

Mizuho Mobile Market Survey 3.0

Big 3 Platforms Remain Dominant; Improvements From Yelp, Pinterest and LinkedIn

Summary

In May 2016, we conducted our third mobile survey of U.S. smartphone users, and came away with some interesting takeaways: 1) Google continues to dominate mobile search but we saw an improvement with people going to Yelp for local info; 2) other social apps like Pinterest and LinkedIn also saw an increase in people using those apps, and are well ahead of Twitter; and 3) Amazon's lead in mobile shopping continues to widen. We remain bullish on **GOOGL**, **FB**, and **AMZN** based on our third survey results.

Key Points

- Overall smartphone usage** – In general, we found that the vast majority of people still use Google to find information (~80%) – whether it is through a Google search app, directly in a browser (Chrome or Safari), or via Google Now voice search. Facebook Messenger is the most popular way people communicate on their phones (after texting and calling), and Yelp also saw strong improvement in local search - 29% of users now use Yelp to find a local restaurant or store, up from 23% in November 2015.
- Social Media** – In general, it appears more people are utilizing social media apps, with Facebook remaining the leading social site by a wide margin. When we asked which social apps people are using and would continue to use the most, Pinterest came in second at 35% (up 6 points from November), and LinkedIn came in third at 33% (+4 points). Twitter also increased 3 points but didn't make the top 4 social sites that people use.
- mCommerce** – 67% of people now shop on Amazon's mobile app, up from 61% just six months ago. Perhaps more importantly, the average spend on Amazon has increased by ~20% and is now more than 4 times more than runner-up eBay. We believe that Amazon's Prime flywheels are in full effect - as Prime users not only grow in users, but increase their engagement and purchase volume.
- We Remain Buyers of GOOGL, FB, and AMZN shares.** With our recent survey results, which highlight the commanding dominance of these three companies on mobile, we have greater conviction that these stocks will generate solid returns through 2016.

Company	Symbol	Price (6/06)	Rating		
			Prior	Curr	PT
Alphabet, Inc.	GOOGL	\$730.06	-	Buy	\$1,010.00
Amazon.com, Inc.	AMZN	\$726.73	-	Buy	\$810.00
eBay Inc.	EBAY	\$23.99	-	Neutral	\$26.00
Facebook Inc.	FB	\$118.79	-	Buy	\$140.00
LinkedIn Corporation	LNKD	\$135.70	-	Neutral	\$145.00
Netflix, Inc.	NFLX	\$100.74	-	Neutral	\$109.00
Pandora Media, Inc.	P	\$12.17	-	Neutral	\$11.00
Twitter, Inc.	TWTR	\$15.27	-	Neutral	\$16.00
Yahoo! Inc.	YHOO	\$37.07	-	Neutral	\$38.00
Yelp Inc.	YELP	\$27.18	-	Neutral	\$24.00

Source: Bloomberg and Mizuho Securities USA

Neil A. Doshi
 Managing Director, Americas Research
 +1 415 268 5519
 neil.doshi@us.mizuho-sc.com

San Q. Phan
 +1 212 205 7858
 san.phan@us.mizuho-sc.com

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Mizuho Mobile Market Survey 3.0

This marks our third U.S. Mobile Market Survey, which we first conducted in June 2015, and then in November 2015, to measure mobile usage progression in the U.S. **During the last week of May 2016, we surveyed over 1,000 people in the U.S. who are smartphone owners to gauge how people's mobile usage and tendencies have changed.** As we've noted before, we believe that the trend in mobile is one of the most disruptive forces to the Internet, and we want to measure and analyze how people are using their mobile devices, and more importantly, how usage will change over time. Our latest survey is broken into five key components:

- 1) **Overall smartphone usage** – How are people searching for information? Are people increasingly going to specialized apps to find information? In general, we found that the vast majority of people still use **Google** to find information – be it through a Google search app, or directly in a mobile browser (e.g. Chrome and Safari).
- 2) **Communicating** – Aside from texting and calling, how else are people communicating on their phones? Seems like what has been consistent has been **Facebook** Messenger. Messenger now has approximately 900 million MAUs (as of April 2016), and per our survey, is the leading way people communicate with others outside of texting and calling – 47% use Facebook Messenger, up from 41% in our November 2015 survey.
- 3) **Local Search** – What was most surprising was **Yelp's** improvement – 29% of respondents now use Yelp to find a local restaurant or store, up from 23% in November 2015. This is a substantial increase, and we believe that Yelp's improvements to its mobile app have been a key contributor. However, most people still use Google to find local information, as opposed to going directly to Yelp or other specialized apps.
- 4) **Social Media** – Which social media apps do people use? How are people's attitudes towards specialized social apps changing? We saw some of the biggest changes in the survey here. In general, it appears that more people are increasingly finding social media sites useful, with **Facebook** maintaining its leading position at 71%. **Pinterest** showed the most improvement, with 35% of people saying they are active users and plan on using Pinterest again, up from 29% in November. **LinkedIn** also showed nice improvement, up 4 points to 33% of people planning on using the site again, and **Twitter** actually showed a 3-point improvement to 29%.
- 5) **mCommerce** – Where do people go first when they shop on their mobile phones? How much do they spend on various eCommerce sites? **Amazon** remains the #1 place for mobile shopping by a wide lead, followed by **eBay** and **Google**. We also asked people how much they spend on various sites per month.

People spend around \$160 per month on Amazon, or about \$1,880 per year, which is more than 4 times more than they spend on eBay (~\$35 per month).

Our Survey results reaffirmed our top picks in Facebook, Amazon, and Google. On the margin, LinkedIn and Yelp showed very nice improvement in user penetration, but it is still too early to tell if these positive trends will have a corresponding impact to revenue growth.

And now, we move on to the Mizuho Mobile Survey 3.0 results.

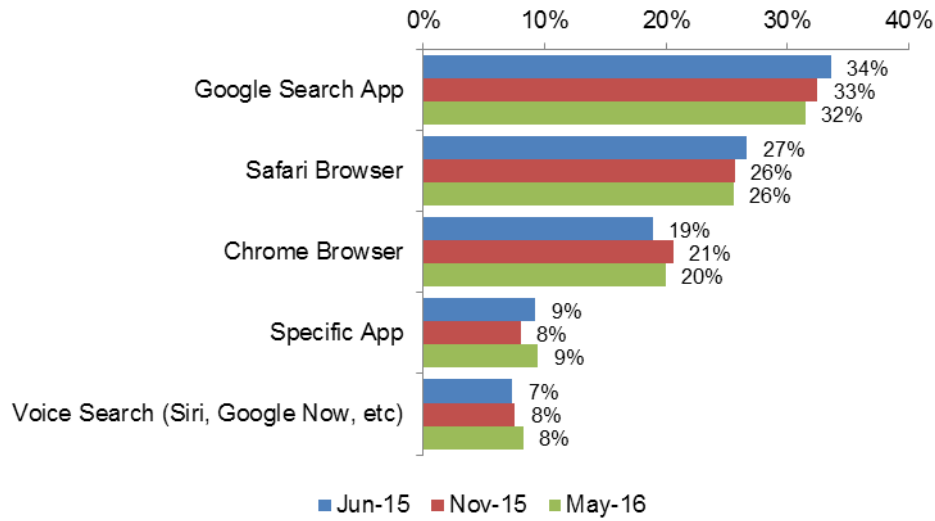
1. Overall Smartphone Usage

Search & Discovery

Nearly a year after our initial survey, it appears that the vast majority of mobile users in the U.S. are still completing traditional search queries in mobile browsers or the Google search app versus doing searches within specific apps. Google remains the clear winner in this scenario given the Google search app, Apple's Safari browser, Google's Chrome browser, and Google Now all utilize the Google search engine. **The combined share for these Google-powered search engines in our latest survey was ~80% and comparable to our prior two surveys.** People are still primarily using the Google Search app as their go-to source for finding information on their phone. But, the Google's search app has been modestly trending down, from 34% in June 2015 to 32% in May 2015. Google has indicated that TAC could go up due to mobile, and this could be partially due to Google continuing to do search deals where Google would pay a certain TAC to preferred search partners.

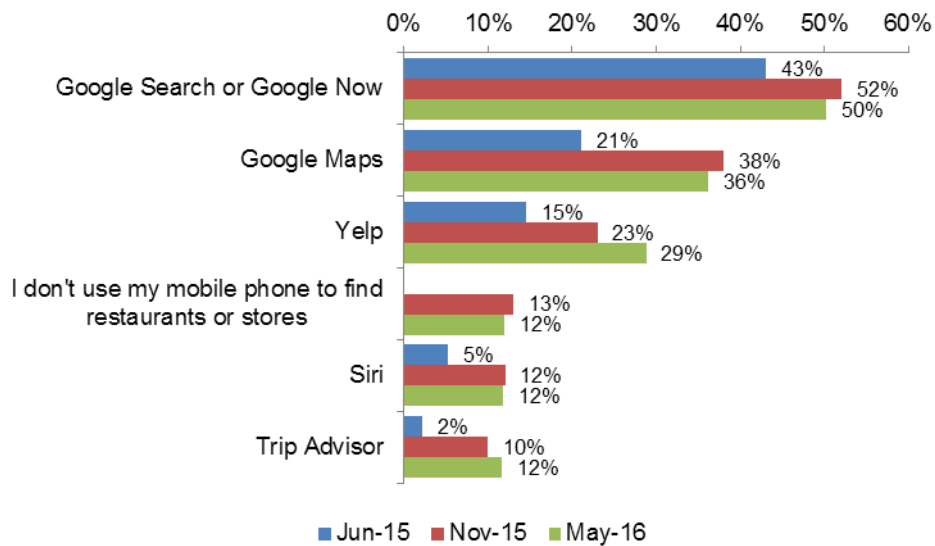
What was most surprising was **Yelp** improving its usage percentage –29% of users now use Yelp to find a local restaurant or store, up from 23% in November 2015. This is a substantial increase, and we believe that Yelp's improvements to its mobile app were a key contributor. However, most people still use Google to find local information, as opposed to going directly to Yelp or other specialized apps. And with Google now starting to ramp up ads on Maps, we think Google could take share from Yelp.

Exhibit 1: When online using your smartphone, where do you go most often to find information?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015).

