

Internet @ 20: More Dynamic, More Disruptive and More Desirable Than Ever Before

Initiating on the Internet & Interactive Entertainment Sectors

Summary

The pace of technology evolution over the past 20 years seems far more substantial than the prior 30 years and we believe that the next 10 years will be just as, or even more, critical for many Internet companies. In this report, we outline our R.A.M.P framework for how we think about Internet stock investing. We also share our 1,000 person mobile survey results which show that the companies with the largest scale and breadth on the desktop, appear to be winning on mobile.

Key Points

- **R.A.M.P: Our investment framework for the Internet** – We are big fans of tacky acronyms, so we have a new one for you – R.A.M.P. This includes: new **Revenue** sources that could add billions of incremental dollars to the topline; large **Audiences**, where companies can achieve network effects by serving new products and services to its large and growing audience base; **Margin** expansion - which is key for profitability but not when there is large share to be gained; and **Platform** extensibility - how successful are companies in expanding into new platforms like Virtual Reality, Payments, Video, etc. While our ratings do not coincide 100% with our framework, R.A.M.P helps us think through the long-term potential for each of the Internet stocks we are covering.
- **Proprietary Mobile Survey – We surveyed over 1,000 U.S. Smartphone users** to understand how they are using their devices, and where there are opportunities for online business models. Key findings: a) Search isn't dead, as the vast majority still use Google for mobile search queries; b) Texting and email are the two most popular activities on the Smartphone. Search and Social were virtually tied; c) Facebook and Instagram are the two most popular social sites, but Twitter, Pinterest, Google+ and LinkedIn were neck-at-neck in terms of popular social networks; d) 45% of users start their mobile shopping experience on Amazon while 16% start on Google; e) 15% of respondents used PayPal for mobile payments while only 3% used ApplePay or Google Wallet, f) and 80%-90% of people surveyed said they have not used a on-demand service in the past month (like Uber, Thumbtack, Postmates, etc.). Overall, this survey was positive for Facebook, Amazon, PayPal and Google.

Company	Symbol	Price (6/24)	Rating		
			Prior	Curr	PT
Activision Blizzard Inc	ATVI	\$25.44	–	Buy	\$29.00
Amazon.com, Inc.	AMZN	\$440.84	–	Buy	\$498.00
eBay Inc.	EBAY	\$61.61	–	Neutral	\$65.00
Electronic Arts Inc.	EA	\$67.68	–	Buy	\$75.00
Facebook Inc.	FB	\$88.86	–	Buy	\$104.00
Google Inc.	GOOG	\$558.57	–	Neutral	\$595.00
Netflix, Inc.	NFLX	\$655.85	–	Neutral	\$720.00
Take-Two Interactive Software, Inc.	TTWO	\$28.60	–	Buy	\$32.00
Ubisoft Entertainment SA	UBI FP	€16.42	–	Neutral	€18.00
Yahoo! Inc.	YHOO	\$40.94	–	Buy	\$51.00

Source: Bloomberg and Mizuho Securities USA

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Please refer to page 39 of this report for important disclosure and analyst certification information.

Internet @ 20: More Dynamic, More Disruptive and More Desirable than Ever Before

This is, perhaps, one of the most interesting times to be initiating coverage of Internet and Interactive Entertainment stocks. 20 years after the Netscape IPO, the Internet landscape is vastly more varied, the capabilities more powerful and the integration into our daily lives more pervasive than technologists likely could ever have imagined. From a business perspective, we've seen some early 'success' stories succumb to the axiom, 'no revenue, no earnings, no hope.' Other early entrants, though, thrived and became the pillars of our daily interaction with the Internet. And still more companies only survived, but lost their early dominance to newer, more disruptive competitors. Today, the investment choices are more numerous, the free cash flows more tangible and the continued opportunities for growth more mobile than the Internet's creators likely could have imagined.

But despite these successes, and our positive forward view of the sector in general, the very nature of the Internet as a disruptive technology could, at any moment, be the downfall of many of the companies in the sector. A lack of traction in mobile, a lack of growth in users, continued investments in new technologies that take management's eyes off emerging and dynamic competition are all dangers that can cause even the best, brightest and largest of these companies to stumble. As the sector matures, growth rates naturally slow to levels less-than-stratospheric, all of which potentially magnifies the impact of any of these pitfalls.

Against this backdrop, we are initiating coverage of the Internet and the Interactive Entertainment sectors with a generally positive fundamental outlook, even as the Internet is clearly maturing. For example, eCommerce as a percentage of total retail was only 7% of total retail in the U.S. last year, and online advertising was about 28% of total, implying (we think) that there is still much more growth to come...but not at the stellar growth rates that we've seen in the past. On the other hand, we believe that there still are plenty of secular shifts that should provide sustained double digit growth for the coming years: We expect the U.S. online advertising and eCommerce markets to grow by about 14% and 13% this year, respectively.

