as well. With online sales growth (YOY) still in the low double-digits, such worrisome talk might seem alarmist. After all, the migration of retail sales to the online channel is very much a story in progress that still has years to run. However, if online sales growth has indeed reached an inflection point (and we're not absolutely certain it has), this has big implications for the potential of the online channel in terms of its ultimate market share, which we'll discuss shortly. For years, it has been taken as an article of faith that online retail sales will grow at mid-teen rates indefinitely. It may be time to question that belief. (Note that we use the terms "online" and "e-commerce" interchangeably throughout this report, and that they refer to sales transactions consummated online by shoppers for retail goods from store-based, catalog or web-only retailers.)

Just when it seemed that U.S. shoppers were finally emerging from a multi-year funk, consumer spending growth unexpectedly pulled back to modest levels again beginning in the second-half of 2018 for no obvious reason, with retail sales growth (YOY) downshifting from a robust 5%-6% in early to mid-2018 to the mid-3% range later in the year. Several developments may have contributed to consumers' spending skittishness, including the looming government shutdown that materialized in December, the escalation of trade tensions and tariffs, and a sharp sell-off in financial markets in late 2018, but none alone could explain why most shoppers suddenly decided to curtail their spending heading into the back half of the year, including the all-important holiday season. More confounding, the U.S. economy has remained fairly healthy on balance, with only the lingering impact of tariffs and trade tensions persisting today, yet spending sluggishness has endured through the first half of 2019. ***This consumer spending growth slowdown is unlike any other we have experienced this decade in one critical respect—it has dented online spending growth as well.***

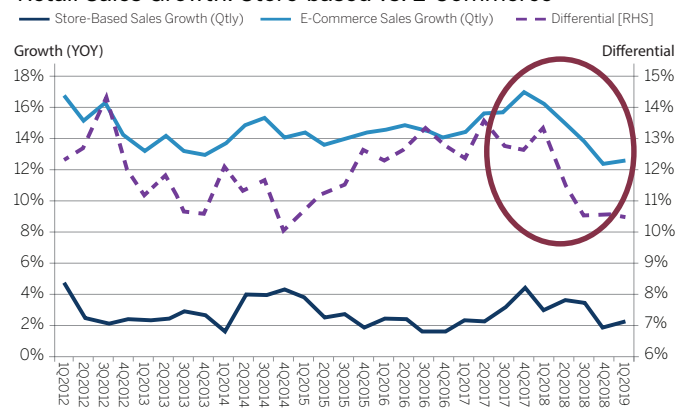
Online retail sales growth in the mid-teens (14%-17% YOY) has been as consistent and reliable this decade as the chances of the New England Patriots making the playoffs. This has been true even in years when overall retail sales were sluggish, such as the period 2015-2016 (see Exhibit 1). But the script was flipped in mid-2018 when online sales growth began to decelerate towards the low-12% vicinity in the most recent two quarters. In fact, the mathematical difference between online sales growth and store-based growth recently approached its lowest point of the decade (Exhibit 1), meaning that online

sales growth has fallen more sharply than store-based growth in recent quarters. That's highly unusual and lacks a simple explanation. It's tempting to pin at least some of the blame for this on the volatility in financial markets, as hardcore online shoppers tend to be from more affluent households. However, this reasoning seems less plausible with financial markets having fully recovered in 2019 and flirting with all-time highs without a corresponding rebound in online sales growth.

It's time to consider the possibility that online sales growth has hit a natural inflection point at which growth inevitably slows simply by virtue of its underlying size, which topped \$500 billion in 2018. We are fond of saying that trees don't grow up to the sky, meaning that exponential growth cannot continue indefinitely. High growth is easy when something is small but becomes increasingly difficult as that thing becomes larger. That's nature. There may be nothing wrong at all with online sales except the inevitable encounter with natural growth limits. If that's the case, then this development has meaningful implications for the remaining growth trajectory of the online channel and its final ceiling.

