COWEN
AND COMPANY

Equity Research

March 2017

eCommerce Disruption: Just Getting Started

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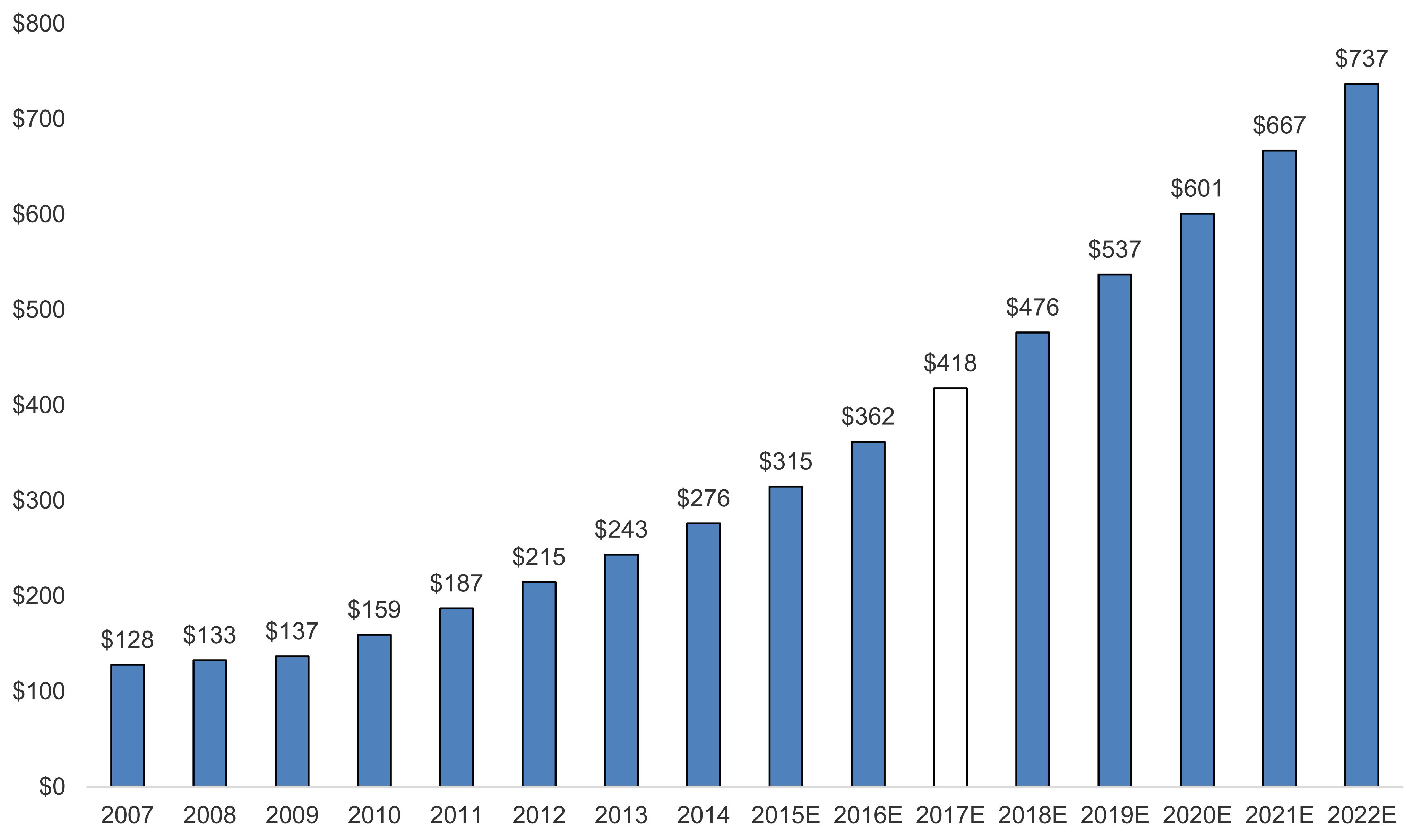
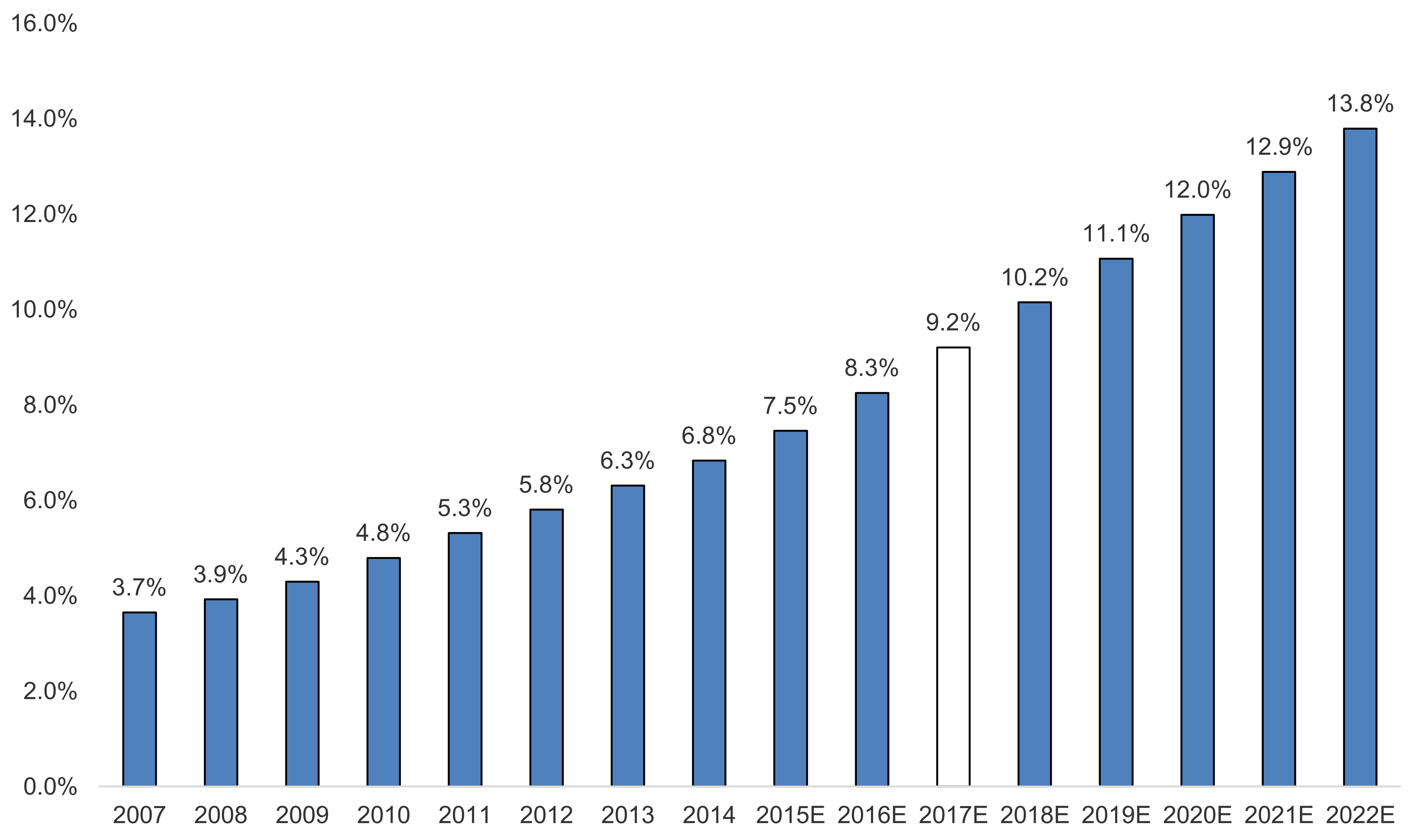
Long Runway Ahead

- Expect US eCommerce growth to accelerate again in 2017 and remain robust for the foreseeable future
- Estimate eCommerce will account for ~9% of U.S. Retail Sales (x- Gas, & Non-merchandise Receipts) in ’17
- Going forward, we expect several massive underpenetrated markets, namely Food & Beverage and Consumables (which we refer to collectively as Grocery), to drive the next leg of US eCommerce Growth

U.S. eCommerce Sales 2007-2022E ($, BN)



U.S. eCommerce Penetration 2007-2022E (% of Retail Sales)