Moreover, we believe that Mobile will continue to drive disruption and outsized growth over the next several years. Companies that can or have pivoted to mobile will be the clear winners over the coming years, in our view. The Mobile device has become the greatest level-setter for the Internet today, enabling constant connectivity, continual content consumptions, perpetual commerce, and paving the way for a host of new businesses and industries that would never have been possible with the desktop web. 20 years ago, few would have dreamed that such power could reside in a small device in the palm of one's hand. 20 years from now, we can only think that whatever new technology that connects us to commerce, entertainment, work and each other will follow the path of its Internet predecessors, giving birth to new investment opportunities by disrupting the old. It will be interesting to see which companies survive and prosper.

But for now, we turn to our analysis of the industry, its key trends and our analysis of ten companies in the Internet and Interactive Entertainment sector. In this report, we plan to accomplish three key tasks:

1. **Outline our investment framework for the Internet** – We are big fans of tacky acronyms, so we have a new one for you – RAMP. This includes: New **Revenue** Sources, Large **Audiences**, **Margin** Expansion, and Platform Extensibility. While our ratings do not coincide 100% with our framework, RAMP helps us think through the long-term potential for each of the Internet Stocks
2. **Key takeaways from our proprietary mobile Smartphone survey** – We surveyed over 1,000 U.S. Smartphone users to understand how they are using their devices, and where there are opportunities for online business models. Search isn't dead, Social is becoming increasingly important, mobile commerce has a big opportunity, and it is still early days for the On-Demand economy apps.
3. **Checking the boxes** – Yes, we have estimates of Online Advertising, eCommerce, and Video Games. While overall growth is decelerating, we are (and will be) hyper focused on emerging trends, especially around Mobile and the various ecosystems built on mobile platforms.

But first, we focus on our Top Picks in each of our two sub-sectors, Internet and Interactive Entertainment...

MSUSA's Top Picks for Internet and Interactive Entertainment

Our Top Picks For the Internet Sector:

1. **Facebook (FB, Buy, \$104 PT)** – This is a consensus buy, but our proprietary analysis of Instagram makes us believe that there are a number of under-monetized opportunities at Facebook that could evolve into multi-billion dollar businesses.
2. **Amazon (AMZN, Buy, \$498 PT)** – New disclosure shows that AWS and Amazon's retail businesses are profitable, and with FC investments modestly abating, we think there could be room for margin improvement.
3. **Yahoo! (YHOO, Buy, \$51 PT)** – Our Sum of the Parts analysis suggest that Yahoo!'s core business is valued at virtually zero. While we think the business is challenged, it is FCF positive and that plus \$6 per share in cash should be worth more than nothing.

One company that is missing is **Google**. We've long been bullish on Google, but we are concerned. Google now faces increasing competition from other platform providers, such as Amazon and Facebook, and faces major challenges with the EU which officially charged Google for anti-competitive practices, and could expand its scope to include Google's monopoly around Android. While we are

generally constructive on the business and long-term potential for the company, we believe shares might be range-bound until we get more transparency around Google's key businesses, clarity around the EU's anti-trust suit, and better visibility around new revenue sources or areas for margin improvement.

Our Top Picks for the Interactive Entertainment Sector:

1. **Activision|Blizzard** (ATVI, Buy, \$29 PT) – Highest margin profile of any publisher, the new *Destiny* looks very good, and new FTP games should provide more margin uplift.
2. **Take-Two** (TTWO, Buy, \$32 PT) – Strong pipeline of games, including *Battleborn*, shifting resources towards more digital gaming experiences, and F2017 could provide incremental upside with potential launches of favorite IP; and
3. **Electronic Arts** (EA, Buy, \$75 PT) – The stock is up materially, but after meeting with management, we feel confident in the company's product strategy and ability to generate continued margin leverage over the next 12-18 months. And Star Wars Battlefront was one of the most fun games we played while at the E3 video game conference.

It seems odd to be long on all three publishers. We attended the E3 video game conference from June 15-18 in Los Angeles, and met with the management teams of each of the major publishers. We came away most impressed with EA - EA seems to have a solid slate of games this year, especially with *BattleFront* and *Mirror's Edge*. And it appears that management still has room for margin leverage, which could take the stock higher. Take-Two's *BattleBorn* was exciting and fun to play, and should give Borderland fans something fun to play. And if Rockstar provides an early Christmas gift with a GTA V DLC, that could provide nice optionality for the stock. And finally, ATVI's new *Destiny* DLC looked incredible, the company is firing on FTP games, like *Hearthstone*, *Heroes of the Storm*, and *Call of Duty Online*, and we found the new *CoD Black Ops III* to be pretty fun.