EXHIBIT 1

Retail Sales Growth: Store-based vs. E-Commerce



Source: U.S. Census Bureau and FTI analysis

A REFLECTION ON INFLECTION

During the first two decades of e-commerce, while entrepreneurs and retail executives were working feverishly to transform their industry, the forecast horizon for most predictions of online sales from the armchair punditry was centered on the near-term future. There simply wasn't enough data history or deep insight into consumer adaptation to ponder the truly metaphysical questions about e-commerce—namely, where is all of this going, and how long will it take to get there? Forecast models that dared to venture into the distant future of e-commerce mostly were mathematical abstractions predicated on

consumer adoption patterns of game-changing products such as cell phones or flat-screen televisions, which weren't necessarily relevant to online shopping but provided a useable template. Nobody really knew where this journey was going, but we were well on our way. That lack of visibility has begun to change in the last few years. Today there is sufficient statistical evidence and accumulated wisdom to hazard credible predictions about the ultimate destination of e-commerce retailing. That distant shoreline is still miles away, but the rough contours of it are coming into sight.

With nearly 20 years of historical e-commerce retail sales data at our disposal—both in the aggregate and by major product category—we can reasonably forecast online sales over the next decade via extrapolation, that is, from the historical data itself, assuming it conforms to the general model of logistic growth (or the S-curve), as we have pointed out in previous years. The logistic curve best describes the growth pattern of many naturally occurring phenomena as well as the adoption of technological innovations. The elegance of a logistic growth curve, regardless of its particular shape, is its symmetry around its inflection point—that moment when growth begins to decelerate and the concavity of the curve changes from up

to down. Its utility as a predictive model derives from this symmetry, an attribute that is particularly useful in forecasting: If you have just half of the curve then you'll know what the other half will look like, more or less. Reaching an inflection point is a defining moment in the natural life of anything whose growth trajectory is best described by a logistic growth curve. How do you know when you have reached an inflection point? It has occurred when it's evident that the logistic curve has begun to "bend back" and starts to form the upper half of its S-shape. An example is shown in Exhibit 2, where we plot the number of Americans with broadband internet access, which hit an inflection point in 2007.

For omni-channel retailers, recognizing the inflection points for their product categories should impact business planning decisions. The failure to do so could result in over-investment in costly online expansion projects, such as distribution centers and logistics support, under a potentially erroneous assumption that high growth rates are sustainable for a prolonged period.

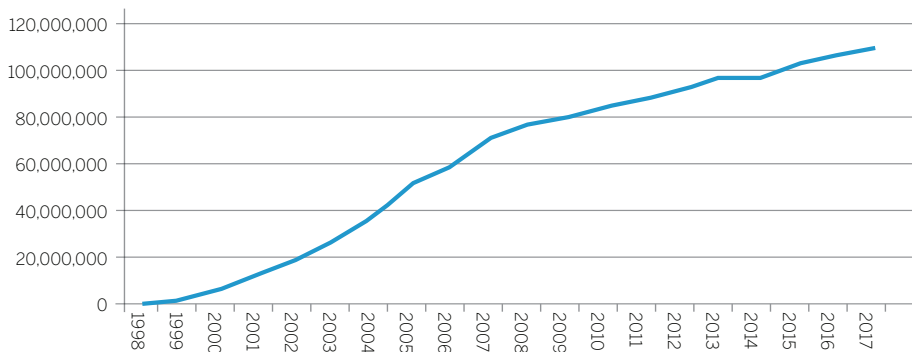
FTI CONSULTING'S 2019 ONLINE RETAIL FORECAST

Our forecast model for U.S. e-commerce retail sales in the aggregate indicates

that online sales growth may have hit an inflection point and may experience decelerating growth going forward. However, it is by no means yet a certainty. An exception would be if the online spending slowdown were an early indicator of a pending recession, which would be a cyclical phenomenon rather than a secular one. We would need to see another two or three quarters of slowing online sales growth in the absence of recession to believe strongly that an inflection point has been reached. If so, we reiterate that there is nothing ominous about it. It's like realizing that your teenager won't be a power forward on his college basketball team because he isn't growing nearly as fast at the age of 17 as he was when he was 15. You just have to account for it. Not to worry—U.S. online retail sales will be a trillion-dollar category by 2025, though all our annual estimates have come down a bit compared to last year. **We expect U.S. online retail sales will be \$575 billion in 2019 compared to \$513 billion in 2018, a 12.3% increase, then reach \$645 billion in 2020, a 12.1% increase.** U.S. online sales of \$513 billion in 2018 missed our forecast of \$522 billion due to slowing online growth in the back half of 2018. Our forecast model implies a CAGR of nearly 9.0% over the next decade, and maintains that e-commerce will achieve a market share of total retail sales (excluding auto & gas) of 21% by 2025 vs. 15% in 2019 and ultimately approach a forecast market share ceiling of 25% towards the end of next decade. **By our estimate, the e-commerce channel captured about 43% of total retail sales growth in 2018 and continues to grow its market share by just over one percentage point annually, though that share gain is now decelerating.**