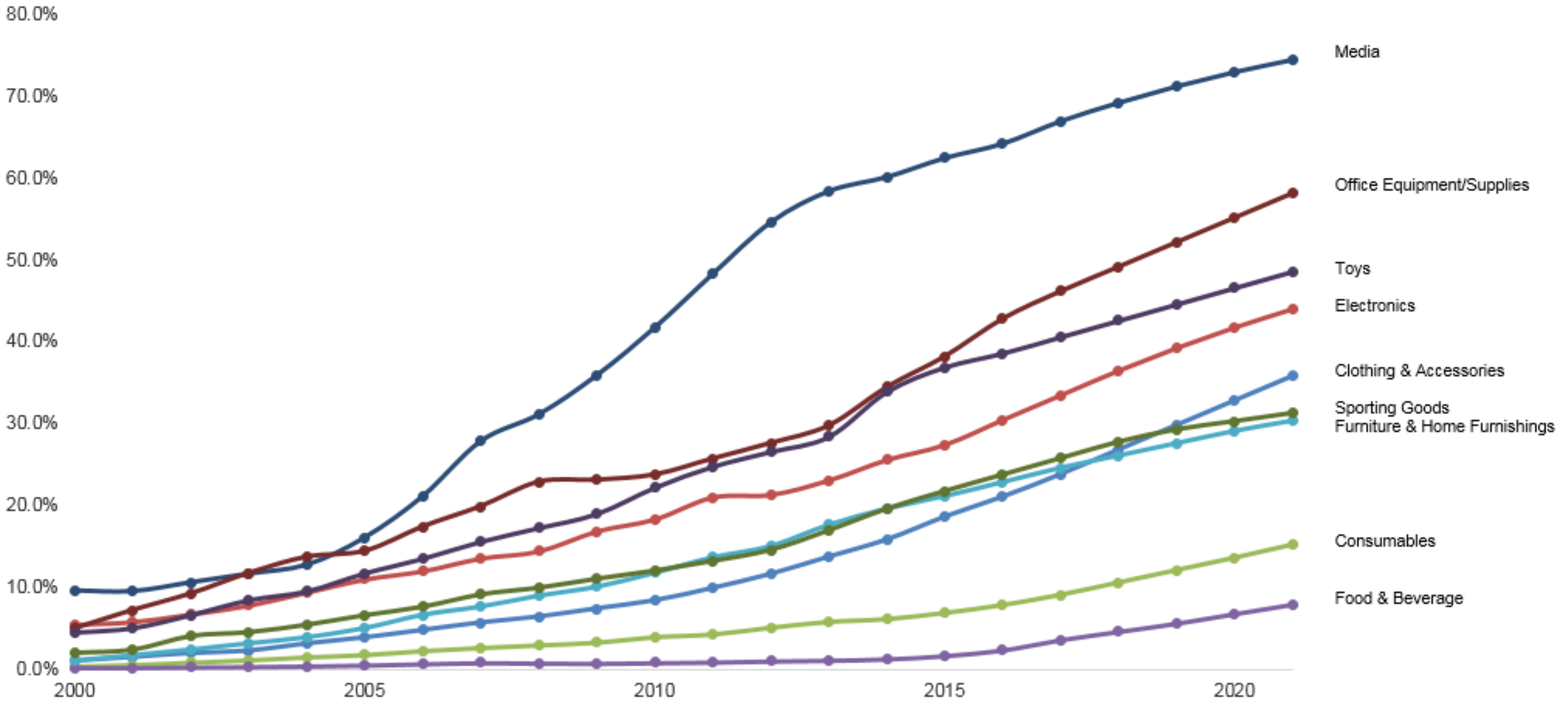


Source: Cowen and Company; US Census Bureau

Quantifying the Disruptive Power of eCommerce

- Idea that eCommerce is taking share and disrupting Brick & Mortar Retailers is hardly new
- **Absence** of digestible data has made it difficult to quantify
- So, we set out to provide investors the framework for quantifying disruption overall and by US sales vertical

U.S. eCommerce Penetration by Vertical '00-'22 (% of US Retail Sales)



Source: Cowen and Company; US Census Bureau

The Various Stages of eCommerce Disruption

- eCommerce as a percent of total sales, or simply eCommerce penetration, within any given vertical varies significantly depending on the stage of disruption

- **Late Stages**:
  - eCommerce penetration rates above 40%
  - declining physical store counts
  - Significantly lower in-store sales vs the industry's peak
  - i.e. Media
- **Middle Stages**:
  - eCommerce penetration rates ranging from 10-40%
  - declining to flat physical store count
  - declining in-store sales
  - i.e. Electronics (Middle to Late) / Apparel (Early to Middle)
- **Early Stages**:
  - eCommerce penetrations below 10%
  - mixed in-store sales growth
  - mixed store growth/declines
  - i.e. Grocery

Stages of Disruption by Sales Vertical

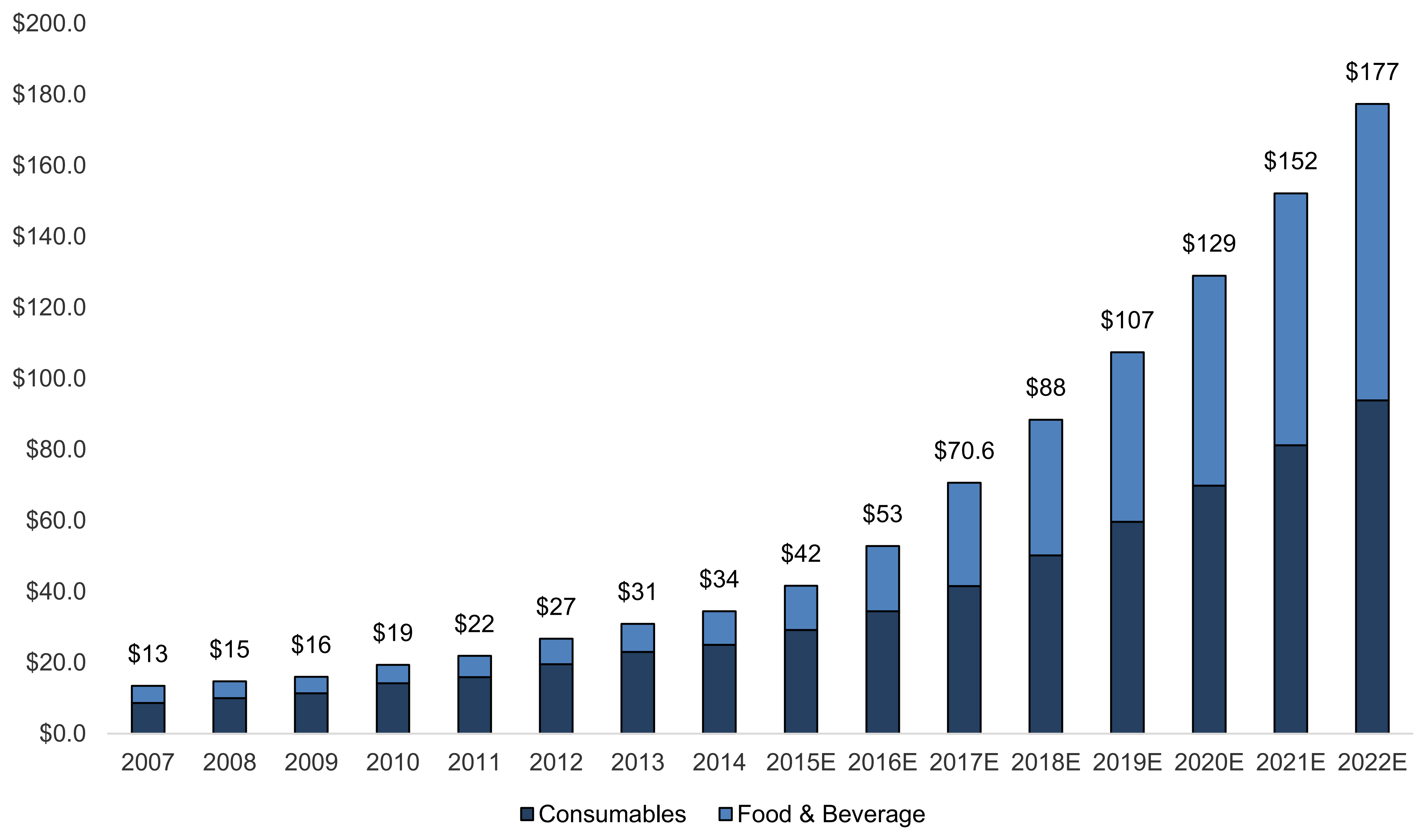
Sales Vertical	Stage of Disruption
Auto	Early
Clothing & Accessories	Early / Middle
Electronics	Middle / Late
Consumables	Early
Food & Beverage	Early
Furniture & Home Furnishings	Early / Middle
Garden Equipment/Supplies/Build Materials	Early
Media	Late
Office Equipment and Supplies	Late
Sporting Goods	Early / Middle
Toys/Hobby Goods/Games	Late