Exhibit 1: Stock Coverage Overview

Internet

Company Name	Ticker	Last Price	Price Target	Rating	Market Cap	Ent. Value	Revenue		EV/Sales		Non-GAAP EPS		P/E		PEG	EBITDA		EV/EBITDA	
		2015E	2016E				2015E	2016E	2015E	2016E	2015E	2016E	2016E	2015E	2016E	2015E	2016E		
Google	GOOGL	\$558.57	\$595	Neutral	\$385,133	\$324,932	\$59,323	\$69,289	5.5x	4.7x	\$27.49	\$31.75	20.3x	17.6x	1.1x	\$28,531	\$33,354	11.4x	9.7x
Facebook	FB	\$88.86	\$104	Buy	\$252,007	\$239,780	\$17,112	\$22,399	14.0x	10.7x	\$2.06	\$2.73	43.2x	32.6x	1.0x	\$10,148	\$13,474	23.6x	17.8x
Amazon.com	AMZN	\$440.84	\$498	Buy	\$204,991	\$199,467	\$103,256	\$121,815	1.9x	1.6x	\$3.85	\$7.11	114.6x	62.0x	0.7x	\$9,241	\$10,624	21.6x	18.8x
eBay	EBAY	\$61.61	\$65	Neutral	\$74,918	\$67,255	\$18,998	\$20,626	3.5x	3.3x	\$3.20	\$3.46	19.2x	17.8x	2.3x	\$6,045	\$6,302	11.1x	10.7x
Netflix	NFLX	\$678.61	\$720	Neutral	\$42,055	\$41,498	\$6,781	\$8,456	6.1x	4.9x	\$2.24	\$3.61	303.4x	188.2x	3.1x	\$449	\$572	92.5x	72.5x
Yahoo!	YHOO	\$40.94	\$51	Buy	\$38,810	\$34,275	\$4,316	\$4,324	7.9x	7.9x	\$0.78	\$0.85	52.7x	48.4x	5.5x	\$1,107	\$1,145	31.0x	29.9x
	Median	-	-	-	-	-	-	-	6.7x	5.2x	-	-	79.5x	51.4x	1.1x	-	-	27.3x	20.2x
	Mean	-	-	-	-	-	-	-	7.0x	5.6x	-	-	96.6x	60.7x	1.9x	-	-	33.0x	25.5x

Interactive Entertainment

Company Name	Ticker	Last Price	Price Target	Rating	Market Cap	Ent. Value	Revenue		EV/Sales		Non-GAAP EPS		P/E		PEG	EBITDA		EV/EBITDA	
		2015E	2016E				2015E	2016E	2015E	2016E	2015E	2016E	2016E	2015E	2016E	2015E	2016E		
Electronic Arts	EA	\$67.68	75.00	Buy	\$21,928	\$18,938	\$4,471	\$4,823	4.2x	3.9x	\$2.82	\$3.25	24.0x	20.8x	1.4x	\$1,320	\$1,523	14.3x	12.4x
Activision Blizzard	ATVI	\$25.44	29.00	Buy	\$18,851	\$18,456	\$4,486	\$4,848	4.1x	3.8x	\$1.25	\$1.46	20.4x	17.4x	1.0x	\$1,498	\$1,693	12.3x	10.9x
Take-Two	TTWO	\$28.60	32.00	Buy	\$3,289	\$2,021	\$1,440	\$1,753	1.4x	1.2x	\$1.08	\$1.84	26.4x	15.6x	0.2x	\$188	\$304	10.8x	6.7x
Ubisoft	UBI	€ 16.42	€ 18.00	Neutral	€1,748	€1,550	€1,460	€1,562	1.1x	1.0x	€1.19	€1.42	13.8x	11.6x	0.6x	-	-	-	-
	Median	-	-	-	-	-	-	-	2.8x	2.5x	-	-	22.2x	16.5x	0.8x	-	-	12.3x	10.9x
	Mean	-	-	-	-	-	-	-	2.7x	2.5x	-	-	21.1x	16.4x	0.8x	-	-	12.5x	10.0x

Source: MSUSA, Factset. Prices as of 06/24/15 close.