Going forward we expect more retail analysts will be weighing in on the topic of the online channel's event horizon and how we get there. The vast abundance of historical online sales data and trends makes it too hard to resist such

EXHIBIT 2
U.S. Broadband Subscriptions



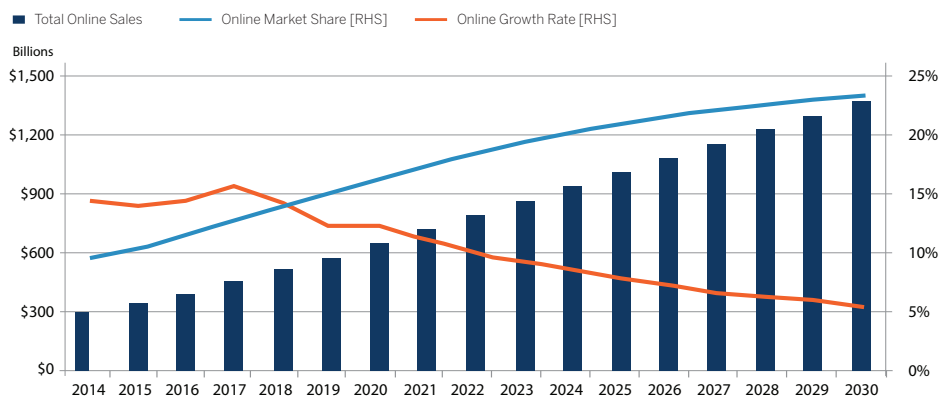
Source: The World Bank

prognostications. The end is not nigh for e-commerce, but it is remotely visible. We have seen some higher estimates of e-commerce market share potential from other analysts, but we go where the math takes us. Certainly, e-commerce market share is already above 20% in several product categories, but we are looking at the totality of retail sales (again, excluding auto & gas). However, our analysis does include grocery, a very large product category (about \$750 billion) that we firmly believe won't ever achieve significant online market share. If we were to exclude the grocery category from our market share analysis, then the ceiling for e-commerce share is closer to 30%.

There are plenty of large omni-channel retailers already getting 20%-30% of their sales online. That is not to suggest they soon will be approaching some theoretical wall, though it's possible. It depends on their product categories and historical experiences and success with online retailing. Retailers should try to understand the unique S-curve(s) that underlie their own online business. But we will say this: Retailers that have a large percentage of their total sales (say, 20% or more) coming from the online channel without having taken meaningful market share in those product categories have likely disappointed shareholders. There are plenty of omni-channel retailers whose "success" online is achieving little more than shifting sales from their own stores, causing profitability to stagnate. Under this scenario, more aggressive store closings are required, something we've been calling attention to for quite a while.

In previous years we have also provided our online market share estimates for broad product categories, which we calculate based on e-commerce retail sales data collected by the U.S. Census Bureau and released annually in May in the Bureau's E-STATS report. The Census Bureau did not release that report this past May, telling us that this compilation

EXHIBIT 3
U.S. Online Retail Sales, Growth & Market Share



Source: U.S. Census Bureau and FTI analysis

was behind schedule (thanks a lot, government shutdown!) and would not be available until September. We cannot update our estimates of online market shares and projections by product category without this data from Census, so we'll provide a supplement to this report in autumn when that data is released, and we have a chance to crunch the numbers.

AND WHAT ABOUT AMAZON?