Source: Cowen and Company; US Census Bureau

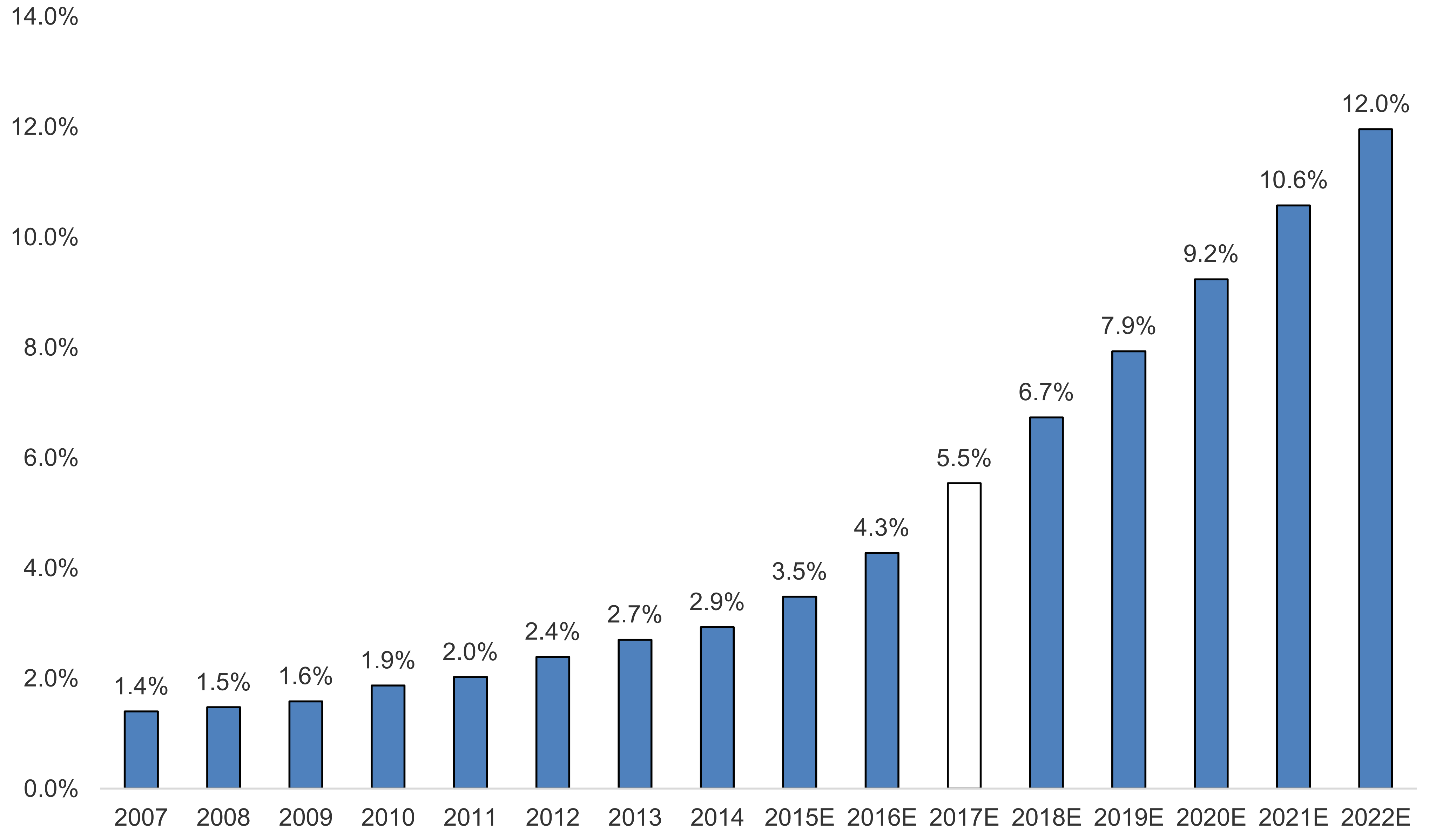
The US Grocery Retail Market is in the Very Early Stages

- We view US Grocery (which includes Food & Beverage + Consumables) as one of the sectors in the very early days of disrup tion, as eCommerce should account for only ~6% of total Grocery sales in ’17
- Expect US online grocery sales to grow more than 2x the rate of growth for total US eCommerce in ’17, or +34% y/y vs. +15. 5% y/y

U.S. Online Grocery Sales ’07-‘22E ($, BN)



U.S. eCommerce Grocery Penetration 2007-2022E

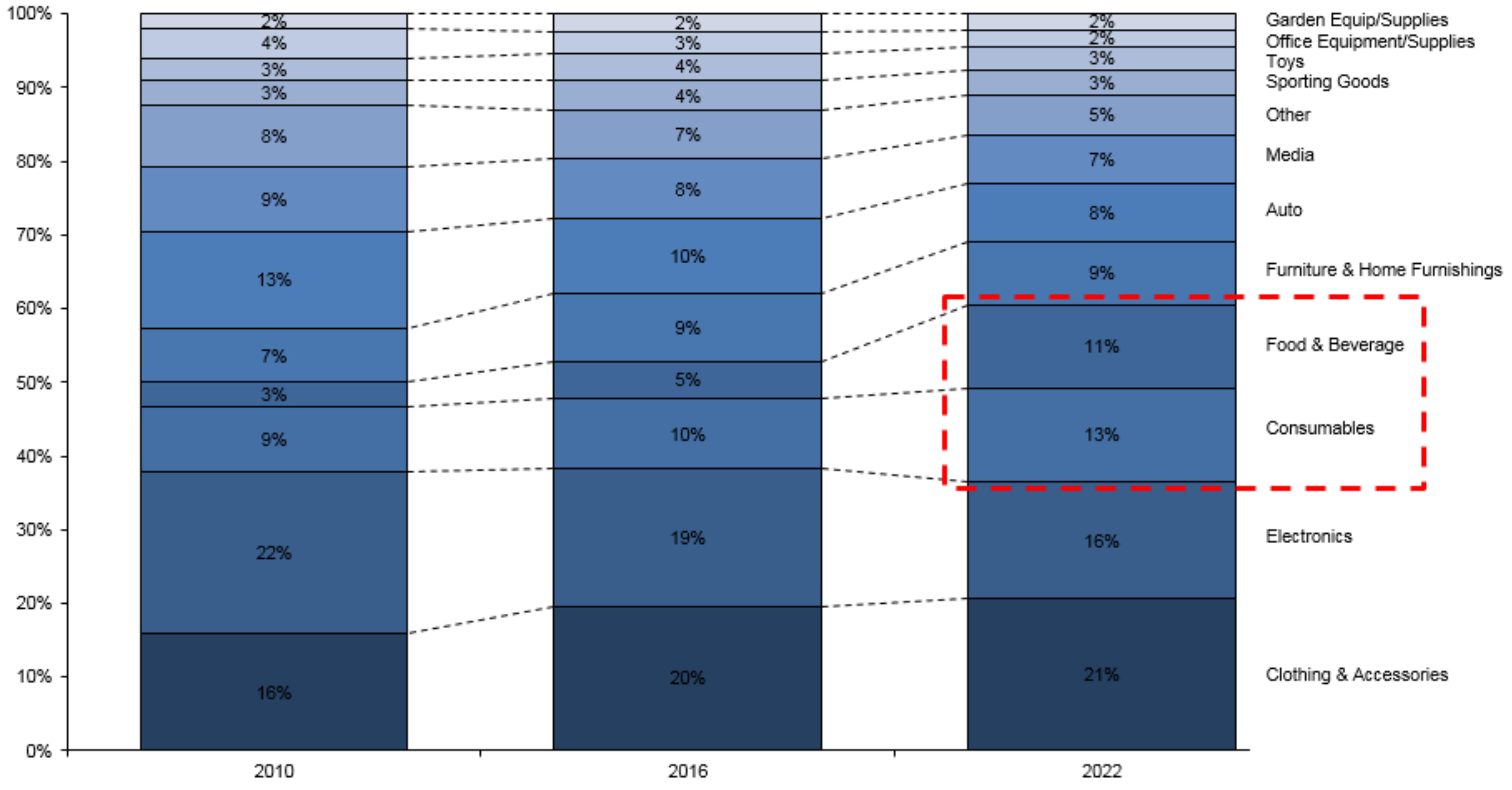


Source: Cowen and Company; US Census Bureau

US Grocery to Account for a Larger Piece of the eCommerce Pie

- Expect growth within Grocery to consistently outpace overall U.S. eCommerce growth ’17-’22, resulting in an increased share of U.S. eCommerce sales
- Estimate Food & Bev and Consumables (Grocery) combined share to rise from 15% in ’16 to 24% in ’22
- As a compare, we estimate the two verticals represented ~28% of total ’16 U.S. Retail Sales

