Runways for growth opportunities abound

Amid all the concerns about "the new normal"—slower global growth and shrinking opportunities amid the rise of "job-killing" automation—Client Portfolio Manager Jordan Stuart offers an alternate perspective. He outlines the extraordinary everyday innovations that most of us take for granted. These same innovations have the potential to bring about countless other possibilities, offering still more green shoots for growth.

Let's face it, bad news not only sells, it also deeply affects us due to its often sharp, sudden arrival. Yet we tend to miss a vast array of positive happenings that occur so gradually, they can be hidden in plain sight. Consider treatments for formerly unmanageable diseases, the widespread reduction of global poverty or the extraordinary capabilities that technology offers to everyone.

While awareness of risk is important in making prudent investment decisions, there is also risk in being overly cautious. Experienced investors know that real opportunity lies in what is not yet widely known. Many of the tremendous advancements highlighted below were unimaginable a relatively few years ago. They have proven or will soon prove capable not only of potentially benefiting investors but also changing lives. That's reason enough to be confident about the future, as unpredictable as it may be, as never before have individuals had so much choice, convenience and access when it comes to shopping, transportation, entertainment and, increasingly, health-care services.

Shopping: How the 'Amazon effect' revolutionized retail

From its start in books, electronics and media, Amazon has steadily expanded into two of retail's biggest drivers: groceries and consumables—a huge category that entails everything from paper towels and toiletries to fresh food and restaurant meal delivery. That's all your shopping delivered at your door at competitive prices, with easy returns and quick refunds.

But the biggest Amazon effect is how it has created ever-increasing customer expectations. As a result of Amazon's enormous investments in technology, cloud services and data mining, hyper-convenient, highly personalized shopping is now a standard that has completely disrupted the multitrillion-dollar

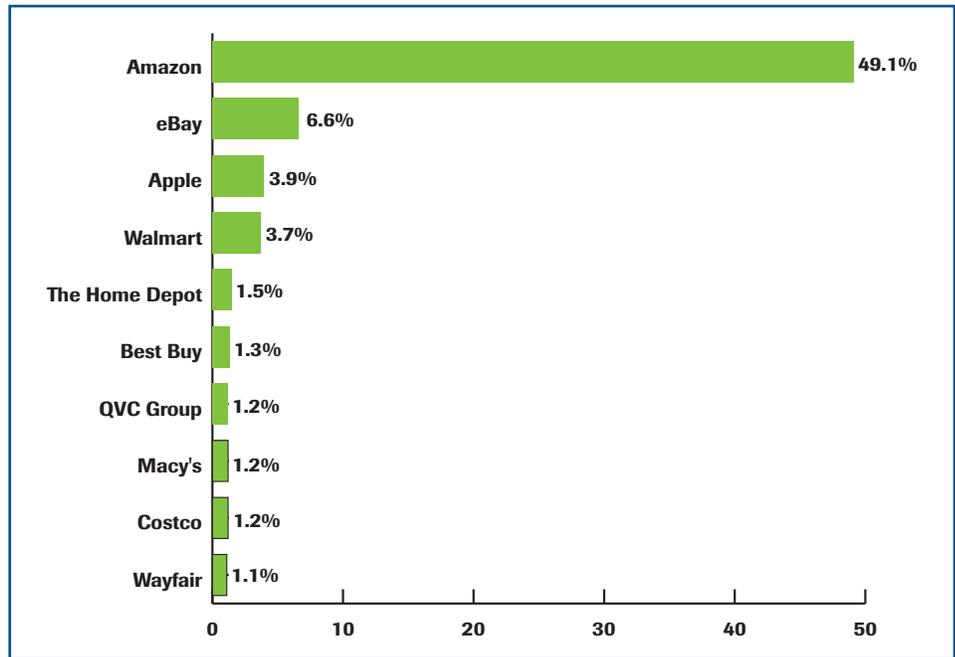## Retail E-commerce sales in the U.S. 2017-2023 (in millions)
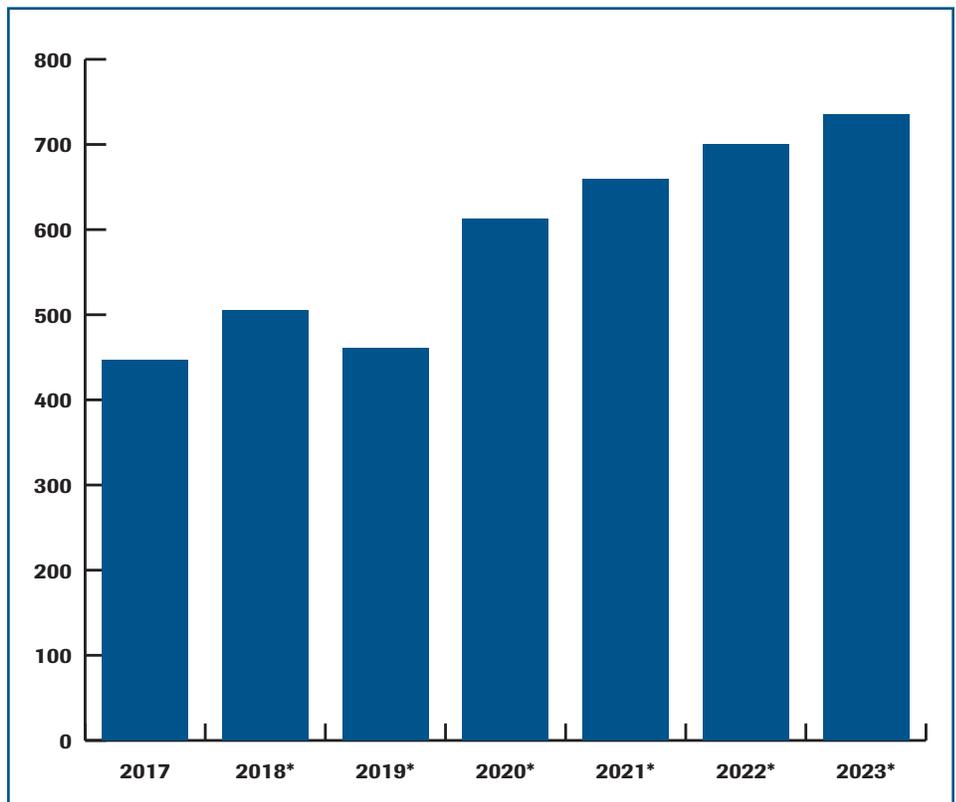
Source: Strategas as of 9/18. Past performance is no guarantee of future results.
estimated amount