No discussion about the state of online retailing would be complete without giving Amazon its due. With its fifth Prime Day, Amazon certainly seems intent on making this a permanent shopping holiday in mid-July to rival Black Friday, and other large retailers are rolling out their own competing deals. How many retailers can say they've created their own shopping holiday? Amazon began Prime Day as a way to boost Prime membership, which it certainly has done. Yet with an estimated 100 million U.S. Prime members according to Consumer Intelligence Research Partners, Amazon may soon encounter its own S-curve limits to that growth, which will then start to slow going forward. Incredibly, Amazon reported \$14 billion in Prime subscription fees in 2018—an amount

exceeding the total sales of JC Penney and its 900 department stores. Prime Day may be starting to take on the feel of Black Friday's door-buster specials, with the best deals offered on select merchandise—mainly Amazon-branded stuff, and in limited quantities—and less fabulous deals on other brand-name merchandise. That's okay, though, as Amazon's branded product lineup continues to grow in breadth and popularity.

Prime Day is also a vital part of Amazon's strategy to ramp up and prepare its distribution network for the back-to-school and holiday seasons. This provides two key benefits: It reduces the intense distribution center [DC] ramp up by shifting some of these sales to July and it allows DCs to be stress-tested, both of which mitigate capacity constraints often experienced by retailers during the holiday season.

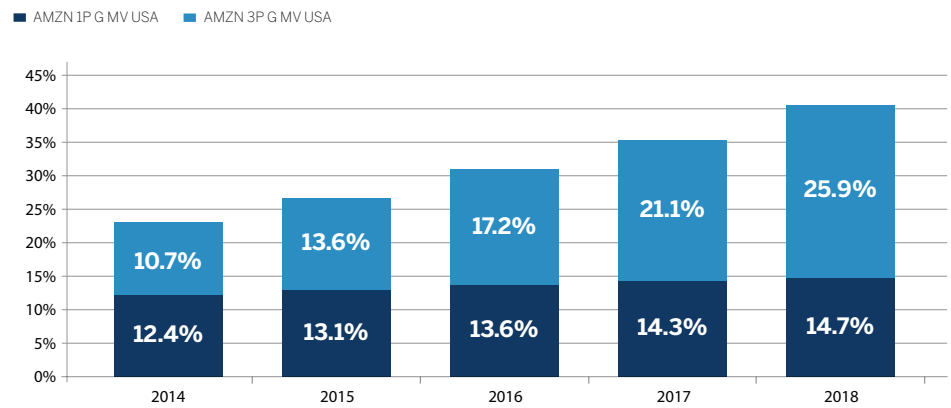
Amazon's dominance of the e-commerce realm is common knowledge. What is less well known is how dramatically Amazon's retail business has changed in the last few years—and, perhaps most surprisingly, that its retail sales growth also has slowed notably in recent quarters. The parabolic growth of Amazon Web Services (AWS) and other

fast-growing revenue streams such as advertising has deflected much of the Amazon conversation away from retail.

Lost amid the many accolades heaped on Amazon is its increasing reliance on third-party (3P) retail sales. In contrast to first-party (1P) sales where Amazon owns, holds and has legal title to inventory, the 3P sales are of unowned merchandise listed on Amazon's site and/or fulfilled by Amazon, and Amazon takes a commission of each sale, plus storage and fulfillment fees if applicable. Much has been written about the ambivalence of some vendors to listing on Amazon: They certainly get the eyeball traffic and sales, but Amazon takes a sizeable cut and sometimes rolls out competing private-label products. Amazon clearly has pivoted more of its retail business to 3P sales, and it is evident in their numbers.