R.A.M.P: Our Investment Framework

What is R.A.M.P, you might ask? The formal definition of a “ramp” is a slope or inclined plane joining two different levels. Similarly, as we think about the desktop Internet world and increasing shift to the emerging mobile Internet world, we will use RAMP as a way to find the best companies that not only can bridge the two, but ones that can develop large, thriving business models on mobile for years to come. RAMP stands for:

- **R: Revenue** – We will be focused on new revenue sources that provide optionality to existing businesses. For Google, Display advertising was a new revenue sources five+ years ago, and Google has become one of the largest display ad players today. For Facebook, mobile was a new product/revenue source 3 years ago, yet today Facebook is a truly mobile company with ~70% of its ad revenue now coming from mobile. As we look over the next 3-5 years, we will rate companies based on the potential to generate new, billion dollar+ revenue sources, and managements’ abilities to execute on those large opportunities.
- **A: Audiences** – We like big Audiences and we cannot lie! Facebook and Google each have over 1 billion+ monthly visitors. Yahoo! at one time had ~billion monthly unique visitors, and now it has closer to around 800 million. Amazon has the largest number of active buyers at 278 million, larger than any eCommerce company in the U.S. (roughly in-line with Alibaba’s 279 million active buyers). Companies that have built large audiences are in the best position, in our view, to leverage that base to expand into new businesses and services, which should ultimately lead to additional revenue growth and margin expansion over time
- **M: Margins** – Of course, profitability is important. But there is a fine line between rev growth and margin expansion. Facebook has the highest non-GAAP operating margin profile of any of the Internet companies we cover (57% in 2014), but given the vast opportunities ahead of Facebook, the company is now ramping up its investment in the business (R&D and Sales & Marketing), and rightly so, in order to realize greater revenue growth and build new streams of revenue. Google, on the flip side, had around 40% operating margins, and margins have been declining YoY while revenue growth has remained relatively flattish. We’d like to see Google show more prudence in its spending. Amazon has been in a multi-year investment cycle, but we are starting to see the fruits of its labor, as higher margin businesses are starting to contribute to the overall bottom line.
- **P: Platform Extensibility** – We look at some big trends today, including mobile, online video, the Internet of Things, digital payments, etc., and determine which of our companies are best suited to take advantage of some or all of these trends. Some companies won’t be participants in some of these categories (like Netflix won’t be a player in real-time communication

any time soon), while others will have the cash and resources to broaden their platform into these key categories.

In the table below, we summarize our RAMP results. We graded each company on a scale from 1 – 5, with 5 being the best and 1 being the worst. The company with the highest score ranks best on our RAMP framework.

- **Facebook** – The leader with a score of 19, ranked best for new sources of revenue, its audience size, best-in-class margins, and tied with Google for platform extensibility. Facebook also happens to be our #1 top pick in the Internet sector.
- **Google** – Came in second, as it is unclear what could be Google’s large new revenue source, and Google’s margins have been flat or declining for the past few years as it continues to invest in core and non-core businesses.
- **Amazon** – Ranks #3. Its audience is smaller than other companies, and Amazon will likely have less of a stake in newer emerging trends like real-time mobile communications. Its margin profile is the lowest of any of our companies, this is partly due to its large first-party retail business and investments.
- **Netflix** – We think Netflix has executed brilliantly on bringing engaging content to users via a streaming online service. But as the company expands to other international countries, we expect margins to continue to fall this year and next.
- **eBay** – eBay really needs to focus on its core marketplace business, and we hope that the separation of PayPal and the Enterprise business will allow management to re-invigorate the core business before considering expanding the platform to other new opportunities.
- **Yahoo!** – Declining revenue, and falling margins. Fundamentally, Yahoo! is a classic “show me story” where management will need to execute on monetization.

Exhibit 2: R.A.M.P Summary

	R - New Revenue Sources	A - Audience Size	M - Margins	P - Platform Extensibility	Total	Rating
FB	5	5	5	4	19	Buy
GOOGL	3	5	3	4	15	Neutral
AMZN	4	3	2	3	12	Buy
NFLX	4	2	2	3	11	Neutral
EBAY	2	2	3	3	10	Neutral
YHOO	1	4	1	2	8	Buy

Source: MSUSA, Factset

RAMP - Revenue

What we are most interested in are **new potential sources of revenue** for our coverage companies, within the next 18-36 months. We believe that some of these sources of revenue might not be built into consensus estimates, and can provide material upside and optionality over time. **Facebook** has the biggest opportunity ahead of it in our view, as it operates the #1 and #2 social networks today (flagship Facebook and Instagram), is quickly becoming a leading source for online/mobile video watching, and we haven't even scratched the surface on Messaging and VR. **Netflix** and Amazon are close behind. Netflix has a multi-billion dollar revenue opportunity as it plans to move into more International markets. **Amazon** could drive more incremental revenue by expanding third party services abroad, pushing on AWS innovation, and expanding the Prime offering.