Top 10 U.S. companies based on % of e-commerce sales

retail industry and is on its way to doing the same to pharmaceuticals, insurance, health care and payments.

With the rollout of 5G wireless networks and exponentially greater, faster computing power, consumers can expect even more personalization as retailers and service providers seek to create a unique experience for each and every user. Increasingly, sites will show individuals products and services targeted to them based on the many data points that have been collected on their profiles. This will transform industries across the board as they look to adapt their business models—and stay competitive—based on opportunities generated by the Internet of Things, big data and new cloud technologies.

Company	%
Amazon	49.1%
eBay	6.6%
Apple	3.9%
Walmart	3.7%
The Home Depot	1.5%
Best Buy	1.3%
QVC Group	1.2%
Macy's	1.2%
Costco	1.2%
Wayfair	1.1%

Source: eMarketer, July 2018

### Transportation: How one app can change an industry

Within a few years of its launch in 2009, Uber—followed by Lyft and other ride-sharing apps—completely disrupted the taxi business by offering riders greater convenience, reliability and more options for payment. According to a 2018 U.S. Gallop Poll, three in 10 Americans use a ride-sharing service. When research firm Certify tracked ride-share reimbursement for businesses, they found that from the first quarter of 2014 to the second quarter of 2018, the share of taxi use dropped from 37% to 5% and rental car usage fell from 55% to 22%. The share of Uber and Lyft grew from 8% to 72.5% the same period.

Uber and businesses like it, such as Airbnb in the lodging industry, are part of a fast-growing "sharing economy." While criticism abounds for the negative impacts these business are having on traditional providers, they have proved a boon to those who can generate income on their own schedules from otherwise underutilized resources—whether it's a car, an extra room, extra time or a particular skill. Consumers obviously benefit by having additional choice, flexibility and more transparent pricing.

The app-facilitated, sharing model has continued to expand into other services, from InstaCart for grocery delivery to Avvo legal services to Taskrabbit that instantly matches customers with available workers. Increasing, apps are being employed to share infrequently used but expensive items from power tools and specialized cooking equipment to surfboards and ski mobiles.