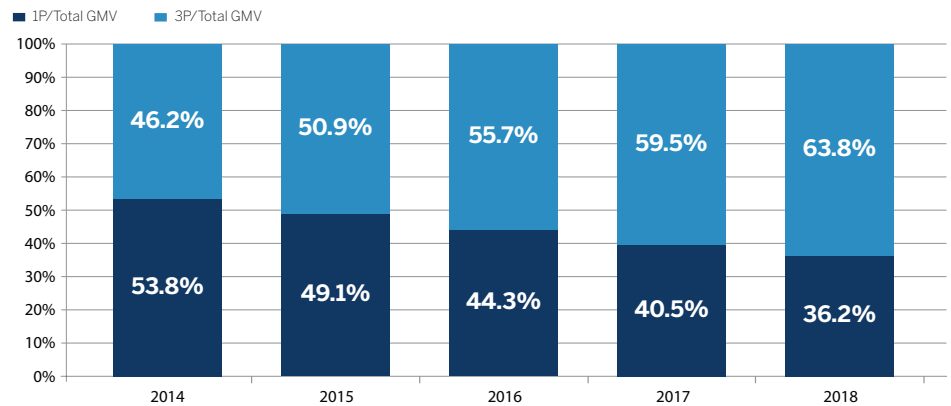
Today Amazon (1P + 3P) claims a 41% market share of all U.S. e-commerce sales versus 27% in 2015 (Exhibit 4). To put that in perspective, consider that Wal-Mart's share of U.S. online sales is barely 4% after several years of considerable effort to grow that business, which it has done nicely. Amazon is growing its market share by taking an ever-larger share of the online channel's sale growth. Hard as it may be to believe, we estimate that Amazon took approximately 70% of the channel's total sales growth in 2018. We also estimate that Amazon's 3P sales accounted for 63% of its Gross Merchandise Value (GMV) in 2018 compared to 51% in 2015 (Exhibit 5). Nearly all of the increase in Amazon's market share of e-commerce since 2015 has come from 3P, which has nearly doubled in market share versus 1P's slight increase in that period (Exhibit 4). 3P is likely a very lucrative business for Amazon relative to the cost of the services it provides, as well as a lower-risk business that ties up considerably less working capital. For Amazon, this all makes sense. It is tougher decision

EXHIBIT 4
Amazon Market Share of U.S. Online Sales



Source: SEC filings and FTI estimates

EXHIBIT 5
Amazon's 1P/3P Breakout of Online Retail Sales



Source: SEC filings and FTI estimates

for third-party sellers, since partnering with Amazon also means giving it access to your sales and customer data, which many merchants believe Amazon then exploits. However, Amazon's search traffic dominance makes it increasingly difficult for merchants to shun that alliance altogether, despite these misgivings.

Even less noticed of late is the slowing growth rate of Amazon's retail sales (1P and 3P) since mid-2018. We suppose this shouldn't really be surprising. If U.S. online sales growth is slowing and Amazon claims a large share of those sales, then it too should be feeling these

effects—and it has been, especially in the last two quarters (Exhibit 6). A strong 2018 for Amazon's retail side of the house consisted of an exceptionally strong first half and a less-than-stellar second half. Amazon's retail sales growth rate (YOY) in 1Q19 was approximately one-half lower than a year earlier. In fact, 1P sales were up "only" 11.9% (YOY) in 1Q19, a merely yeoman figure for the king. Fortunately for Amazon, its retail sales are still growing faster than the overall channel, so it continues to gain market share despite the growth slowdown. However, let's not sugarcoat what's happening here: online sales growth at Amazon and across the e-commerce

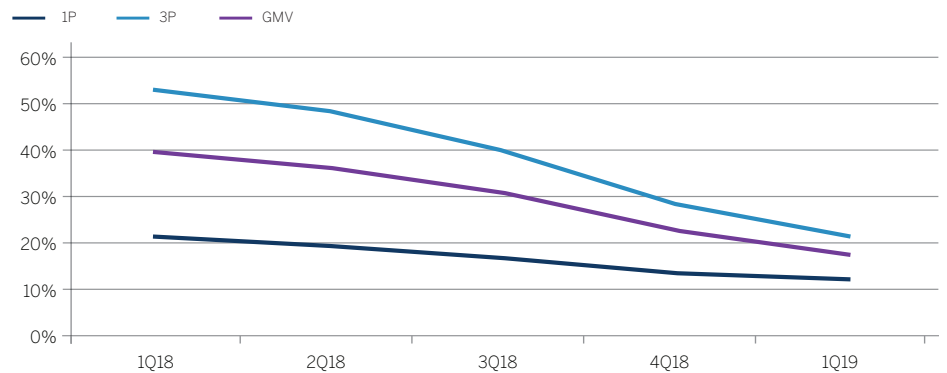
platform definitely is slowing. *We expect Amazon's retail sales growth rate (1P + 3P) to slow to 19% in 2019 from 30% in 2018 while its online market share will grind higher to 43% this year and eventually top 50% in 2024.*

Another underreported Amazon retail story is the quite unspectacular results to date with its Whole Foods acquisition of 2017, either as a standalone business or as an integrated part of the larger Amazon ecosystem. No one expected this to be a home run in the first inning, but from the little data Amazon provides on its physical stores, it is likely not exceeding anyone's expectations so far. Amazon is a long-term player that likes to tinker with things, so there's plenty of time to make this better but so far we don't see an indication that this experiment has gone smoothly. Grocery is arguably the toughest of all retail segments to achieve consistent outperformance and profitability, and online grocery is doubly difficult no matter who is doing it, which Amazon has discovered. We marvel at the effort, bucks and determination by all players to make online grocery work on a large scale—despite the reluctance of consumers to fully embrace online food shopping and the slow inroads made after two decades. The size of the opportunity is too big to resist.