Exhibit 2: When you are using your mobile phone to find a local restaurant or store, what apps or mobile sites do you use? (Select all that apply)

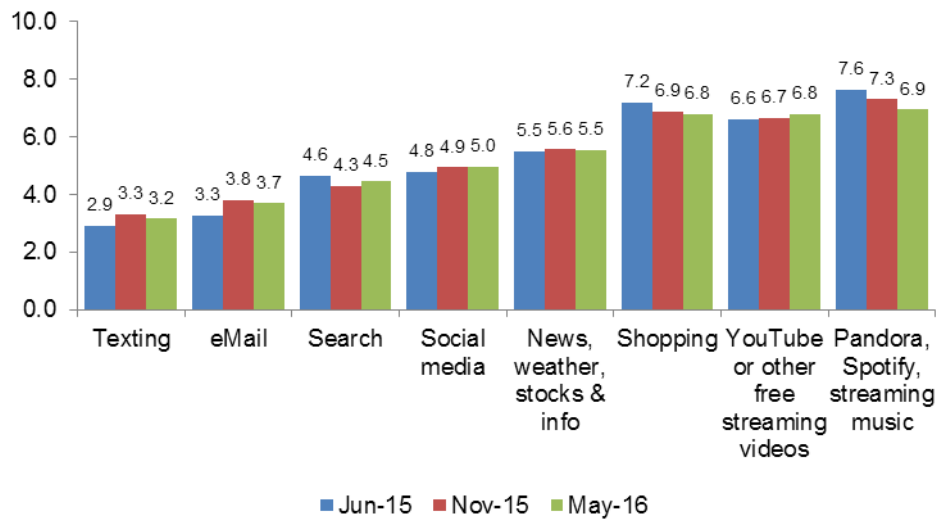


Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015). Question modified from single-choice to multiple-choice in Nov-15.

Time Spent

The vast majority of time spent on mobile devices is still centered on traditional communications (texting and email). Search continues to be the third most frequent activity. **Whereas search and social media were neck and neck in terms of popularity back in our June 2015 survey (4.6 and 4.8, respectively), search has pulled ahead to 4.5, while social media is now 5.0.** Streaming music is also becoming more popular, from 7.6 in June 2015 and 7.3 in Nov 2015 to 6.9 in our latest survey.

Exhibit 3: When you are on your mobile device, how do you spend your time? (1=most time spent, 11 = least time/no time spent)

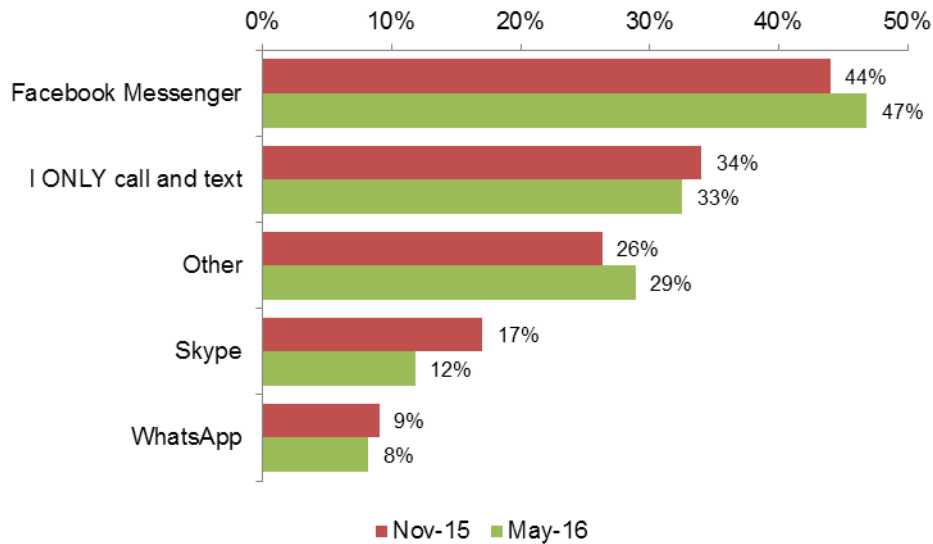


Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Communicating on Smartphones

How are people communicating on their smartphones outside of calling and texting? **Facebook Messenger is becoming the new, dominant norm, with ~47% of people saying they use the app to communicate with others outside of calling/texting. This is up from 44% in our November 2015 survey.** A while back, Facebook forced Facebook users to download the Facebook Messenger app to use the direct messaging service, and it now appears that a large percentage of people are using Facebook Messenger as a key tool for communicating. This has big implications, as FBM could be the next new leg of revenue growth for the company. At F8, Facebook’s developer conference, the company announced that it is working with retail partners to drive commerce on Messenger, and Facebook is adding AI to make automated responses faster and more natural. We’ve seen this with Google’s InBox App, and we’ve been surprised at how certain “suggested responses” are very similar to how we would have responded to various emails.

Exhibit 4: Outside of call and text, what is your most frequent means of communication?



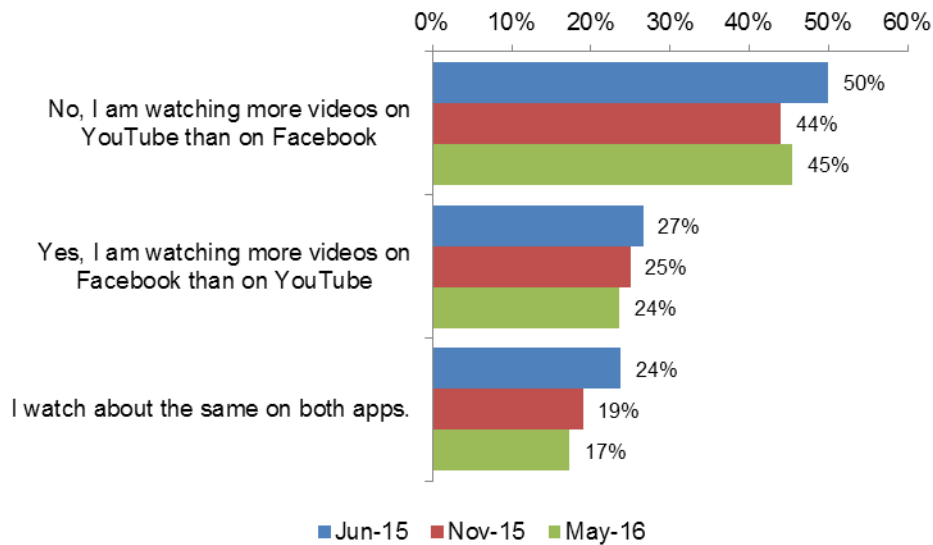
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Mobile Video

YouTube continues to be the dominant online video service, with 45% of people watching more videos on YouTube vs. Facebook. 24% of respondents said that they watch more mobile videos on Facebook than on YouTube (down slightly from 25% in November 2015 and 27% in June 2015), but perhaps more telling is that the number of respondents who watch more videos on YouTube than Facebook declined from 50% in June 2015 to 44% in November 2015 and 45% in May 2016..

While YouTube is still the dominant mobile video source (excluding streaming video subscription services), we believe that more people are watching videos on both sites comparably, and there are other competing apps that are making headway into video viewing, including SnapChat, Vimeo, Twitter, Twitch, and others.

Exhibit 5: Over the last 3 months, do you find yourself watching more online videos via Facebook than YouTube?



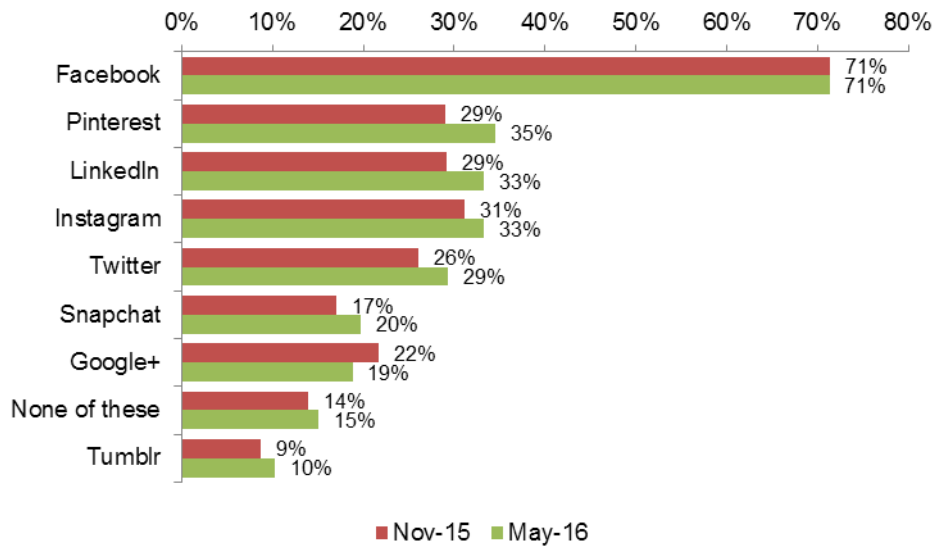
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

2. Social Media on Mobile

Facebook continues to dominate social media on mobile device with its core Facebook app – 7 out of every 10 people use Facebook, the same levels from half a year ago. There was a general improvement across the board for social media apps which indicates to us that more people are finding value in those apps and engaging with them.

- 1) There is a large market for specialized social media apps, as evidenced by the cluster of apps after Facebook, and it is not a zero sum game with Facebook, in our opinion. After Facebook, several other key social media apps (Pinterest, LinkedIn, Instagram, and Twitter) have gained users and are in a tight usage range spanning 29%-35%. Instagram fell from 2nd place in our last survey to 4th place this time around.
- 2) Pinterest had the biggest improvement, going from 29% in our November survey to 35%.
- 3) LinkedIn also showed nice improvement since our last survey, expanding penetration rate by 4-pts to 33%.
- 4) Google+ continues to have a ~20% penetration rate, and we are surprised that it remains that high.