Share of U.S. eCommerce Sales ’10 vs. ‘16E vs. ‘22E

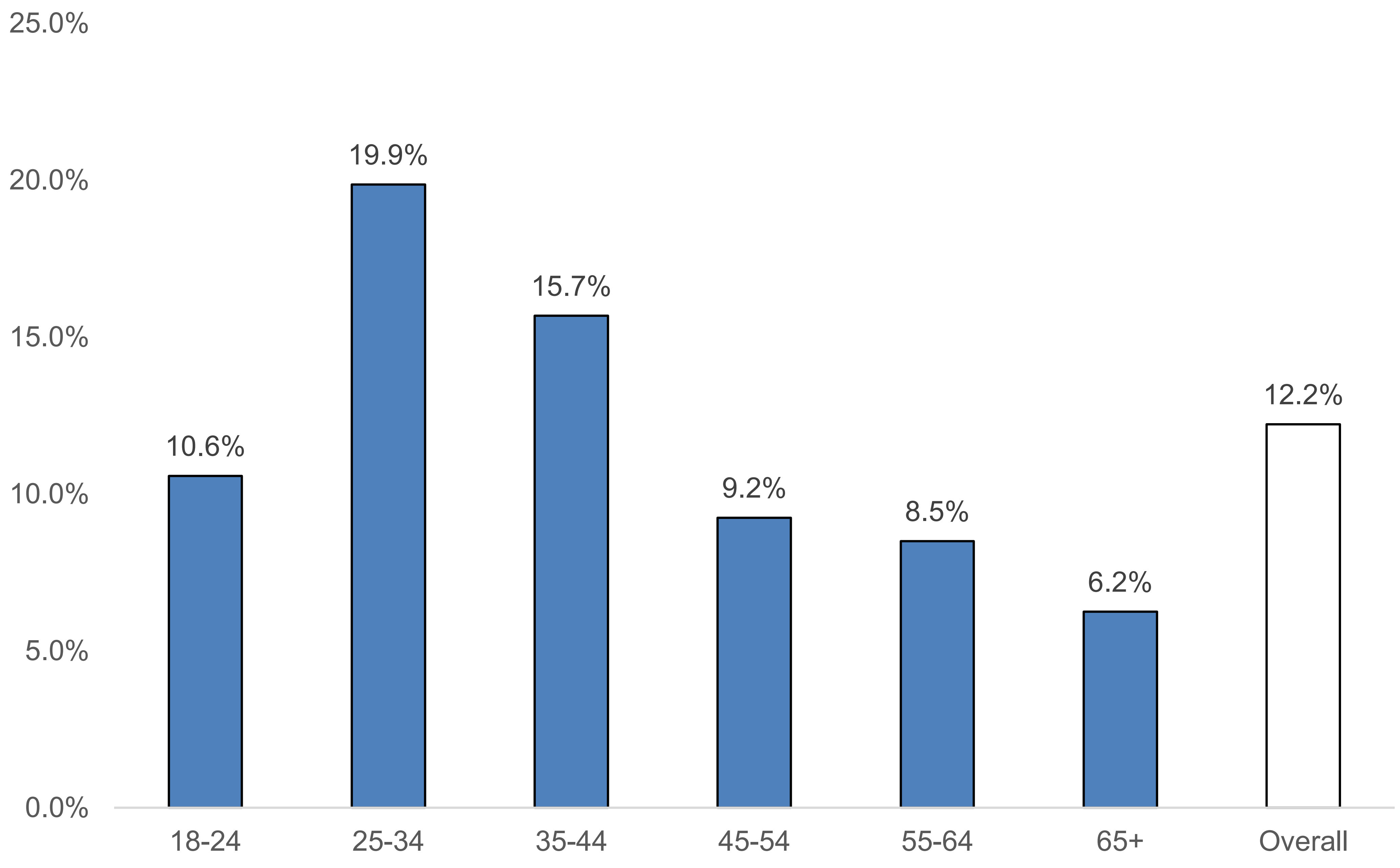


Source: Cowen and Company; US Census Bureau

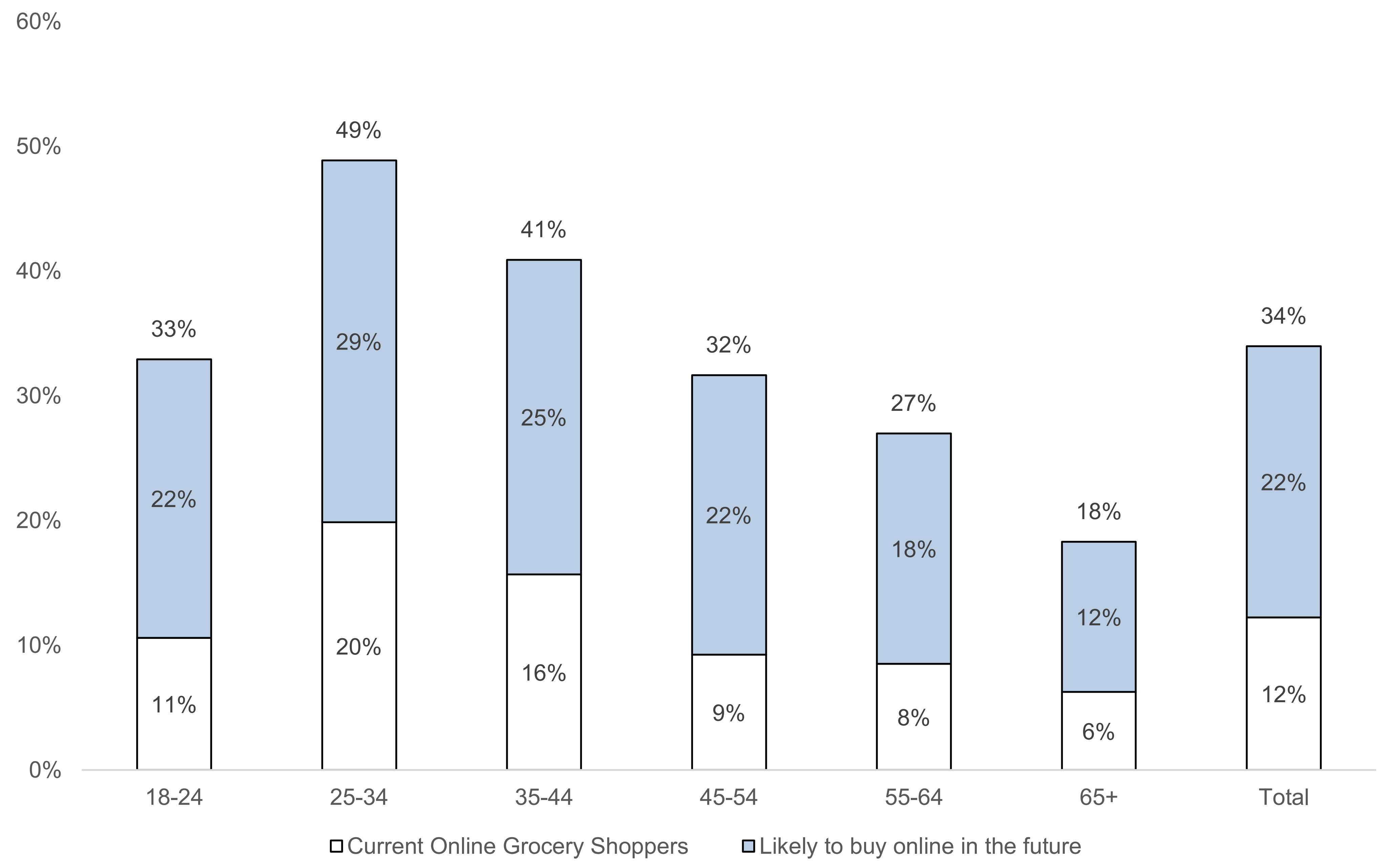
Evolving Consumer Habits will Drive Online Grocery Growth