Exhibit 3: R.A.M.P – Revenue Summary

	Mizuho	Rept'd Revenue (\$Ms)		2015 Rev	'14-'17	New Revenue Drivers
	Ranking	2014A	2015A	YoY Chg	Rev CAGR	
FB	5	\$12,466	\$17,112	37%	32%	<ul style="list-style-type: none"> * Instagram - \$3B in incremental mid-term revenue * Video Ads - \$3-5B+ in mid-to-long term revenue * WhatsApp - multi-billion \$ rev opportunity
NFLX	4	\$5,505	\$6,781	23%	22%	<ul style="list-style-type: none"> * New incremental markets could generate over \$1B in revenue over the next 3+ years * Potential price increases could be additive
AMZN	4	\$84,344	\$103,256	22%	19%	<ul style="list-style-type: none"> * U.S. mobile revenue could be \$27B in 2015 * Opportunity to grow Prime user base with more Prime Instant Video offerings
GOOGL	3	\$52,505	\$59,323	13%	15%	<ul style="list-style-type: none"> * WW mobile revenue could be \$27B in 2015 * Google Cloud, Fiber, Nest, Dropcam, Project Fi, self-driving cars, etc.
EBAY	2	\$17,902	\$18,998	6%	9%	<ul style="list-style-type: none"> * Mobile GMV should exceed \$30B in 2015 * Needs to focus on execution around revitalizing its core marketplace business
YHOO	1	\$4,401	\$4,316	-2%	0%	<ul style="list-style-type: none"> * Solid mobile assets, but needs to focus on execution * Video and programmatic could provide upside

Source: MSUSA, Company Reports

RAMP - Audiences

We like big audiences, especially ones that keep coming back. **Facebook** has over 1.4 billion MAUs, of which the vast majority access the Facebook service both online and via mobile devices. This does not count the 800 million WhatsApp members, the 600 million Facebook Messenger users, and the 300 million Instagram members. **Google** also ranks tops because of its 1.2 billion monthly uniques, and Google now has multiple services with a billion+ users: Over a billion users use Chrome, Android, Maps, YouTube, and Search. And Gmail is close behind with about 900 million members. Companies with large audiences can roll out new services and products to those users, and this large base of users will provide positive network effects over time, in our view.

Exhibit 4: R.A.M.P – Audience Summary

	Mizuho	Users (Ms)		2015E	'14-'17	Notes
	Ranking	2014A	2015E	YoY Chg	User CAGR	
FB	5	1,394	1,559	12%	10%	WW MAUs; Mobile MAUs were 1.49B or over 90% of total 2015 MAUs.
GOOGL*	5	1,232	1,300	6%	7%	Google has 1B monthly users on Search, Chrome, Android, Maps, YouTube, and soon to come, Gmail (0.9B).
YHOO*	4	670	700	4%	3%	Yahoo! had 600M mobile users at the end of 1Q15, including 400M+ Tumblr users.
AMZN	3	270	290	7%	7%	WW total active customers . If Amazon can gain more traction in India and China, we could see growth accelerate.
EBAY	2	155	170	10%	10%	WW total active buyers.
NFLX	2	54	70	29%	21%	Paid domestic & int'l streaming subscribers. Netflix has the fastest growth given its aggressive expansion plans to 200 countries by the end of 2016.

Source: MSUSA, Company Reports

RAMP - Margins

We understand the trade-off between margins and gaining share against a large total addressable market. But we do like to see margins improve over time, rather than constantly deteriorating. We rank Facebook the highest given its best-in-class margin profile (even after ramping up investments). Google comes in second as it has the second best operating margin profile. However, we'd note that Google appears to be in a multi-year investment cycle, and it is unclear if or when this cycle will end.

Exhibit 4: R.A.M.P – Audience Summary

	Mizuho Ranking	PF Operating Inc. (\$Ms)		Pro Forma Operating Margin			Key notes
		2014A	2015E	2014A	2015E	2017E	
FB	5	\$7,125	\$9,076	57.2%	53.0%	56.1%	Despite heavy investment, FB continues to have best-in-class margin profile. FB needs to invest more in tech & dev, which is why margins are coming down.
GOOGL	3	\$21,049	\$23,703	40.1%	40.0%	41.5%	Google has not only been investing heavily in core business but also investing in other areas like hardware, fiber service, cellular service, and various moonshots. It remains unclear when margins could go back to the 50% level any time soon.
EBAY	3	\$4,604	\$4,721	25.7%	24.8%	23.7%	Margin profile at eBay is solid, and will increase to the low 30% range once PayPal is spun off. However, management is calling for flat-to-modestly up margins over the next two years.
NFLX	2	\$518	\$385	9.4%	5.7%	10.4%	Overall margins should improve as international contribution margins turn positive in more markets. We could see further margin leverage with marketing. Expects U.S. CM at 40% by 2020.
AMZN	2	\$1,978	\$3,279	2.3%	3.2%	5.2%	Heavy investments continue, but Amazon is starting to see high margin businesses gain scale: AWS, 3P, shipping leverage, etc.
YHOO	1	\$755	\$496	17.2%	11.5%	15.0%	One of the lowest margin profiles of any Net media company, and margins have been deteriorating over the past few years. Yahoo! also has one of the most bloated cost structures given its declining revenue base.