Exhibit 6: Which social media apps do you use?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

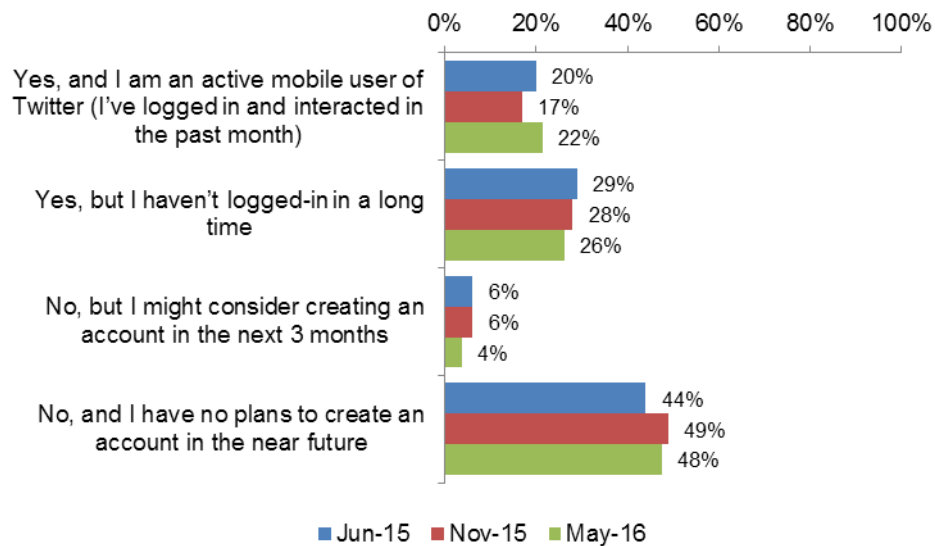
Next, we wanted to dive a bit deeper into some of the social apps. We wanted to know if people have accounts, if they plan on coming back to those social sites, or if they never plan on visiting those sites.

Twitter (TWTR, Neutral)

Results were slightly positive. In June 2015, about 20% of respondents said they had an account and were active users, but in November 2015, that fell to about 17%. In our most recent survey, the active user percentage increased to a record high 22% within our survey. We believe that this could be partially due to increased video usage and incorporating Periscope into the core Twitter app.

Former Twitter users who haven't logged in for a long time also showed slight improvement, going to 26% from 29% in June 2015 and 28% in November 2015. The people who said they have no intention of creating a Twitter account was generally constant at 48% vs. 49% in November (and still above the 44% we saw in June 2015).

Exhibit 7: Do you have a Twitter Account?

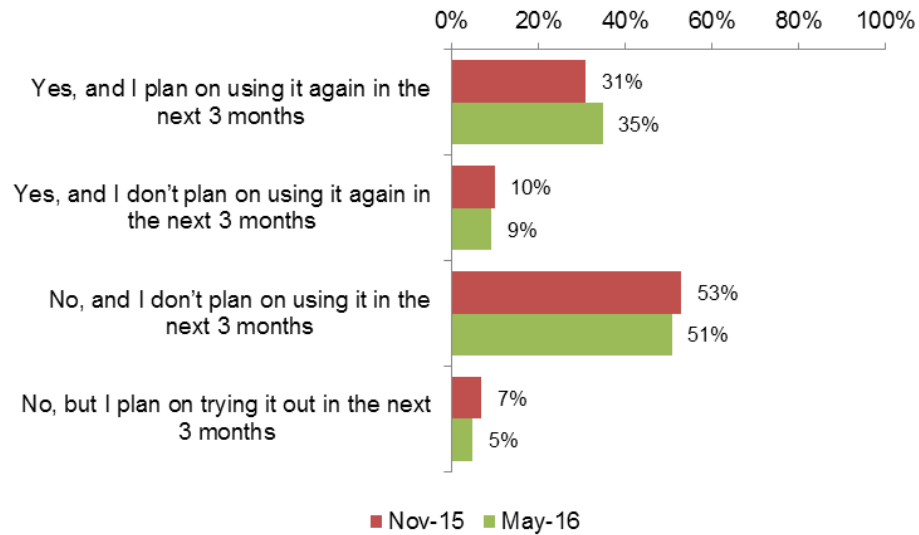


Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

LinkedIn (LNKD, Neutral)

Results were positive. In May, 35% of respondents said that they are active users, up from 31% in November 2015. We still see inherent value in LinkedIn, and with compelling improvements to the mobile app, along with more content being pushed to users, we believe that people could be engaging more with the LinkedIn app.

Exhibit 8: Have you used LinkedIn in the past 3 months?



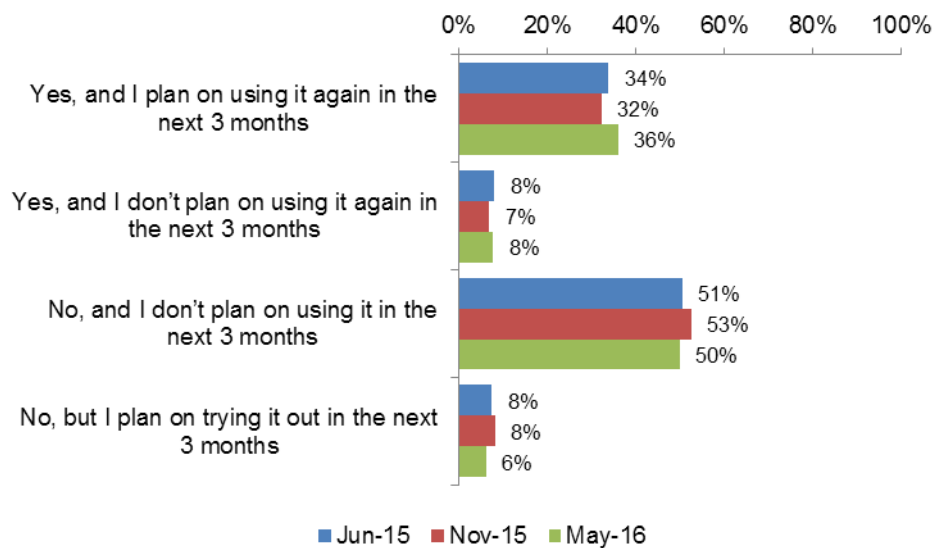
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Pinterest

Pinterest showed the most improvement, with active users increasing from 32% in November 2015 to 36% in May 2016. We believe that Pinterest’s redesigned app that launched on April 19, 2016 was the company’s fastest and cleanest app yet. The new, sleeker app experience could have resulted in more active users wanting to come back to Pinterest.

In May, 50% of respondents said they haven’t used Pinterest in the past 3 months and don’t plan on using Pinterest in the next 3 months. This is down from 53% in November, which is also an improvement.

Exhibit 9: Have you used Pinterest in the past 3 months?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

3. *mCommerce*

Mobile commerce trends remain strong, growing north of 40% and outpacing the desktop e-commerce market by more than 3.5x, according to comScore data. Mobile now represents nearly 20% of total e-commerce sales. Click-through rates on mobile are only ~1.5%, or roughly 1/3 of PC click-through rates of ~4.5%. We believe this gap will narrow with better mobile UIs and the rise of digital wallets such as Apple Pay and PayPal – further fueling mCommerce sales.

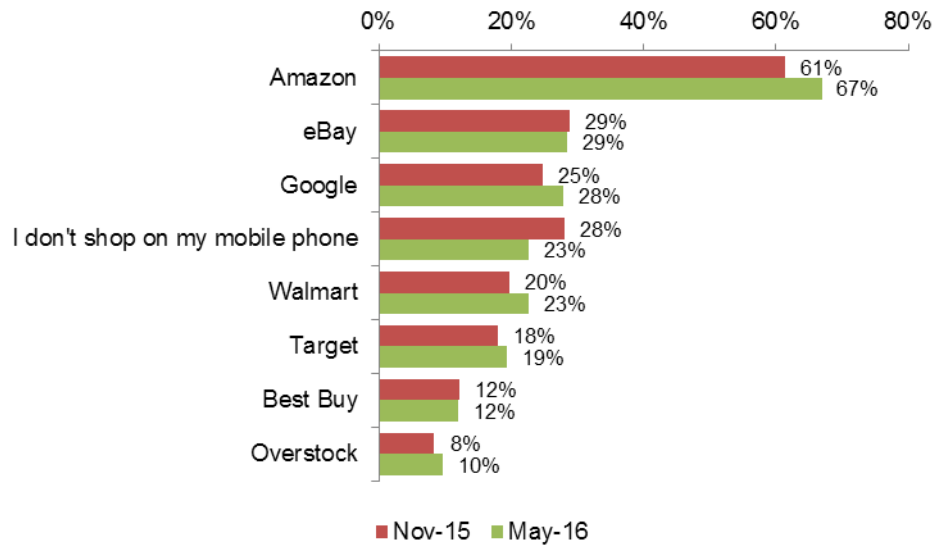
We believe that Amazon will continue to be a big beneficiary of mCommerce, given the strong Prime membership base, pushing into new categories, launching private label products, and Internet of Things efforts that will drive ease of ordering (Alexa, Dash Button, etc.).

Back in June 2015 when we asked where people go first to start their mobile shopping experience, **Amazon** was the clear leader by a wide margin – 45% of people said they started their mobile shopping experience on Amazon, followed by Google at 16% and eBay at 6%.

In November 2015 and this time around, we asked people where they generally shop on their smartphones. To no one's surprise, **Amazon** remains number one, but we were impressed with the company's growing penetration rate among mobile shoppers – 67% of respondents make mobile purchases on Amazon, up materially from 61% in November.

eBay was the next at 29%, steady from our prior survey. Back in November, we noted that 29% was higher than we would have thought, but this survey confirms the company's standing in the rankings. **Google** came in third, as 28% of respondents said they now shop on Google on their phones, up from 25% in November 2015. We have previously noted **Walmart**'s push in growing its online business, particularly with expanding its online assortment, and our surveys results indicate the company is gaining share – 23% of smartphone owners now shop at Walmart, up from 20% six months ago.

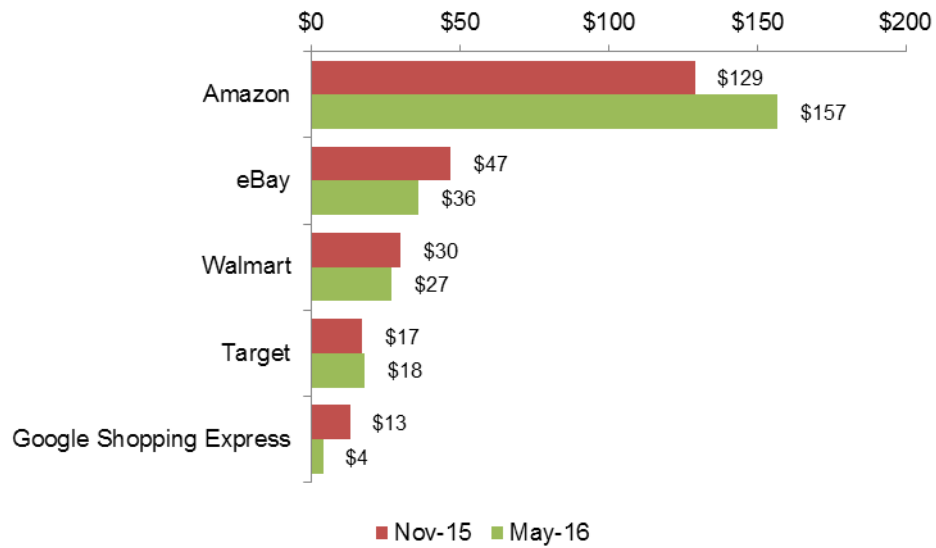
Exhibit 10: Which mobile sites do you use on your phone for shopping? (Select all that apply)



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Finally, we wanted to get a sense as to how much people are spending on different sites. We found that our respondents are spending more on Amazon now, about \$160/month and up from \$130/month back in November 2015. We believe this rise continues to be fueled by a growing number of Prime members such as ourselves. Our survey indicated eBay saw the largest decline with monthly spend at \$36, down from \$47. This supports our belief eBay continues to concede online share to others. Spending at Walmart and Target were relatively flat, while Google Shopping Express struggles to be relevant according to our respondents.