- Overall, ~12% of US grocery shoppers bought groceries online on avg. throughout '16, per our proprietary Survey
- 22% of respondents said they would likely buy groceries online in the future
- Combining current and likely future online grocery buyers touches ~1/3 of overall US HHs

US Online Grocery Shoppers – '16 Avg (% of Grocery Shoppers)



Potential Online US Grocery Shoppers – '16 Avg (% of Grocery Shoppers)

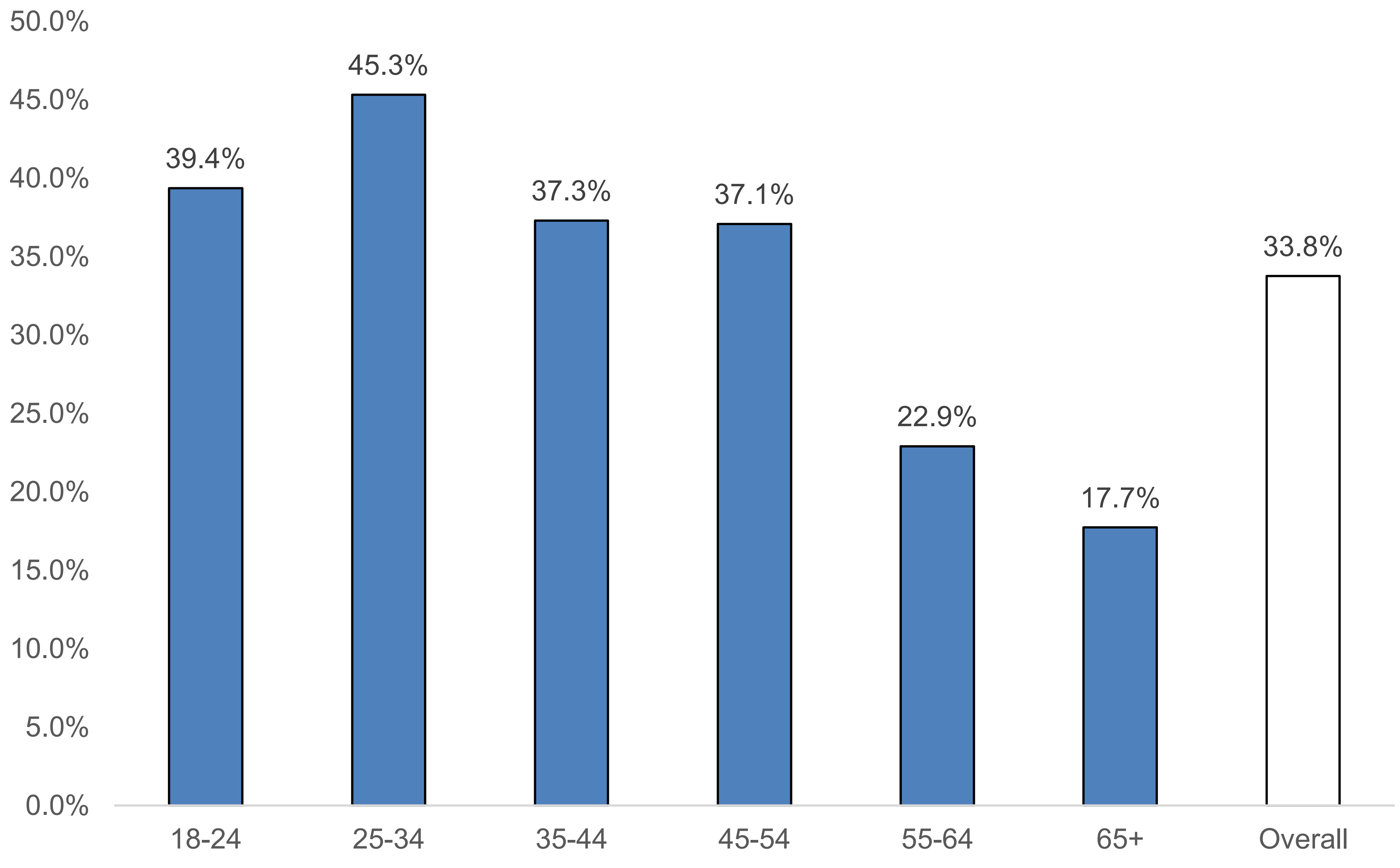


Source: Cowen proprietary Consumer Internet Survey, n=~2500, Jan '16 – Dec '16

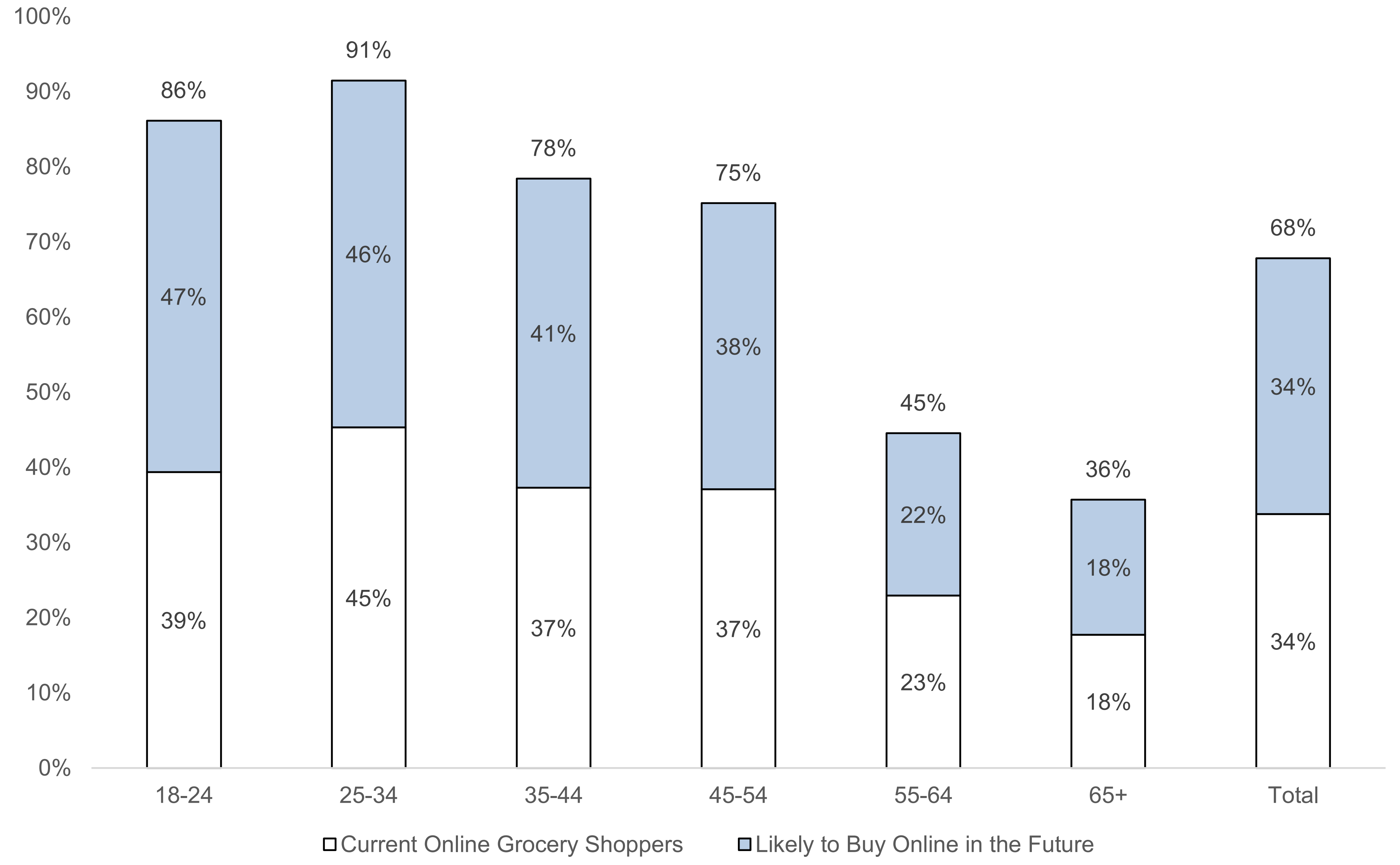
UK Online Grocery Adoption a Positive Indicator for US Trends

- According to our UK Survey of ~1250 consumers, ~34% of respondents indicated they bought groceries online in Jan. ’17, nearly 3x the rate in the US
- Also, another 34% said they would likely buy groceries online in the future vs. 22% in the US
- While US online grocery adoption may not reach UK levels, the UK appears to be a very good proxy for further US adoption