Source: MSUSA, Company Reports

RAMP – Platform Extensibility

In our opinion, there are a number of areas where Internet companies can expand and monetize their existing platforms.

Exhibit 5: R.A.M.P – Platform Summary

	Mizuho Ranking	Mobile	Hardware	Internet of Things	Real-Time Communications	Virtual Reality	Digital Payments	Online Video
GOOGL	4	5	5	4	2	3	3	4
FB	4	5	n/a	2	5	4	2	3
AMZN	3	4	5	3	n/a	2	2	4
YHOO	2	2	n/a	n/a	1	n/a	n/a	2
EBAY	3	2	1	n/a	n/a	n/a	5	n/a
NFLX	3	2	n/a	n/a	n/a	2	n/a	5

Source: MSUSA, Company Reports

Digging down into each of these...

- Mobile** – We believe mobile is probably the most important platform today, as the vast majority of the world will use a Smartphone or mobile device as their primary source to connect online. Google is the mobile leader with over 1 billion Android users, and a dominant share in mobile search. Facebook also ranks top as most of Facebook’s users access the site via mobile devices, and Facebook also has over 1.7 billion users that use WhatsApp, Instagram and Messenger.
- Hardware** – We believe that owning hardware is a key (and expensive) differentiator to keeping users tied to a company’s ecosystem of products and services. Android phone users are significantly more likely to use **Google** apps and services that are built into the device’s operating system. **Amazon** Kindle Fire owners are much more likely to shop on Amazon and buy digital content from Amazon versus other companies. We gave eBay a “1” because PayPal does have some hardware solutions, like PayPal Beacon and PayPal Here Mobile Card Reader.
- Internet of Things** – It is *very* early days, and most solutions are sub-par in our view. But, **Google** owns Nest and Dropcam, which are two of the leading products in their categories. Google also has driverless cars, Google Glass (which is on-hold and could see a re-emergence after the Nest team takes over the product), etc. Amazon comes in second with a number of products like FireTV, Fire Stick, Echo, Amazon Dash, and Amazon Dash Button, which makes it easier to buy items and consume content.

- **Real-Time Communications** – Our proprietary survey indicated that most people spend their time texting one another. We believe that real-time communications is critical for engagement and understanding real-time needs of consumers. **Facebook** takes the cake with WhatsApp (800 million users) and Messenger (600 million users). **Google and Yahoo!** come in second and third, as they have large email users and can add real-time communications options over time.
- **Virtual Reality** – This is a big opportunity, and the interest in VR is growing, especially outside of the gaming community. Facebook owns Oculus Rift, which is one of the most coveted VR platforms out there. But the VR market is getting crowded with many firms coming to market before the Rift makes its debut next year. We also give Google a relatively high ranking since it developed a make-shift VR product called “cardboard” that lets users build a cardboard box that will house your phone and acts as a VR machine. Cardboard is not a true substitute for VR, but we think that it can help spread knowledge about VR, and help developers come up with new ideas as to how to build VR apps.
- **Digital Payments** – The mobile phone now acts as a wallet, letting users store credit card info and make purchases at various traditional retailers. Also, companies like Starbucks have created apps that let users pay directly from their phone. We think PayPal is at the forefront of digital payments and has over 160 million users to drive greater engagement with mobile payments. Google has been investing heavily in this area, and despite the early failure of Google Wallet, Google is pushing its re-vamped product, Google Payments (a new name, we think).
- **Online Video** – **Netflix** is the leader as the company is gunning to convert linear paying TV users to steaming video viewers. And as Netflix expands deeper on the International front, we believe that its scale should breed greater scale. **Google’s** YouTube continues to be the dominant free-streaming video service, with over 1 billion monthly users. **Amazon’s** Prime Instant Video (free for Amazon’s 50-60 million prime members) could be a real competitor to Netflix over time, and **Facebook’s** in-newsfeed video offering is now getting 4 billion daily views and 75% of these are from mobile devices.