Exhibit 11: About how much money have you spent on online shopping from the following sites or apps in the past 30 days?



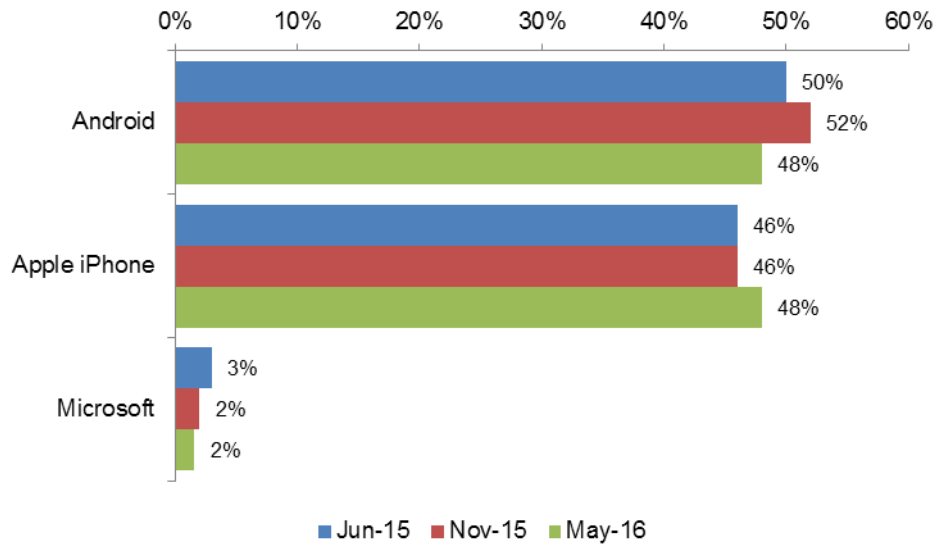
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Appendix: Mizuho Mobile Market Survey 3.0

Below is the full survey from our May 2016 Mobile State of Affairs. Please contact us to discuss any of the additional findings, or for copies of the raw data or charts.

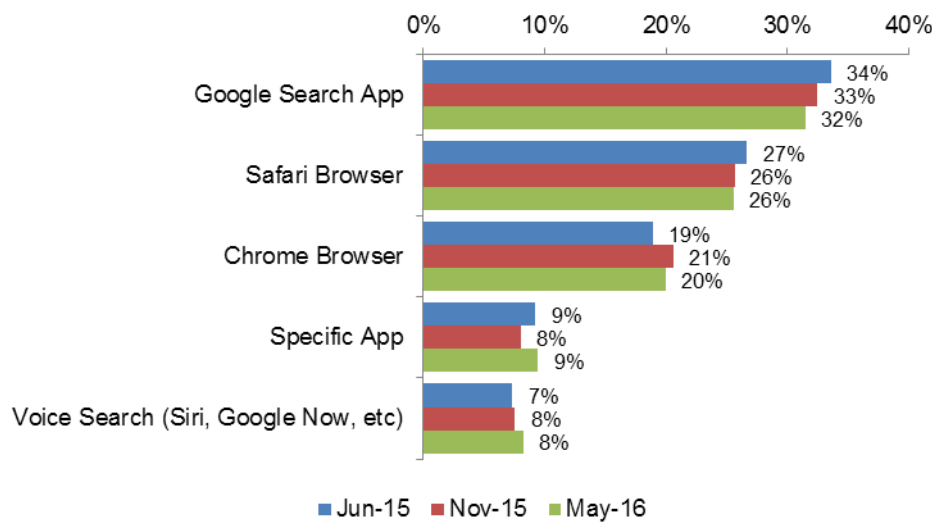
1. Mobile Overview

Exhibit 12: What type of Smartphone do you regularly use?



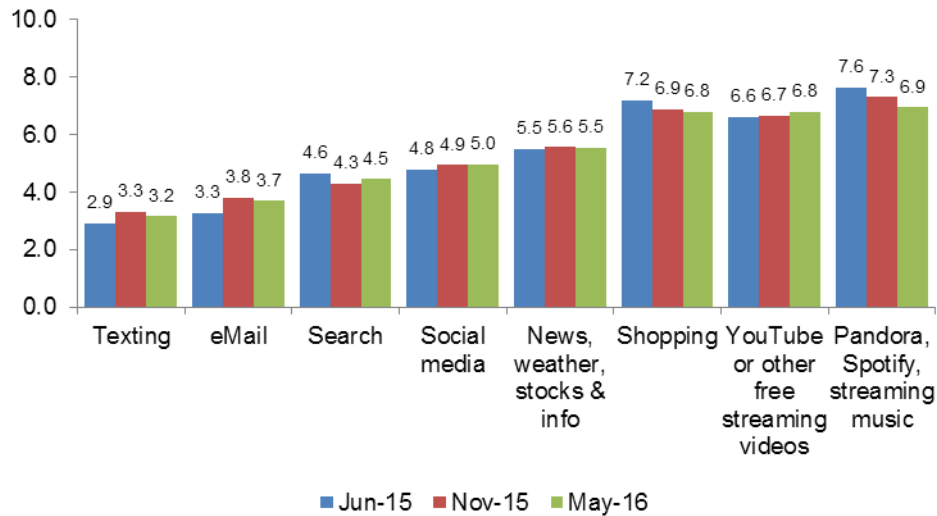
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 13: When online using your smartphone, where do you go most often to find information?



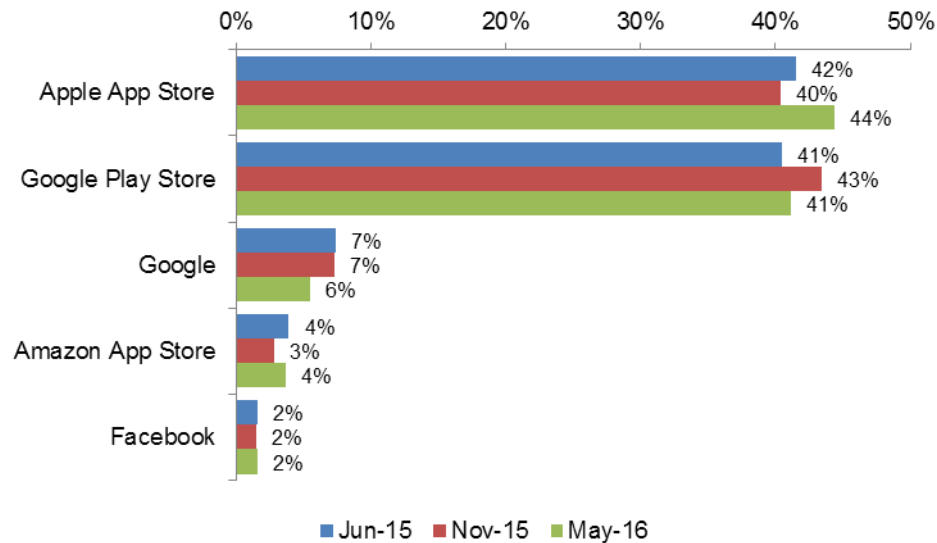
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 14: When you are on your mobile device, how do you spend your time? Please Rank Order from most time (being first) to least time (being last) in the drop boxes below. (1=most time spent, 11 = least time/no time spent)



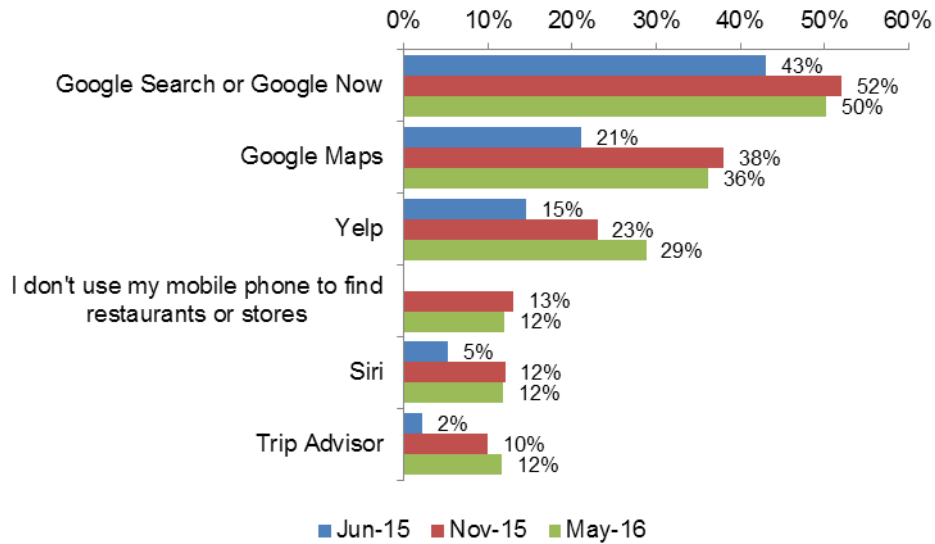
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 15: When you are looking to download a new app to your phone, where are you most likely to first go to look for that app?