UK Online Grocery Shoppers – Jan ‘17 (% of Grocery Shoppers)



Potential Online UK Grocery Shoppers – Jan ’17 (% of Grocery Shoppers)

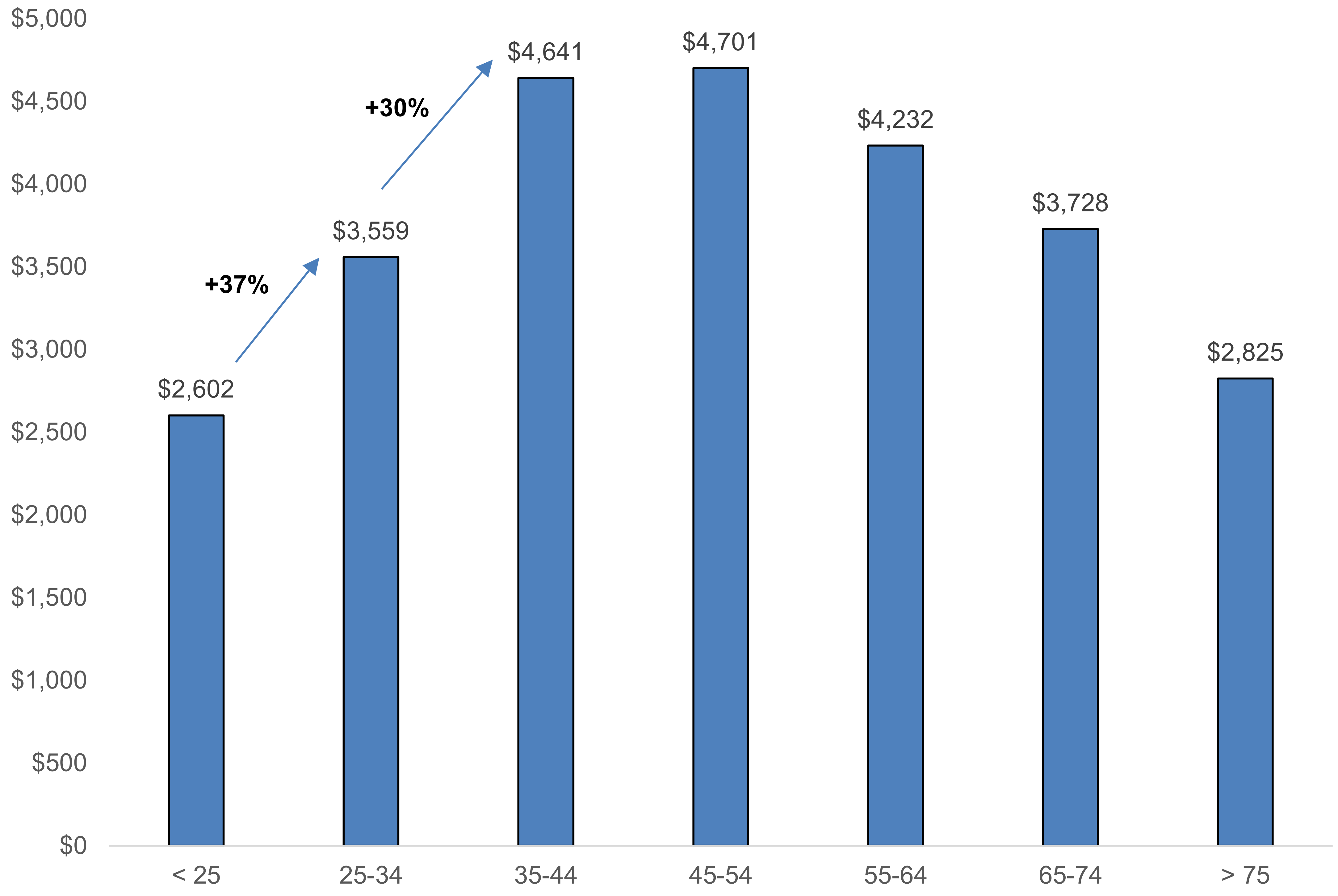


Source: Cowen proprietary Consumer Internet Survey, n=~2500, Jan ‘17

Online Poised for Growth As Millennials' Grocery Spend Rises

- Older Millennials are much more likely to buy groceries online, which should serve as a long term tailwind as they age and enter peak spend years
- According to the BLS, average annual spend on Food & Bev among consumers 35-44 is 30% higher than the age group before it (25-34 / Millennials).
- If historical trends hold, annual Food & Bev spend among older Millennials will continue to grow, with close to 50% of older Millennials likely buying online in the future

Average Spending on Food at Home by Age



Source: U.S. Bureau of Labor Statistics; December 2015 Consumer Expenditure Survey

Amazon ($853.08, Outperform) Using a Multi-Platform Approach to Capture Share Gains

amazon

amazon.com Prime

Amazon Prime members receive FREE Two-Day Shipping for eligible purchases, unlimited streaming of movies and TV shows with Prime Video, unlimited ad-free access to hundreds of Prime Playlists and more than a million songs with Prime Music, the ability to borrow books from the Kindle Owners' Lending Library, and much more all for $99 a year.

Prime now

Prime Now is Amazon's local markets service offering providing 1-2 hour delivery on tens of thousands of items via its standalone mobile app. Prime Now offers members free two hour delivery (and one hour delivery for $7.99) on a wide variety of inventory, including food and beverage items. Prime Now is currently available in ~30 markets in the US.

Prime Pantry

Prime Pantry is a store where Prime members can shop for groceries and household products in everyday package sizes (for example, a single box of cereal). You can fill a virtual box of items from the Prime Pantry store and have them conveniently delivered to your doorstep for a flat delivery fee of $5.99 per box.

amazon fresh

Amazon Fresh, Amazon's complete online grocery offering, offers free grocery delivery for Prime members with the Fresh Add-on and members of their Amazon Household. Same-day and early next morning delivery is available in select regions. We estimate Fresh is no available in 20+ markets despite limited availability a year ago.

amazon go

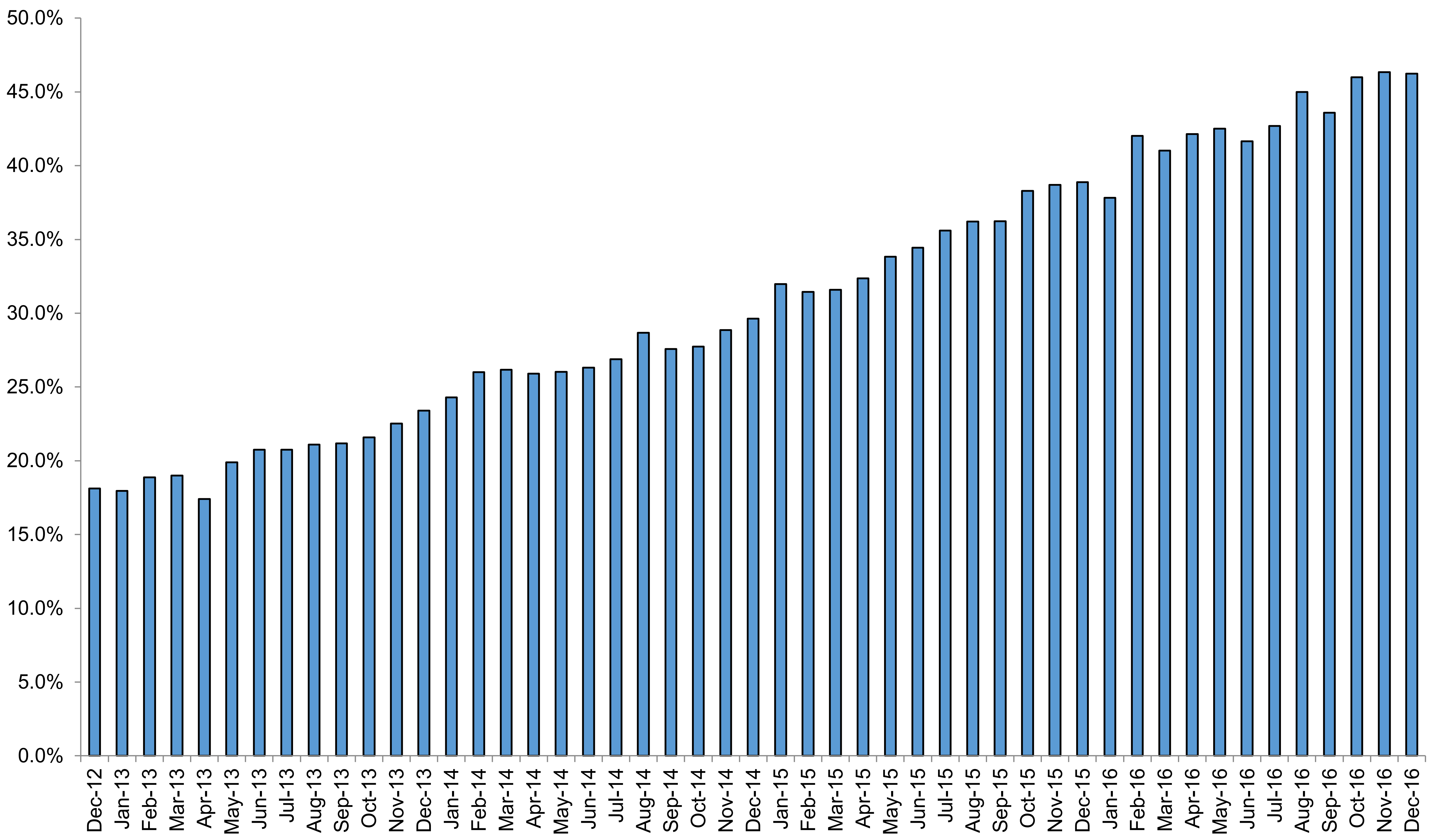
Amazon Go is a grocery/prepared food convenience store that utilizes a variety of advanced technology including computer vision, sensors and machine learning to revolutionize the in-store shopping experience. Customers scan their smartphone when they walk in, select the items they want, and walk out without ever having to wait in line or check out.