Our Mobile Market Survey

We surveyed over 1,000 people in the U.S. who were smartphone owners during the week of June 15-19, 2015. 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 test how people are using their mobile devices, and more importantly, how usage will change over time. We broke down the exercise into four key components:

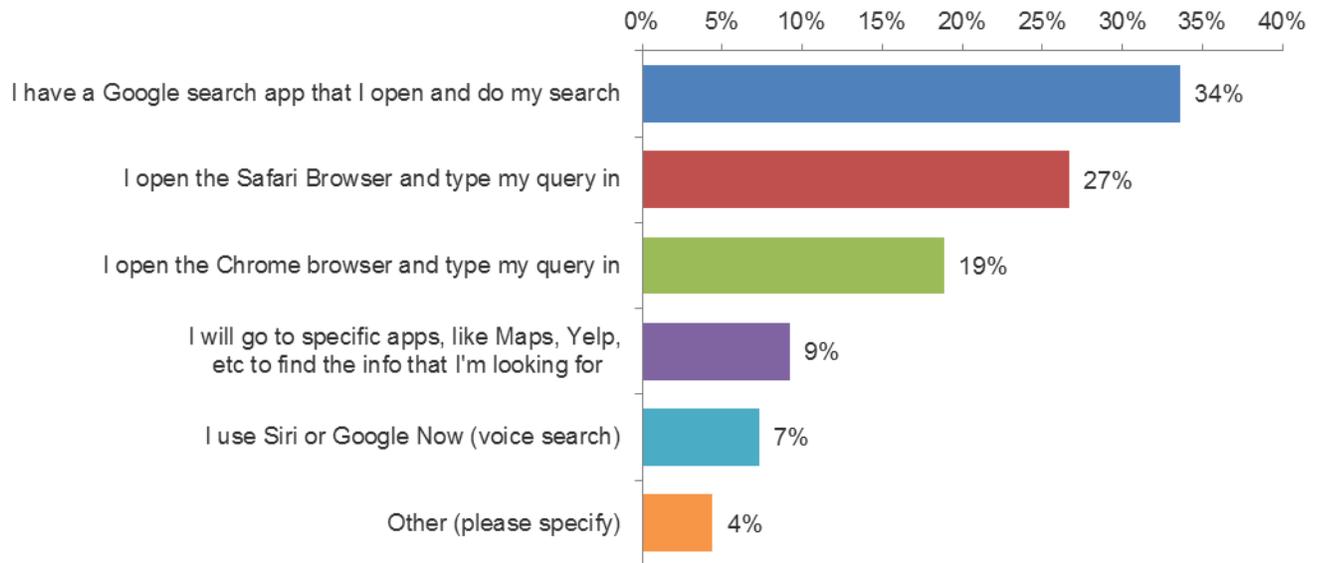
- 1) **Overall smartphone usage** – to test how people are generally using their Smartphones
- 2) **Social Media** – How does Facebook compare to the other Social Media sites? Which ones are popular after Facebook?
- 3) **mCommerce** – mobile commerce is growing rapidly, and we want to know where people are going for their mobile shopping experiences
- 4) **On-Demand Economy** – Companies like Uber, TaskRabbit and others have successfully found ways to engage people as service providers. How many people are using these services today? Who are the leaders?

Below we highlight the top 11 findings from our survey of approximately 25 questions. Please see the **Appendix** at the back of this report for the results of our full survey.

1. Overall Smartphone Usage

Although we believe smartphone owners are increasingly going to mobile apps for their specific needs (e.g., Google maps for directions, Yelp for restaurant reviews, etc.), it appears that the vast majority of users are still completing traditional search queries. Google stands out as the clear winner in this scenario given the Google search app, Apple's Safari Browser search, and Google's Chrome browser all utilize the Google search engine. We would like to note that there have been reports that Apple might stop using Google as the default search engine for Safari when the deal is up later this year. That would be bad for volume, but potentially accretive for Google since it would not have to pay TAC to Apple.