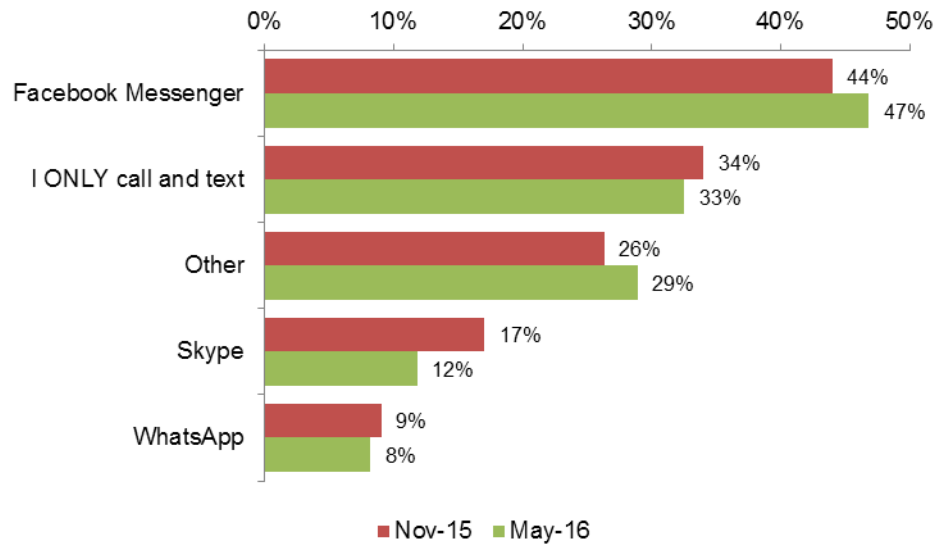
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 16: When you are using your mobile phone to find a local restaurant or store, what apps or mobile sites do you use? (Select all that apply)



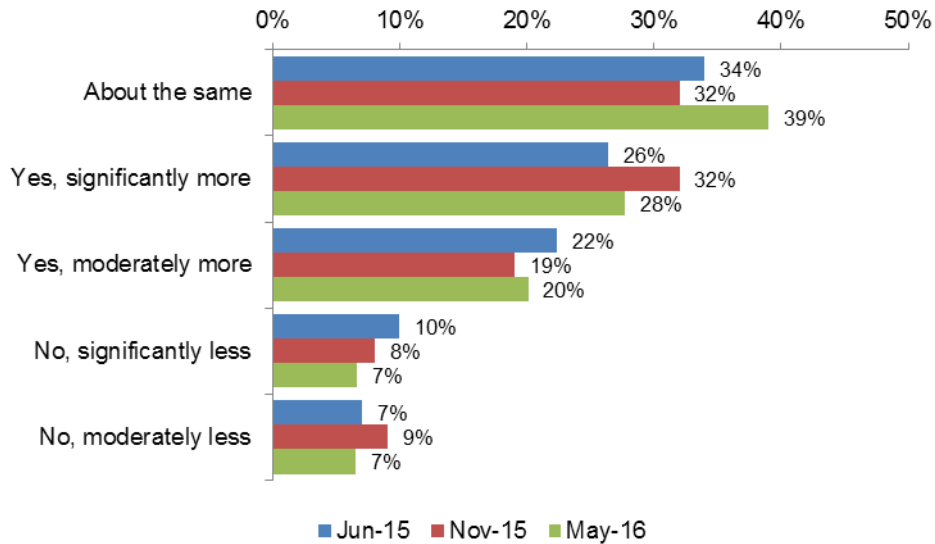
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015). Question modified from single-choice to multiple-choice in Nov-15.

Exhibit 17: Outside of call and text, what is your most frequent means of communication?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

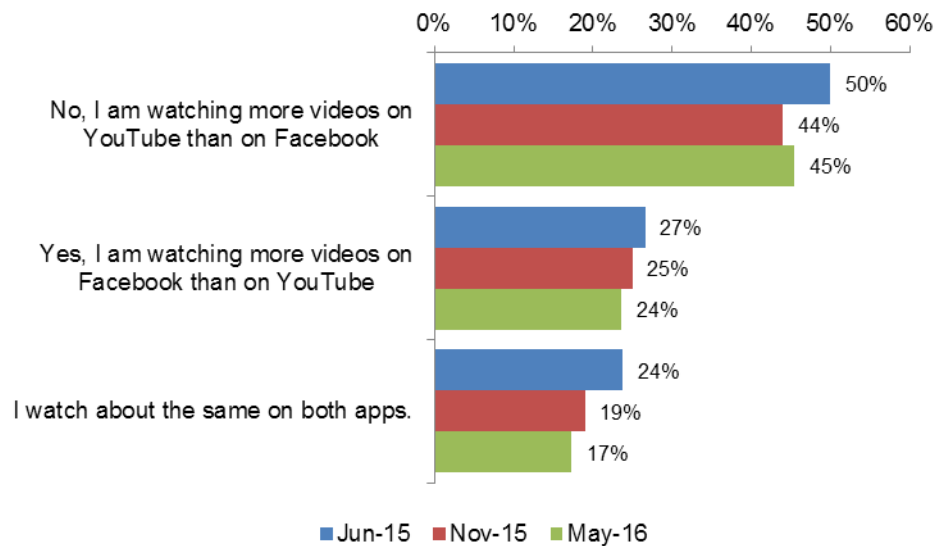
Exhibit 18: When comparing today versus a year ago, are you accessing the Internet from your phone more than your computer?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

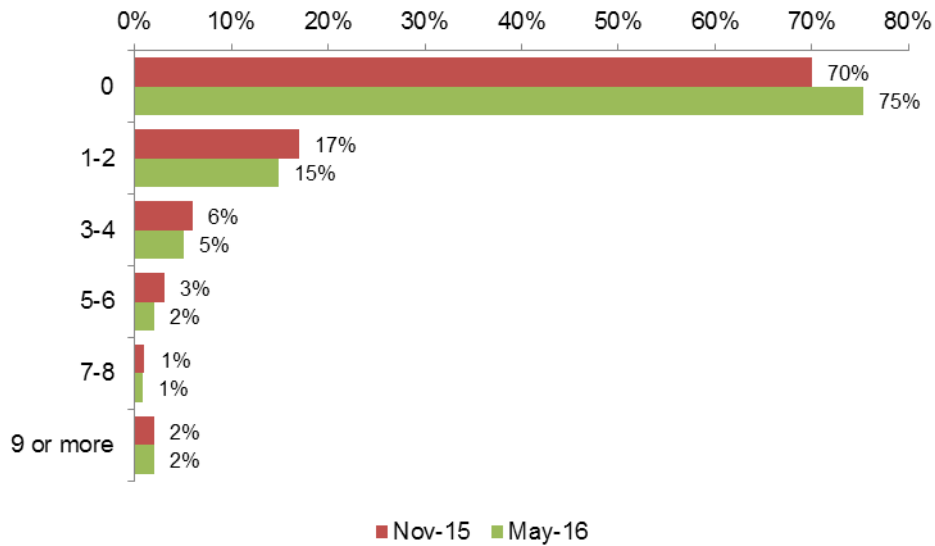
2. Facebook Vs. Google

Exhibit 19: Over the last 3 months, do you find yourself watching more online videos via Facebook than YouTube?



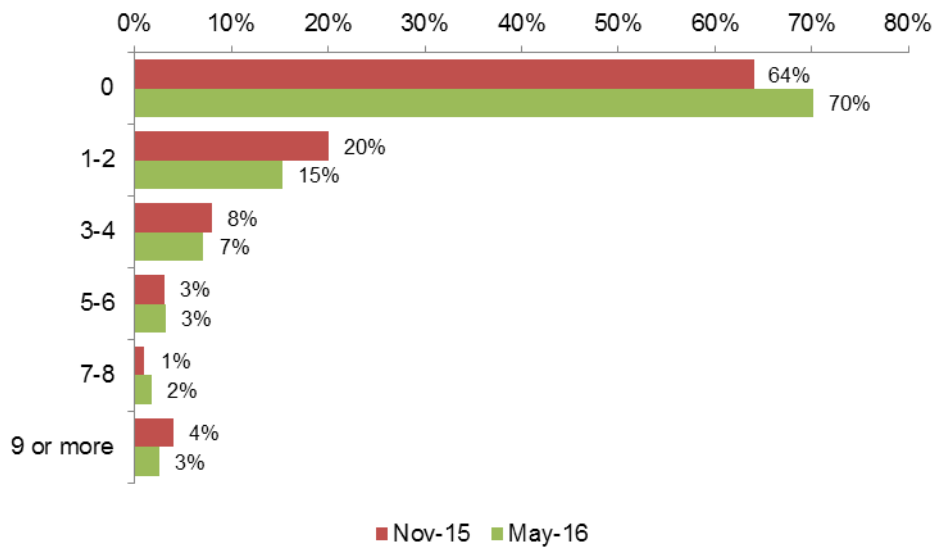
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 20: How many apps have you downloaded from Facebook in the past year?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

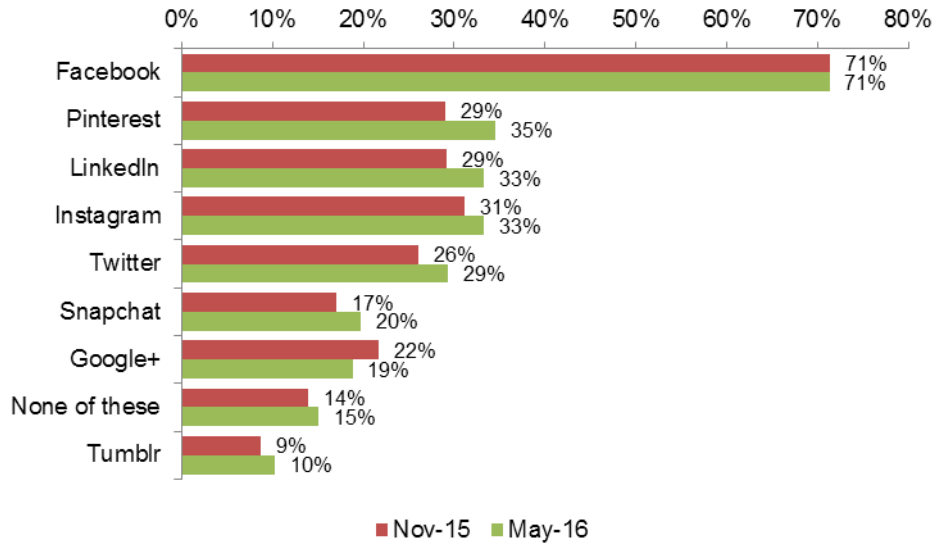
Exhibit 21: How many apps have you downloaded from Google Search in the past year? (Not Google Play app store)