Source: Cowen and Company; Amazon.com

Amazon US Prime Households Surpassed 50MM in '16

- In December '16, ~46% of respondents indicated they live in a Prime household, which we estimate corresponds to ~50MM US Prime subscribers, up from 41MM a year prior (+23% y/y).
- For 4Q16, Prime purchasers represented ~58% of total purchasers on average during the quarter, an all-time high and up fr om ~48% in 4Q15.

Prime US Household Penetration Dec '12 – Dec '16 (% of HHs)

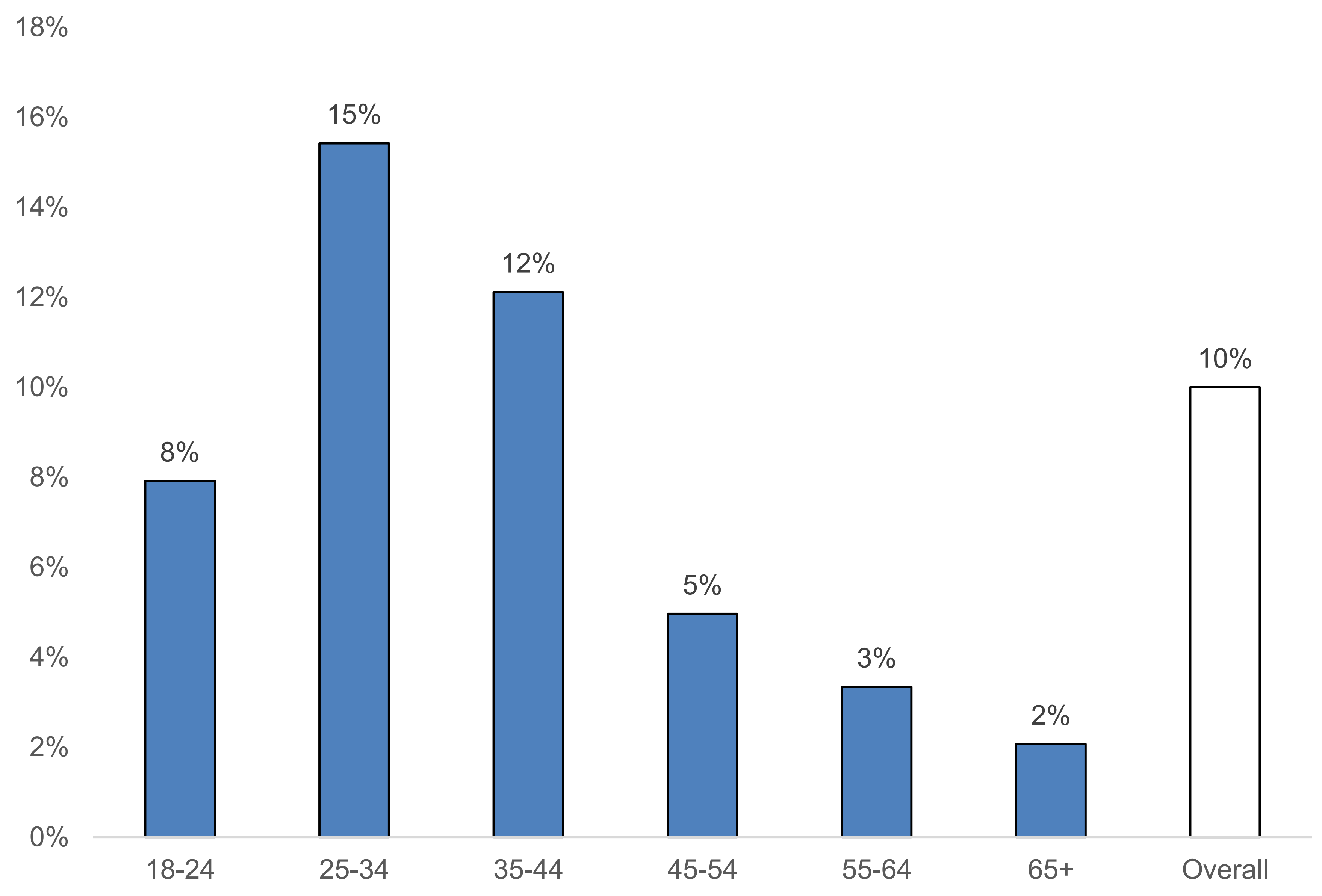


Source: Cowen proprietary Consumer Tracking Survey, n=~2500, December 2016

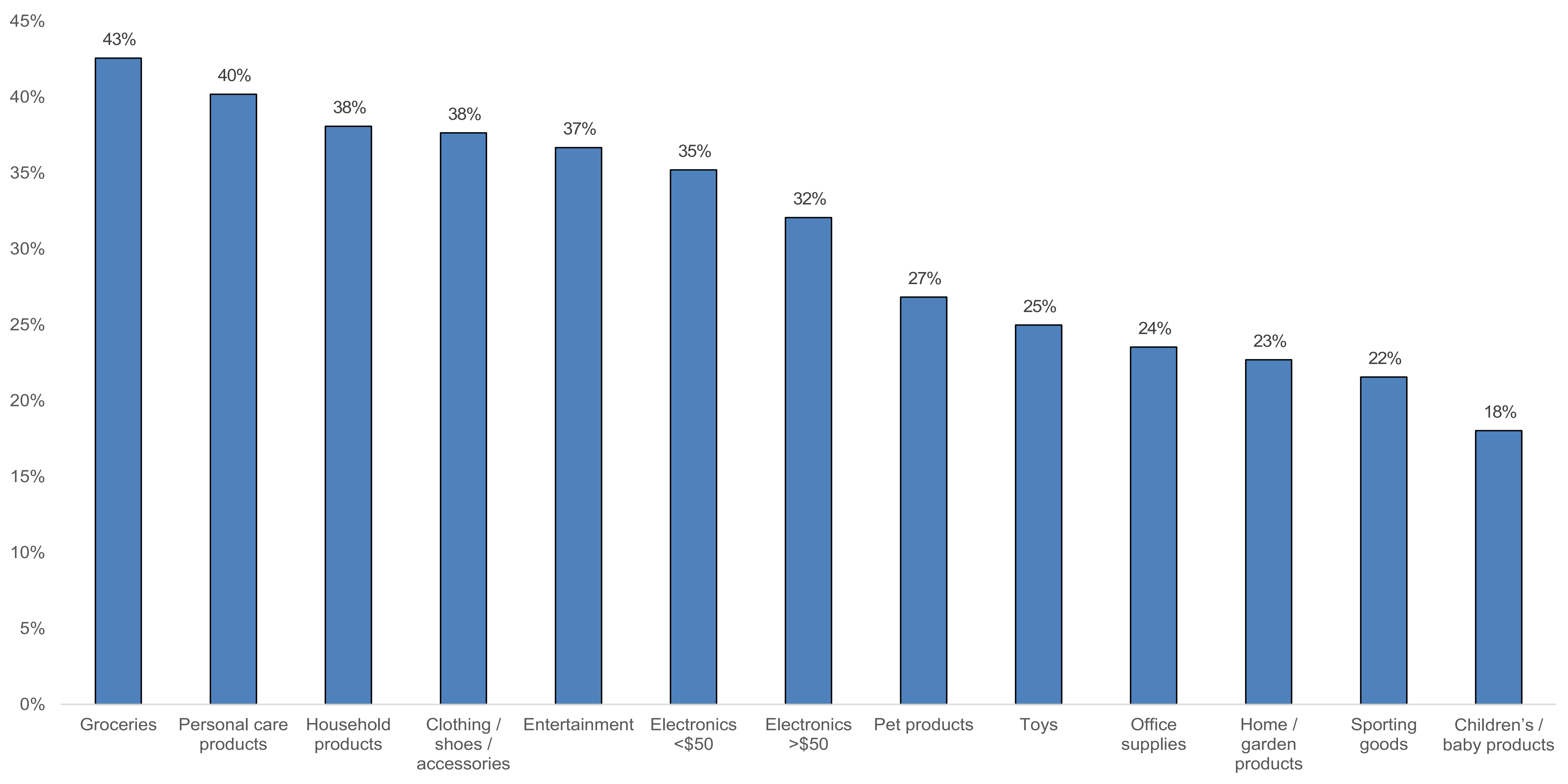
Prime Now Leading Categories: Grocery, Personal Care, Household