Ride-sharing overtakes rentals and taxis

Percentage of separate ground transportation business expenses filed

- Ride hailing 72.9%
- Rental 22.3%
- Taxis 5.2%
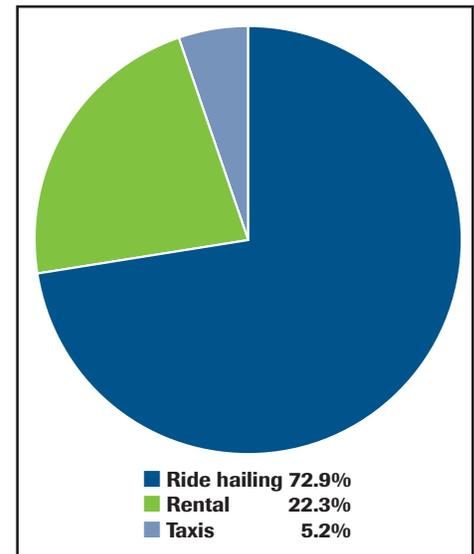
Source: Certify, June 2018

## Global mobile phone users 2015-2020 (in billions)

Entertainment: Cord-cutting on the rise as viewer choice expands

Thanks to a combination of faster internet speeds, expanded data plans and devices capable of supporting digital media, we can get entertainment, information and social interactions anytime, any-place, however we choose. Long gone are the days when everyone gathered around the TV in the den or living room. According to Pew Research, more than 95% of Americans own a cell phone, and Deloitte says the use of smart-phones globally are expected to reach 4.6 billion this year. By 2025, the mobile industry trade group GSM Association forecasts 71% of the world's population will be mobile subscribers.

Given this growth in mobile, when combined with tablets, laptops and connected TVs, it's not surprising that an increasing number of households are switching to "over-the-top" (OTT) streaming services such as Netflix, Hulu, YouTube, network TV apps and Amazon Prime.

While cable and satellite subscrip-tions still dominate, the future of infotainment is moving toward OTT, which is growing at a 17% year-ly pace. This trend is being led by younger generations, who are big users of smartphones and far more likely to prefer OTT over traditional TV. A study by e-Marketer estimates nearly 64% of U.S. internet users will subscribe to an OTT service this year.

As options for viewers multiply, winners and losers have yet to be determined. Meanwhile, we all stand to benefit as industry players attempt to position themselves in a competitive environment by offering more and better content and attractive pricing.
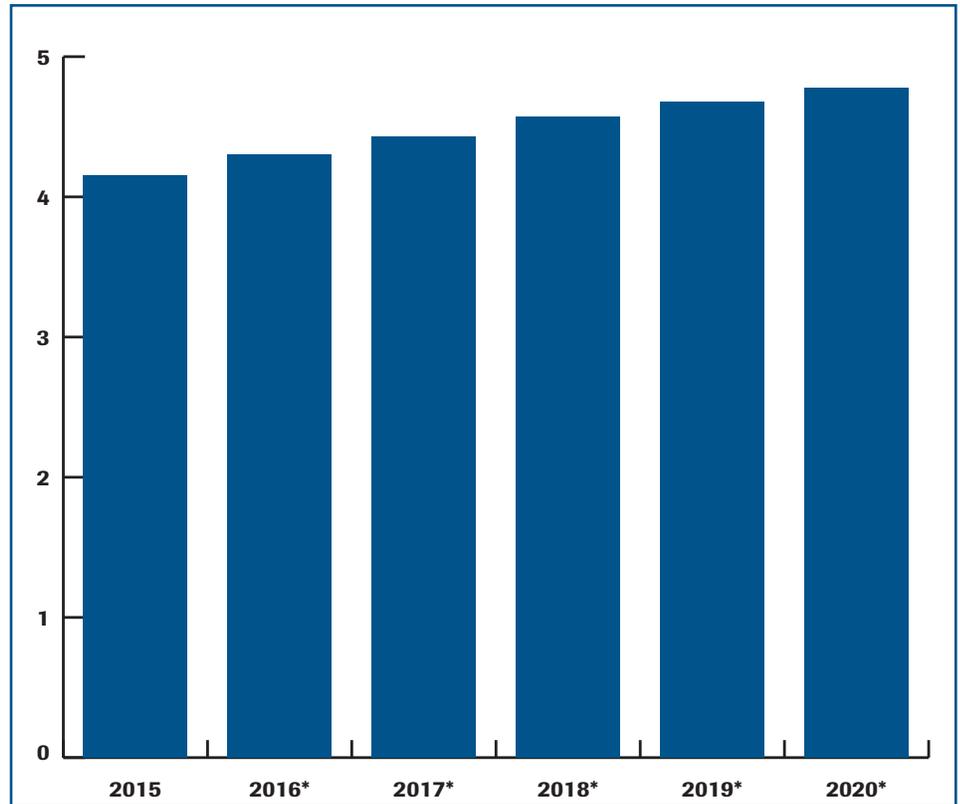
Source: Statista 2019
*estimated amount