Amazon's aura of invulnerability in retailing may take a hit should overall online sales growth continue to moderate or the consumer economy weaken further. It hardly matters in the bigger picture. As we mentioned earlier, Amazon can still expect to take market share even in a slowing economy, but we believe those gains too will be moderating compared to its gains in recent years. As the growth of new Prime members slows, which it surely must fairly soon, Amazon's efforts increasingly will focus on getting existing members to spend more—something it has always done well with its huge captive audience.

EXHIBIT 6

Amazon NA Retail Sales Growth – Quarterly Growth (YOY)



Source: SEC filings and FTI estimates

ADDENDUM: ESTIMATED ONLINE MARKET SHARES OF SELECT RETAIL CATEGORIES

The online channel's overall market share of U.S. retail sales is a solid mid-teen figure (**Exhibit A**) and continues to increase by approximately one percentage point per year, but market shares vary significantly by product category. Beyond the books and music categories that were among the first to achieve high market shares and today derive a solid majority of their sales online, we have identified six other categories that have achieved market

shares of between 25%-50%, according to data recently released by the Bureau of the Census (**Exhibit B**). This accomplishment speaks to the success that many large omnichannel retailers have achieved in driving shoppers to their websites to buy stuff. However, this success also presents limitations on future online growth, as these categories mature and inevitably experience slowing growth as their size swells.

Perhaps most noteworthy is the acceleration of online sales in the toy & hobby category over the last two years, which we attribute to the bankruptcy and liquidation of Toys R Us and subsequent closing of hundreds of domestic toy stores. Online sales in the toy & hobby category will approach a 50% market share this year, the most of any category we track aside from books, music and computers. The demise of the only dedicated toy store chain on a national scale and the redistribution of nearly \$8 billion in sales undoubtedly will be a permanent boost to online sales for the category, as more shoppers than ever opt to go straight to their favorite websites for toys given the limited selection and uninspiring experience of toy shopping in general merchandise stores. Sadly, millions of kids today and in years to come may experience a childhood bereft of a wondrous trip to a legit toy store. A visit to a virtual toy store, such as those on the KidHQ platform, may be as close as they get. *C'est la vie.*

EXHIBIT A

E-Commerce Share of U.S. Retail Sales (LTM)

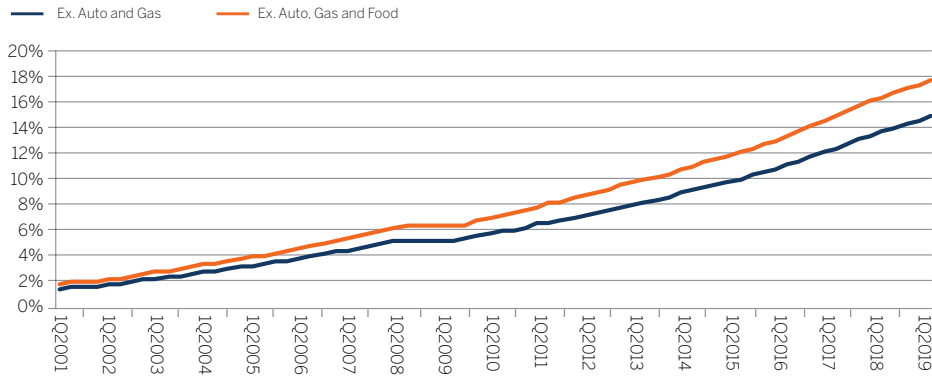
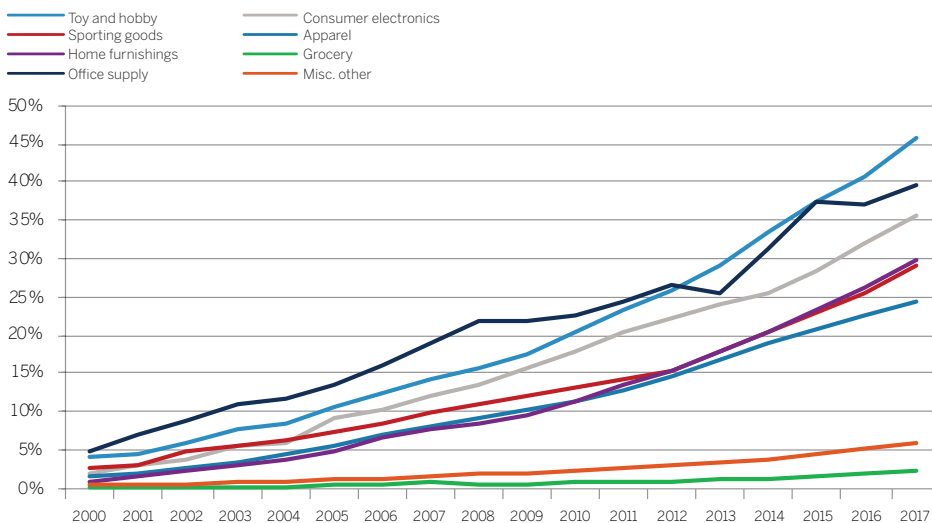