- Amazon Prime Now, Amazon's 1-2 hour delivery service of 25K+ goods available in ~29 US markets and ~45 markets globally, has ramped quickly since launching in NYC in late '14
- Per our survey, 10% of US AMZN Prime HHs (or ~5MM) purchased goods on Prime Now each month on average in '16
- Groceries was the #1 shopping category in '16 with 43% of Prime Now Purchasers buying each month (on avg.), followed by Personal Care Products (40%), and Household Products (38%).

Amazon Prime Now Usage – '16 Avg (% of Prime HHs)

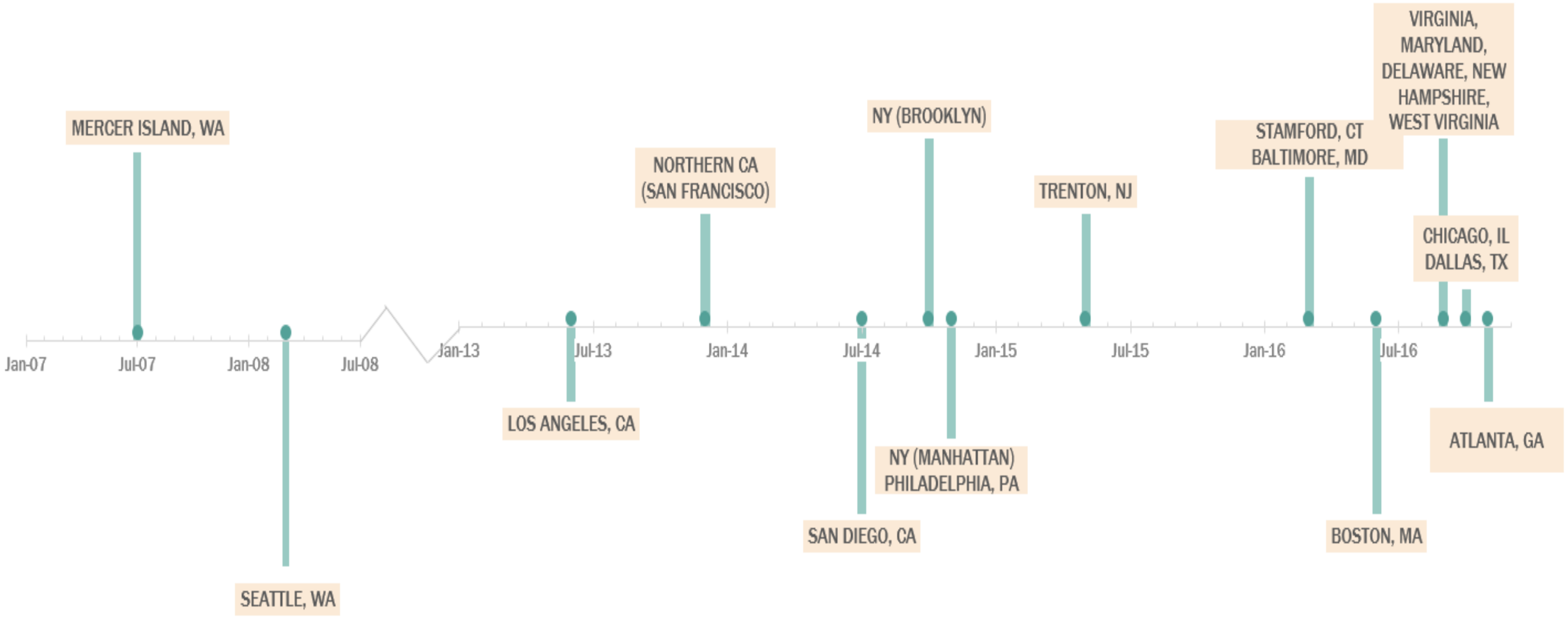


Amazon Prime Now Sales Categories – '16 Avg (% of Prime Now Purchasers)



Source: Cowen proprietary Consumer Internet Survey, n=~2500, Jan '16 – Dec '16

Amazon Fresh Stepped On the Gas in 2016



Source: Amazon.com; Cowen and Company; Press Reports

US Grocery Market Share Analysis

Company	2016E	2017E	2018E	2019E	2020E	2021E	2022E	CAGR 17E-'22E
Walmart	$187,758	$193,247	$198,488	$203,450	$208,536	$213,750	$219,094	2.5%
Kroger	$80,362	$82,890	$85,420	$87,824	$90,016	$92,261	$94,152	2.6%
Amazon (GMV)	$23,783	$29,937	$37,154	$44,964	$53,129	$61,879	$71,428	19.0%
CostCo	$49,186	$50,700	$52,145	$53,512	$54,792	$56,105	$57,321	2.5%
Albertsons/Safeway	$48,682	$50,211	$51,742	$53,197	$54,499	$55,832	$56,975	2.6%
Ahold USA/Delhaize America	$35,636	$36,559	$37,438	$38,300	$39,105	$39,927	$40,725	2.2%
Sams Club	$33,905	$34,922	$35,882	$36,779	$37,607	$38,453	$39,222	2.3%
Publix	$31,716	$32,712	$33,708	$34,654	$35,453	$36,270	$37,011	2.5%
Walgreens	$25,852	$26,369	$26,896	$27,434	$27,983	$28,543	$29,113	2.0%
CVS	$19,789	$20,184	$20,588	$21,000	$21,420	$21,848	$22,285	2.0%
H-E-B Grocery	$17,650	$18,197	$18,743	$19,258	$19,692	$20,135	$20,588	2.5%
Sub-Total	**$554,319**	**$575,929**	**$598,205**	**$620,372**	**$642,231**	**$665,002**	**$687,915**	3.6%
Other Sellers	$681,205	$699,838	$715,292	$733,162	$753,977	$773,672	$794,755	2.6%
Total US Grocery Market	**$1,235,524**	**$1,275,767**	**$1,313,497**	**$1,353,534**	**$1,396,209**	**$1,438,674**	**$1,482,670**	3.1%
Market Share (%)								
Walmart	15.2%	15.1%	15.1%	15.0%	14.9%	14.9%	14.8%	
Kroger	6.5%	6.5%	6.5%	6.5%	6.4%	6.4%	6.4%	
Amazon (GMV)	1.9%	2.3%	2.8%	3.3%	3.8%	4.3%	4.8%	
CostCo	4.0%	4.0%	4.0%	4.0%	3.9%	3.9%	3.9%	
Albertsons/Safeway	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.8%	
Ahold USA/Delhaize America	2.9%	2.9%	2.9%	2.8%	2.8%	2.8%	2.7%	
Sams Club	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.6%	
Publix	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	
Walgreens	2.1%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%	
CVS	1.6%	1.6%	1.6%	1.6%	1.5%	1.5%	1.5%	
H-E-B Grocery	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	
Sub-Total	**44.9%**	**45.1%**	**45.5%**	**45.8%**	**46.0%**	**46.2%**	**46.4%**	
Other Sellers	55.1%	54.9%	54.5%	54.2%	54.0%	53.8%	53.6%	
Total US Grocery Market	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	

Source: Cowen and Company; Company Reports; Supermarket News