Share of cord cutters in the United States in 2018, by age
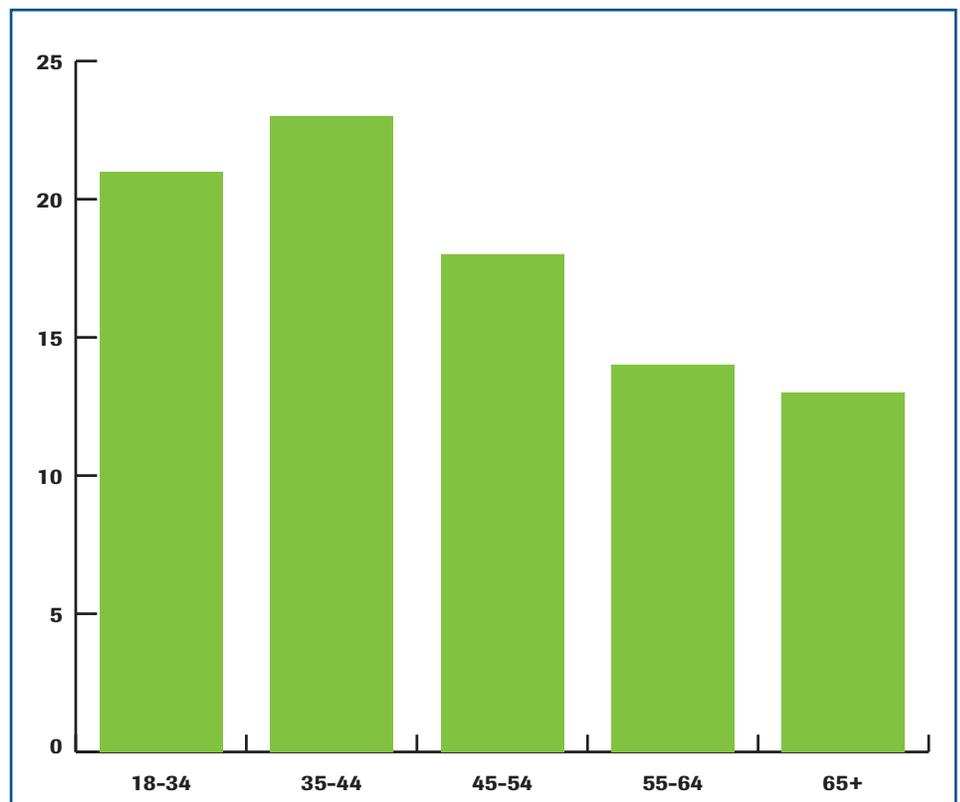
Source: Statista 2019
*estimated amount

Health Care: On the cusp of a data- and cost-driven transformation

Health-care spending in the U.S. is projected to increase 5.5% annually from 2017 to 2026, accounting for almost 20% of Gross Domestic Product, according to the Centers for Medicare & Medicaid. While prices for a broad array of consumer goods and services have become more affordable, hospital services and health-care prices overall continue to exceed the inflation rate by wide margins. The resulting increases in patient out-of-pocket spending is driving demand to more effectively manage these costs, and innovation is taking a lead role in making that happen.

Big data, artificial intelligence, blockchain technology and digital devices increasingly are helping bridge the distance between providers and patients, allowing for more individualized care at significantly reduced cost. These technologies also support medical researchers in developing breakthrough discoveries. Consider the Human Genome Project. It took approximately eight years to produce the first human genome sequence in 2003 at a cost of about $2.7 billion. Today, an individual's genome can be sequenced in a matter of days for less than $1,000.

Researchers can now apply powerful computing capacity to mine vast database networks that contain everything from an individual's genetic blueprint and lifestyle information to the pharmacological properties of virtually every known compound to a store of information about previously used treatments. It can cross-reference this data in seconds, potentially leading to more targeted and effective therapies. Big data and analytics also have given rise to wearable or implanted devices that continuously monitor a patient's heart rate, glucose levels, blood pressure and other vitals. Ingestible implants deliver precisely controlled doses of medicine to more effectively treat complex diseases.

Although the health-care industry has been slow to adopt digital innovation from a business perspective, its cost crisis is leading to big changes. Non-traditional alliances, such as those between Amazon, JPMorgan Chase and Berkshire Hathaway and Walgreens and Microsoft will continue in an effort to lower costs and improve health outcomes. The enormous reach of the health-care industry and the disruptions ahead make it an area ripe for potential growth.

The takeaway

If there's one certainty, it's to expect non-stop change ahead. For investors, these developments provide enormous opportunity as well as challenges. Technology and innovation is changing the way we live, work and interact at a rapid clip. And while some dominant companies will stay on top, others may not survive. Disruption to longstanding, highly successful business models can and will happen. There are multitudes of companies attempting to break through with game-changing discoveries at every stage of the supply chain. The ability to understand and evaluate the potential impact of innovation across a wide range of industries as well as individual companies' longer-term ability to stay competitive will be increasingly critical.