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

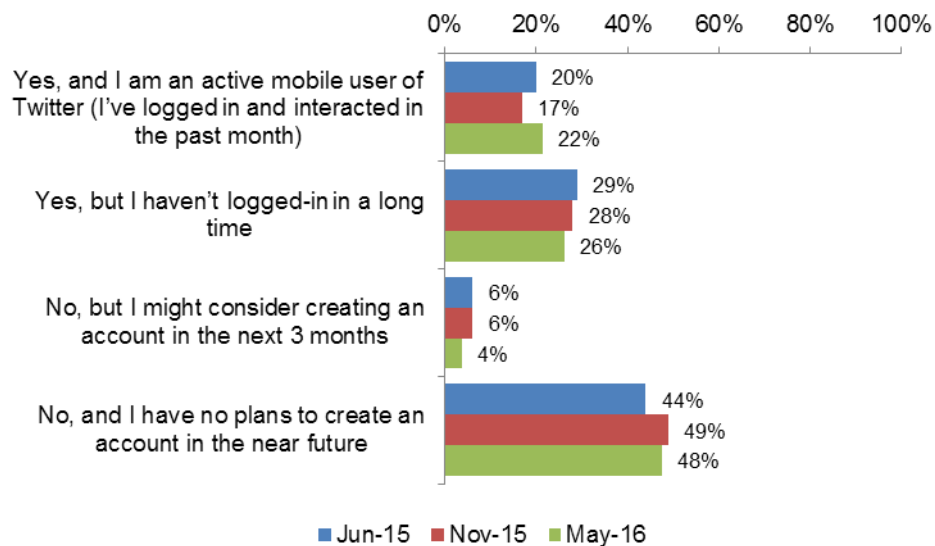
3. Social Media Trends on Mobile

Exhibit 22: Which social media apps do you use?



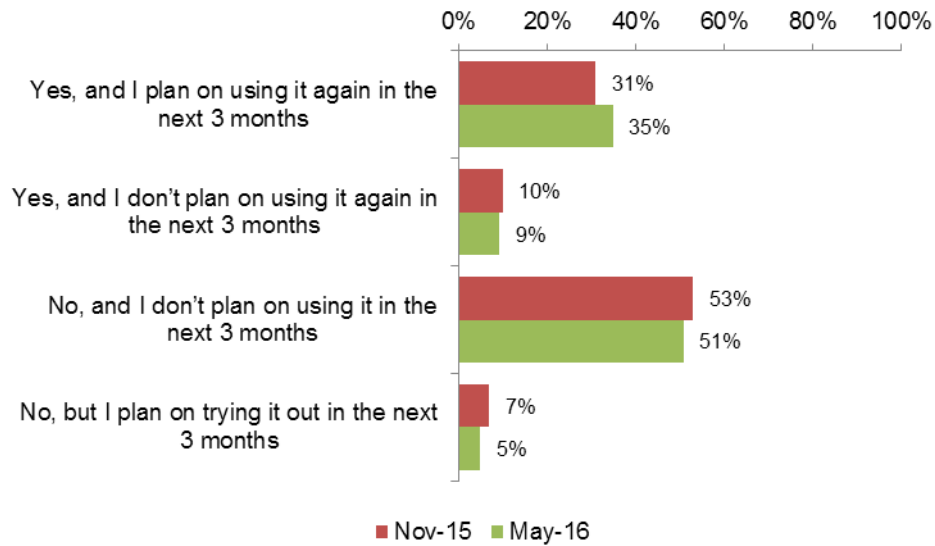
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Exhibit 23: Do you have a Twitter account?



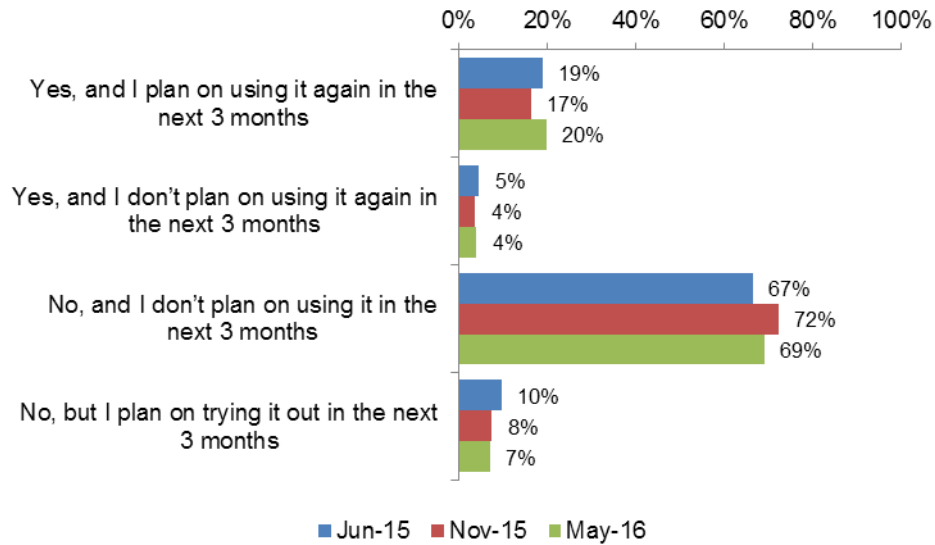
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 24: Have you used LinkedIn in the past 3 months?



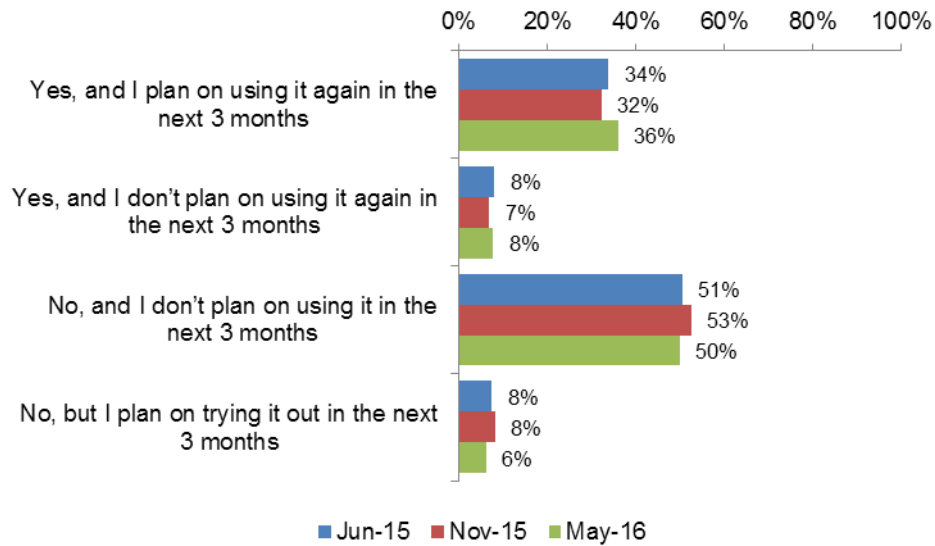
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Exhibit 25: Have you used Snapchat in the past 3 months?



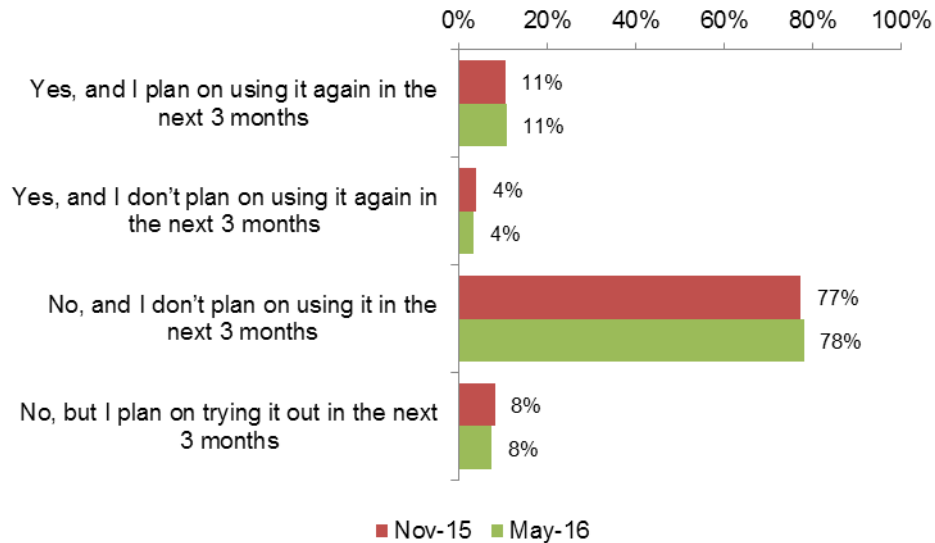
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 26: Have you used Pinterest in the past 3 months?



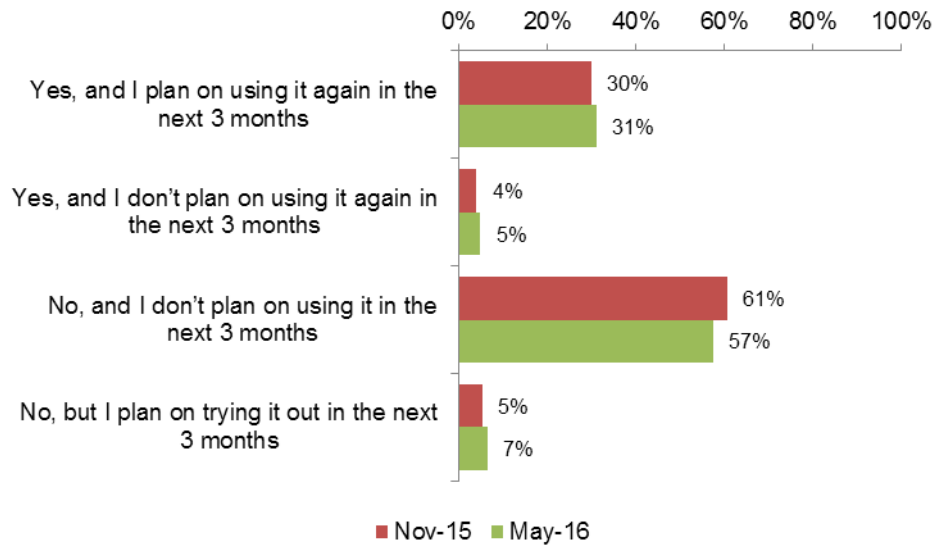
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015), N= 1,028 (June 2015)