EXHIBIT B

Estimated Online Market Share of Select Retail Categories



Source: U.S. Census Bureau and FTI Consulting, Inc.

Apparel & accessories represent the largest online category in sales dollars but online sales growth (YOY) in the category has slowed for four consecutive years—from 20% to 11%—and consequently, its market share gains have already begun to decelerate. Nearly 25% of retail sales in the apparel & accessories category now occur online, and we project an ultimate market share ceiling of approximately 35% reached towards the end of next decade. Efforts to drive more apparel sales online will be collectively met by diminishing gains.

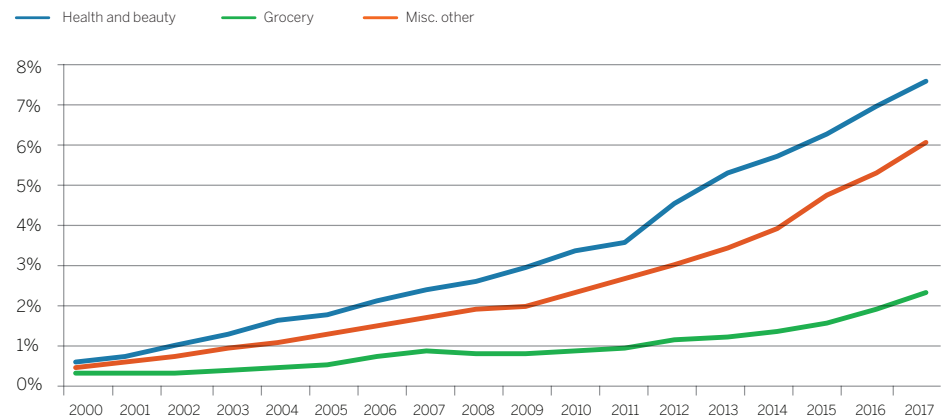
Wayfair and its asset-light business model continues to be a huge disruptor in the furniture & home furnishings sector and will generate nearly \$9 billion of sales this year. A significant share of category sales has been redirected to its

site from competing retailers. However, Wayfair remains deeply EBITDA-negative, which is largely attributable to both its international expansion and its free shipping perk, which is very costly for most heavy or bulky furniture items. Shipping costs for furniture are usually borne by the customer and often add at least \$100 (or more) to the cost of an order, so this is an attractive perk that customers love, and that many other retailers simply cannot offer. However, it is arguably unsustainable if Wayfair aspires to ever be profitable. Currently, Wall Street analysts don't expect Wayfair to be EBITDA positive until 2022—a milestone date that continues to be pushed out further in time by analysts. Wayfair is counting on its sheer scale to eventually get it to profitability but that is uncertain. Like Uber, Wayfair remains a loss generating company that is winning over legions of customers from incumbents with a business model that has yet to demonstrate it can achieve profitability. In the meantime, many traditional retailers in these categories are hurting. It will be fascinating to see how this plays out over the next few years. There will be casualties.