Exhibit 27: Have you used Tumblr in the past 3 months?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

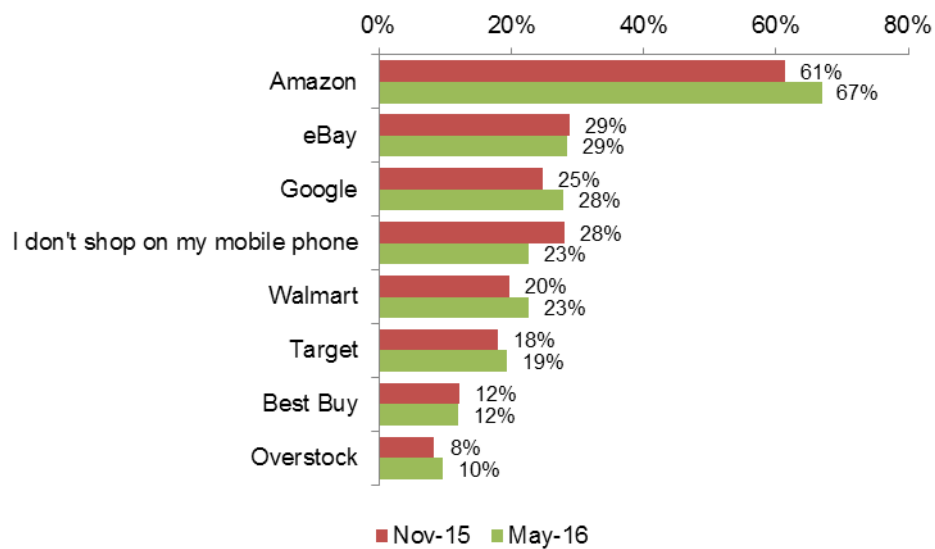
Exhibit 28: Have you used Instagram in the past 3 months?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

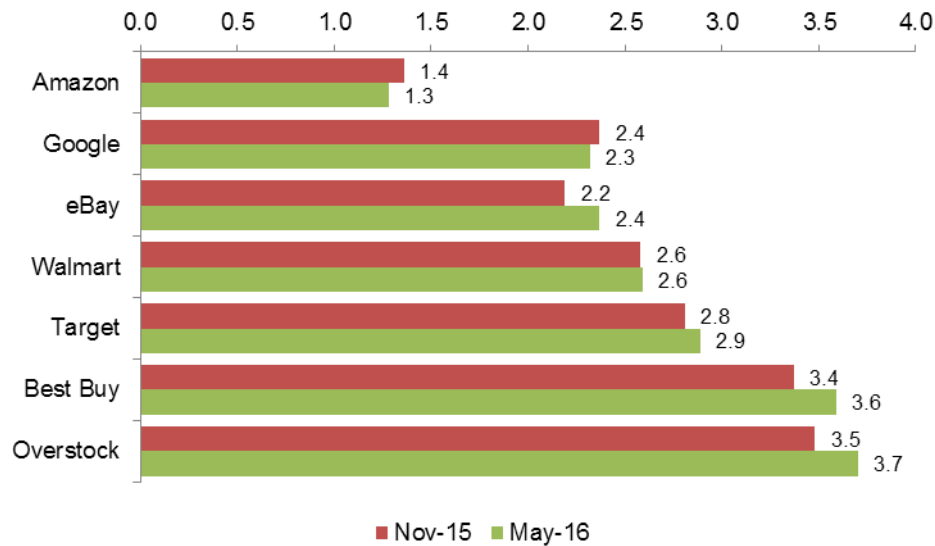
4. mCommerce

Exhibit 29: Which mobile sites do you use on your phone for shopping? Which mobile sites do you use on your phone for shopping? (Select all that apply)



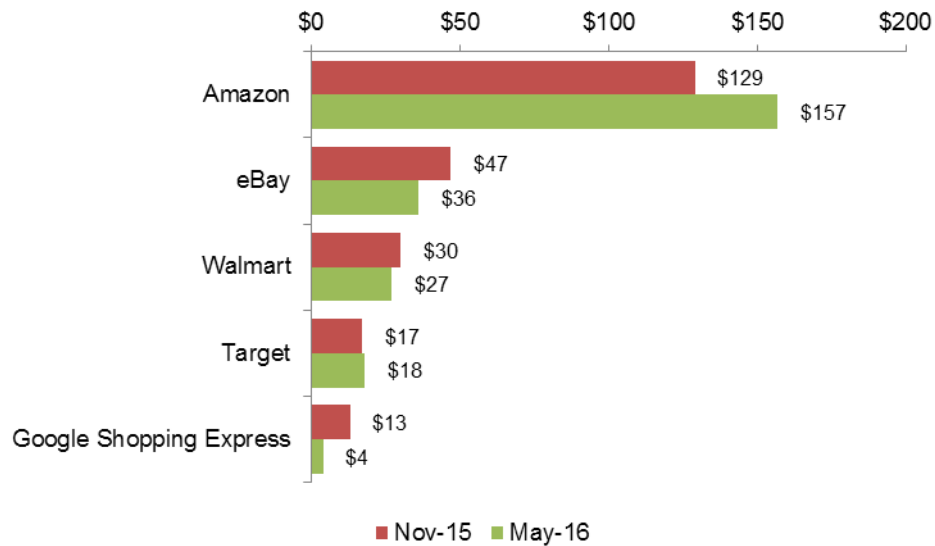
Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Exhibit 30: Please rank how often you use the following mobile sites for shopping. A rank of 1 being the most often.



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015)

Exhibit 31: About how much money have you spent on online shopping from the following sites or apps in the past 30 days?



Source: MSUSA, SurveyMonkey, N=1,042 (May 2016), N=1,004 (November 2015).

Price Target Calculation and Key Risks

Alphabet, Inc.

Valuation:

We use a Sum-of-Parts valuation methodology to arrive at our price target of \$1,070 for Google.

Core Google - This includes Google's Advertising business, Google Play, Hardware sales, Apps, and Google Cloud, among other things. We estimate that Core Google will generate \$38.4 billion in 2017 Non-GAAP Operating Income. Adjusting for \$100 million in Other Income, and factoring a 18% tax rate, we arrive at a 2017 Non-GAAP EPS of \$44.75. We apply a 20x multiple to get to a valuation per share of \$895. For context, Alphabet's shares currently trade at 18x 2017 P/E. Given Google's dominant share in online advertising, solid margin profile and top-notch management team, we'd expect to see multiple expansion from current levels.

Other Bets - This includes Nest, Verily, Fiber, Autonomous Vehicles, and other businesses. We conservatively estimate that Alphabet's Other Bets will generate revenue of \$1.62b in 2017. We assign a Price to Sales multiple of 4.5x (a discount to Unicorn valuations), and arrive at \$10 per share.

The sum of Core Google (\$895) + Other Bets (\$10), as well as adjusting for \$105 per share in YE 2016 net cash, we arrive at our target valuation of \$1,010.

Key Risks:

Key risks to owning GOOGL stock include: 1) Intense competition from other online media properties like Facebook, Twitter, Yahoo!, and Microsoft Bing; 2) Intense competition from eCommerce companies like Amazon, eBay, and potentially Alibaba; 3) A multi-year, heavy investment cycle where pro forma operating margins have gone from the mid-50% range to the low 40% range; and 4) Regulatory concerns.

Amazon.com, Inc.

Valuation

Applying a 28x multiple to our 2017 free cash flow estimate of \$13.9 billion, we arrive at a target price of \$802. We believe AMZN could see multiple expansion as high margin businesses like 3P/FBA and AWS become more material. Our target multiple is largely driven off growth assumptions, but we also considered other factors such as new business opportunities, comparable company multiples, historical multiple ranges, and management's ability to execute. For context, Amazon currently trades at 24x our 2017 P/FCF estimate.

Using a P/S valuation, we apply a 2.5x multiple to our 2017 sales estimate of \$158.4 billion, while adjusting for 2016 year end shares to arrive at a target price of \$818. We acknowledge that this is a high multiple, but AMZN currently trades at 2.0x 2016 sales, and given the multiple levers of growth, we believe that such a high multiple is warranted.

The average of the P/S and FCF valuation methodologies results in a blended target price of \$810.

Risks

Risks to our target price include:

- 1) Competition - Amazon is no longer just a retailer. While it faces stiff competition on the retailing side from traditional and online retailers, it is also facing competition from eBay, Google, Apple, Alibaba, FlipKart, and others.
- 2) Potential for increased investments - While we do believe that Amazon is coming out of a multi-year investment phase, there are plenty of pans in the investment fire - Grocery, same day delivery, investments in China and India, and more. We believe that these investments could each cost several billion dollars if Amazon wants to be a leading player, and the ROI is hard to calculate. This would put pressure on CSOI and could result in the stock to fall.
- 3) European Corporate Taxes - Amazon may have to start paying taxes in Europe on a country-by-country basis, as the EU is cracking down on U.S. companies that have created tax-favorable reporting structures.

eBay Inc.

Valuation

We value EBAY on Non-GAAP P/E for 2017. We apply a 2017 P/E multiple of 13x to our '17 Non-GAAP EPS of \$2.00 which gets us to a target price of \$26.

Risks

1. Competition - eBay faces stiff competition from other Internet and Platform companies like Amazon, Google, Apple, as well as from traditional retail firms like Target, Best Buy, and WalMart.
2. Execution issues. eBay faced a major security breach last year that impacted users coming back to eBay. Furthermore, Google made major changes to its algorithm to penalize low quality search results, and eBay was once of the sites that was hit the hardest.
3. Risks around the eBay and PayPal operating agreement. If eBay's payment contribution to PayPal falls below 80%, eBay will have to pay PayPal. These payments could impact financials for each of the companies.
4. Execution risk. Management for eBay have little experience running public companies. There is inherent risk in running businesses for quarterly results and meeting investor and business expectations.

Facebook Inc.

Valuation:

We use multiple valuation methodologies to arrive at our price objective of \$140, including Non-GAAP P/E and EV/EBITDA, supported by a DCF valuation.

We are expecting multiple expansion, given new vectors of growth, new billion-dollar revenue opportunities, and the highest margin profile of any online media company. We apply a 32x multiple to our 2017 Non-GAAP EPS of \$4.70 to derive a target price of \$150. For context, FB currently trades at 24x 2017 Non-GAAP P/E.