The grocery category finally has gained traction in the online channel in recent years—with an estimated online market share of nearly 2.5% currently, double its market share compared to 2014 (Exhibit C). Online sales growth in the grocery category has accelerated since 2015 to more than 25% (YOY), the best current growth rate of any category we track. This achievement is undoubtedly attributable to the tremendous efforts by Amazon, Wal-Mart, Kroger and others to make online grocery shopping as price competitive, convenient and frictionless as possible. As online sales growth slows in other categories with more sizeable market shares, grocery should continue to outperform on a relative basis. However, we caution against reading too much optimism into these improved online results

EXHIBIT C

Estimated Online Market Share of Select Retail Categories



Source: U.S. Census Bureau and FTI Consulting, Inc.

for grocery, as it doesn't meaningfully alter its S-curve trajectory. Our S-curve model for grocery projects that its online market share will level off at a high single-digit share in about a decade, perhaps approaching 10% at best, notwithstanding its recent accomplishments.

In the aggregate, our nine medium-to-high online market share categories (the six in Exhibit B plus books, music and computer hardware & software) enjoy a collective market share of 33% of their respective categories compared to 25% in 2014. That is the good news. The bad news is that these are well established online categories whose growth rates and market share gains are beginning to slow. That is the inevitable path of the upper half of a logistic growth curve.

Another factor that will inhibit online growth going forward is that total sales in these medium-to-high market share categories collectively account for just 27% of the \$3.5 trillion of total retail sales (excluding auto & gas). In other words, some of the best performing categories online are also some of the smaller retail categories, such as books, music, toys and sporting goods. Their online maturity combined with their relatively small size (plus slowing online sales growth in the

apparel category) all but ensure that these categories soon will no longer be able to pull the online engine on their own, as they have done for years.

As we've mentioned in previous years, the burden of driving online sales growth and market share in the years ahead increasingly will fall on very large retail categories with modest online market shares to date, such as home improvement, off-price and discount retailers, health & beauty, and grocery. The opportunity for meaningful improvement is certainly there, as we have seen recently in grocery following several years of Herculean efforts by Amazon, Wal-Mart, Kroger, and others to move more shoppers online in the category. However, without a sea change, we know with near certainty that these categories will never achieve significant online market share. That's okay, they don't need to in order to move the needle, but they need to do much better online than they have done historically. The U.S. retail sector will remain in a state of flux, and the next decade of online retailing won't much resemble the previous one.

Furthermore, the Census Bureau also recently revised its estimate of online retail sales since 2010, with 2018 online sales revised upward to \$522 billion from

\$513 billion previously. Consequently, our 2019 forecast of online sales now increases to \$593 billion from our previous July estimate of \$575 billion, representing a 13.5% increase (YOY) in 2019 versus our previous growth estimate of 12.3%, reflecting upward revisions by Census Bureau to historical online sales as well as a rebound in online sales in 2Q19 relative to previous quarters. Our 2020 online sales forecast increases to \$656 billion from \$645 billion previously. Despite these revisions, the song remains the same.

Lastly, Amazon just reported third-quarter results that were revealing with respect to changes in its retail business. Foremost, its retail sales growth has accelerated again following four consecutive quarters of slowing sales growth since mid-2018. Amazon's 1P sales growth (YOY) in 3Q19 was north of 20% for the first time since 1Q18. This unwelcome bit of news for other large retailers is undoubtedly attributable to the rollout of Prime one-day shipping earlier this year, which has been a big hit with customers but a costly service for Amazon, stating that it cost them an additional \$800 million in shipping-related costs in 3Q19 and an expected \$1.5 billion (YOY) in extra shipping and fulfillment costs in 4Q19. Analysts and investors don't view these incremental costs as an expense but rather as an investment in its retail business that will further build customer loyalty and market share over time; and they have been tolerant of its negative impact on earnings so far. Amazon's reignited sales gains from one-day shipping very likely came at the expense of competitors rather than an expansion of the online ecosystem. However, Amazon also gave surprisingly light (and detail-free) revenue guidance for 4Q19 that was short of analysts' estimates and implied weaker sales growth than in 3Q19, casting some doubt about the strength of consumer spending as we enter the all-important holiday season.

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