Using EV/EBITDA, we apply a 17x multiple to our 2017 EBITDA estimate of \$20.7 billion. Adjusting for 2016 year end net cash of \$26.4 billion and fully diluted shares outstanding of 2.93 billion, we arrive at a target price of \$129. For context, we note that Facebook currently trades at 15x 2017 EV/EBITDA.

The average of the P/E and EV/EBITDA valuation methodologies yields a blended target price of \$140.

Risks:**Competition:**

Facebook faces intense competition from Internet platform providers, such as Google, Amazon, Microsoft, and Apple. Facebook is heavily dependent on the Apple iOS mobile platform, as well as Google's Android mobile OS platform for growth. Facebook also faces stiff competition from other social networks, such as LinkedIn, Twitter, as well as private ones like Pinterest, Whisper, SnapChat, etc. Finally, Facebook does not have a hardware strategy that could potentially tie users to a "Facebook ecosystem".

Margin Pressure:

Facebook is investing heavily in its business, and rightly so. But this can (and has) put pressure on margins. We've seen EBITDA margins come down from a record high of 68% in 2Q14 to 62% in 1Q16, and Facebook's guidance implies further margin erosion for the balance of 2016.

Regulatory Concerns:

While Facebook has been relatively unscathed by regulatory issues thus far, Facebook has pushed the boundaries of sharing and pushing personal data. If Facebook continues to gain scale and market share, we believe that various government regulatory bodies could try to take action sooner. And if various governments force Facebook to limit or delete personal information of its members out of concern for people's right to privacy, this could impact Facebook's ability to use personal information to deliver more targeted ads.

LinkedIn Corporation**Valuation:**

Our \$145 price target is based on an EV/EBITDA comparable valuation.

We apply a 14x multiple to our \$1.26b '17 EBITDA estimate to arrive at a \$145 per share valuation, after adjusting for year-end '16 cash of \$2.0b and a FD share count of ~140m.

Risks:

1. Competition - The space for online professional networks continues to evolve and other major companies such as Facebook, Google, Microsoft and Twitter are developing or could develop solutions that compete with those offered by LinkedIn. Further, some of these companies are partnering with third parties to offer competing products. Outside of the U.S., other online professional social networks may better cater to local customs that may hamper the company's international growth plans into those territories (international revenues represent roughly 40% of the company's total revenue). The company also competes against smaller companies that may provide more focused solutions to groups of professionals within a specific industry or vertical.

2. Regulatory and corporate limitations - Changes in privacy laws could negatively impact the company's products and services, as well as its monetization efforts. Additionally, we have seen a growing number of companies limiting what their employees can post on LinkedIn – and therefore limiting the value of the professional network to those professionals and their connections.

3. A Possible Tool for Crime - There have been reports of criminals utilizing LinkedIn profiles to identify potential targets. For instance, cyber criminals could identify people in sensitive government or corporate positions on LinkedIn to be bribed, blackmailed, or victims of hacking activities. There is a treasure trove of personal and professional data and any major security breach could have significant financial and political consequences for the company.

Netflix, Inc.

Valuation:

Given the various growth trajectories and profitability outlooks of Netflix's three business segments, we utilize a sum-of-the-parts analysis to capture the valuation of the company's U.S. streaming, international streaming, and U.S. DVD businesses.

1. Domestic streaming – We apply a 28x multiple against 2017E non-GAAP EPS contribution of \$2.04. Our revenue estimates for the domestic segment reflect a 3-year CAGR of 19%. This gets us approximately \$57 per share.

2. International streaming – We apply a 5x multiple against 2017E sales for the international segment given the segment will be generating a loss for this year and next following the completion of the company's global expansion at the end of 2016. Our revenue estimates for the international segment reflect a 3-year CAGR of 53%. We arrive at approximately \$53 per share.

3. Domestic DVD – We apply a 4x multiple against 2017E non-GAAP EPS contribution of \$0.21 to reflect a business facing steady but slowing decline, but still generating a contribution margin of ~50% with strong free cash flow. This equates to about \$1 per share.

Adjusting for 441 million shares at the end of 2016 and ~(\$2) per share in net cash, we arrive at our price target of \$109.

Risks:

1) Competition - Netflix faces intensive competition from growing list of video service providers, various TV Everywhere offerings from broadcasters and networks, and online video services from ISPs.

2) Technology and platform risk - Netflix operates in a highly fragmented ecosystem of computing platforms (iOS, Android, Windows, etc.) and devices (PCs, smartphones, tablets, game consoles, digital media players, connected-TVs, and set-top boxes, etc.). Ensuring full compatibility across these platforms and devices not only increases technology expenses, but can hinder the roll-out of new product features and can create reputation risk when service is unavailable.

3) International contribution margin loss - Netflix recently launched service in 130 additional countries. Netflix international contribution losses are in the hundreds of millions of dollars, and we expect it to worsen in the next few quarters.

Pandora Media, Inc.

Valuation

Using a EV/Sales analysis, we apply a 1.5x multiple to our 2017 Revenue estimate of \$1.67 billion, adjusting for \$32 million in year-end 2016 cash and adjusting for 2016 shares, we derive a valuation estimate of \$11 per share. Our target multiple is derived from historical and future growth assumptions, comparable public company multiples, and various intangibles like management, product pipeline, business model defensibility, etc.

Risks

1. Competition - Pandora competes with Apple, Google, Amazon, as well as Spotify, iHeart Radio, and others. Streaming music is highly competitive, and Pandora is facing mounting pressure from other, better financed firms.

2. New business launches - Pandora is moving into new business lines, like concert ticket sales and developing an on-demand streaming music service like Apple Music. These could be costly and expose Pandora to greater risks.

3. Stagnant user growth - Pandora's user growth has been decelerating significantly.

4. Musician backlash - RIAA and many musicians have complained that Pandora is not paying them enough for their music, despite the fact that the rates are pre-determined. This could change when Pandora strikes individual deals with the record companies for the on-demand service.

Twitter, Inc.

Price Target:

Our \$16 price target is based on EV/EBITDA and PE comparable valuations. We apply a target multiple of 10x to our 2017E adjusted EBITDA estimate of \$1.0 billion to

reach an enterprise value of \$10.0 billion. Adjusting for 2016 end-of-year net cash of \$1.8 billion, we arrive at a market cap of \$11.8 billion, or \$17 per share.

On a PE basis, we apply a target multiple of 18x our 2017 Non-GAAP EPS estimate of \$0.85 to reach \$15 per share.

Using the average of the two methodologies, we arrive at a price target of \$16.

Key Risks:

1. Lack of MAU Growth - Twitter's user growth has decelerated considerably, and U.S. MAUs have been relatively flat for the past 4 quarters.
2. Competition - Twitter faces stiff competition among online advertising firms, including Alphabet, Facebook, Yahoo!, AOL, LinkedIn, among others. In addition, Twitter faces competition from several unicorn companies like Pinterest and SnapChat.
3. Jack Dorsey's Dual CEO-Role - Jack Dorsey is CEO of Twitter and Square. Square recently went public, and Mr. Dorsey has not been a CEO of a public company prior to him taking the interim CEO role at Twitter earlier in 2015. We believe that this is a daunting task, and there could be execution risk with Mr. Dorsey running both companies.
4. Extreme Stock-Based Compensation - SBC at Twitter is ~35% of revenue, the highest of the Internet companies that we cover. On one hand, employees are very well compensated in stock, which should align their incentives with shareholders. On the flip side, this creates an issue when the company's performance and stock lags – which could result in greater turnover if employees are overly compensated in stock.

Yahoo! Inc.

We use a sum-of-the-parts valuation analysis to value Yahoo! shares. In our analysis, we include our valuation estimates for: 1) Yahoo!'s ownership share in Alibaba Group; 2) Yahoo!'s ownership share in Yahoo Japan; 3) our estimate of Yahoo!'s net cash position at the end of 2015; and 4) our estimate of the value of the core Yahoo! franchise.

1) Alibaba Group: \$19 per YHOO share in value. We apply a 40% tax rate + illiquidity discount to Yahoo!'s BABA stake. **This results in a total valuation of \$18.2 billion, or \$19 per share.**

2) Yahoo! Japan: \$6 per YHOO share. We use a USD-JPY exchange rate of ~109 Yen to \$1 USD to yield a market value estimate of approximately \$26.9 billion. We assume Yahoo!'s ownership share at 35%, apply a 40% tax rate and liquidity discount. **This yields a valuation of the Yahoo! Japan holdings of \$5.7 billion, or roughly \$6 per share.**

3) Cash Position adds another \$6 per share. We estimate Yahoo!'s 2016 year-end cash position to be \$5.9 billion, or roughly \$6 per share.

4) Core Yahoo! Value: AOL-type take out multiple yields \$7 per YHOO share. We apply an 8x EV/EBITDA multiple to our 2017E EBITDA forecast of \$844 million, yielding a valuation of Yahoo!'s core operations of \$6.8 billion, or roughly \$7 per share.

In total, we estimate the 12-month prospective market value of Yahoo! at \$36.5 billion, or \$38 per share.

Risk to our target price include: 1) Competition - as Yahoo! competes with larger platform companies like Google, Facebook, LinkedIn, Twitter, and others that are growing faster, and some of which have stronger balance sheets. 2) Sales management disruption - Yahoo! has experienced issues in sales leadership, and it is unclear if recent changes will hold up; 3) Potential taxes on Alibaba stake spin-off - The IRS and U.S. authorities are considering reversing a rule that allows for spin-offs in the form of share distributions to be tax free. If this ruling takes place ahead of the proposed 4Q spin-off, this would have a negative impact on the share price; 4) Declining display ad revenue - Yahoo! needs to show growth in its display ad revenue to regain credibility with the Street and investors.; and 5) Low margins - Yahoo!'s cost structure doesn't match its low-to-no growth revenue, which leads to continued pressure on margins.

Yelp Inc.

Valuation:

Our valuation is based on an EV/EBITDA framework. We apply a 10x EV/EBITDA multiple to our 2017 EBITDA estimate of \$151 million. Adjusting for 2016 cash of \$392 million and applying year-end 2016 shares of 80 million, we arrive at a \$24 target price objective.

Risks:

1. Google - Google continues to be a source of traffic for Yelp, and algorithm changes could impact Yelp's traffic and business
2. Unicorns - intense hiring and lofty pay in the Silicon Valley could impact Yelp's ability to hire high quality engineers, product managers, and sales members.
3. Facebook - Facebook has been revamping its local product, and we believe that Facebook is aggressively trying to go after local business ad budgets

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