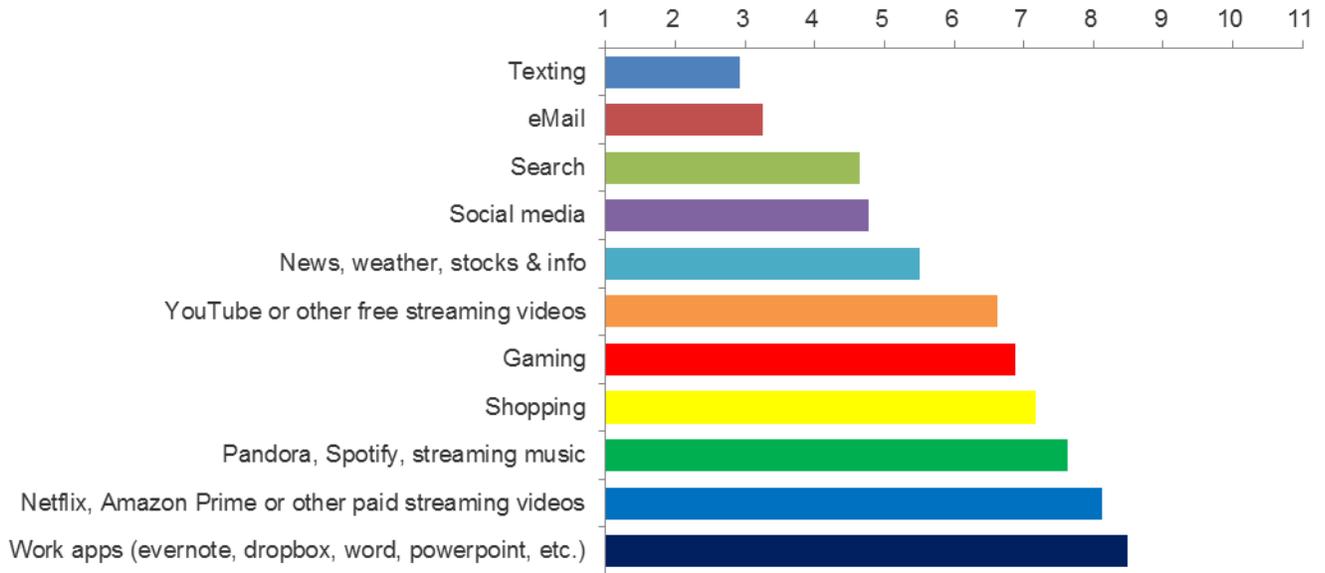
Exhibit 6: When you need go online when using your Smartphone, where do you go most often to find information?



Source: MSUSA, SurveyMokey, N=1,026

The next exhibit highlights that it is still early days in mobile and the vast majority of time spent on mobile centers around traditional communications (texting and email). What’s most interesting is that search and social media are neck and neck in terms of popularity. It will be interesting to see if social media will overtake search by our next survey. As for consumption of digital media, believe the trend towards larger smartphone displays will help drive gaming and video viewing on mobile devices, as well as mCommerce (viewing more items for a more pleasant shopping experience).

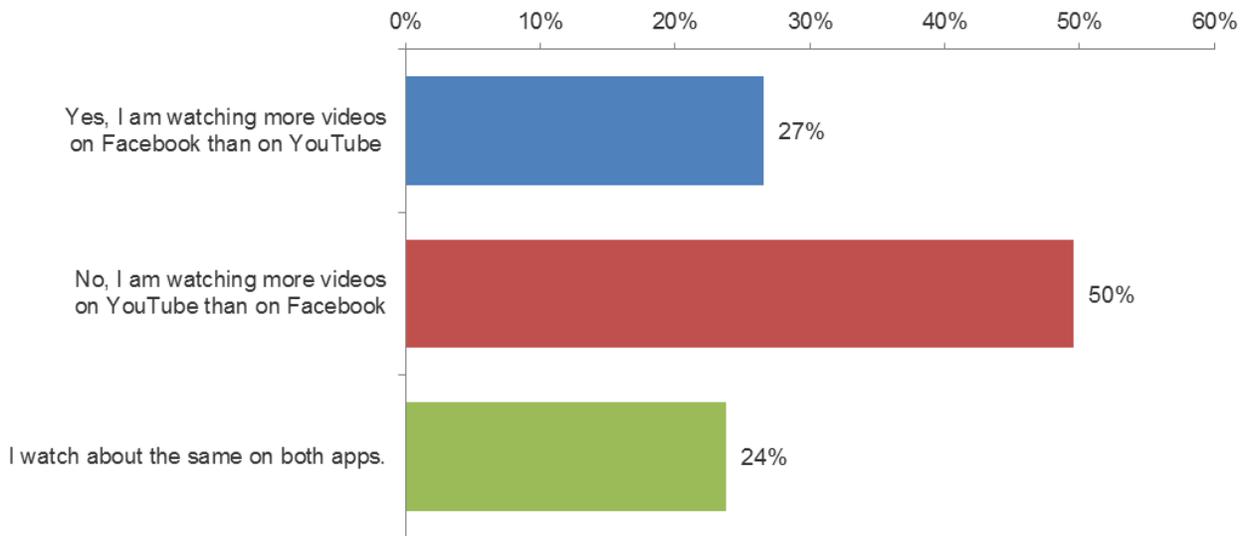
Exhibit 7: When you are on your mobile device, how do you spend your time? (1=most time spent, 11 = least time/no time spent)



Source: MSUSA, SurveyMokey, N=1,026

We believe Facebook is successfully leveraging its base of 1.4 billion users to gain share from Google with mobile video. More than a quarter of respondents now watch more mobile videos on Facebook than YouTube.

Exhibit 8: Over the last 3 months, do you find yourself watching more online videos via Facebook than YouTube?

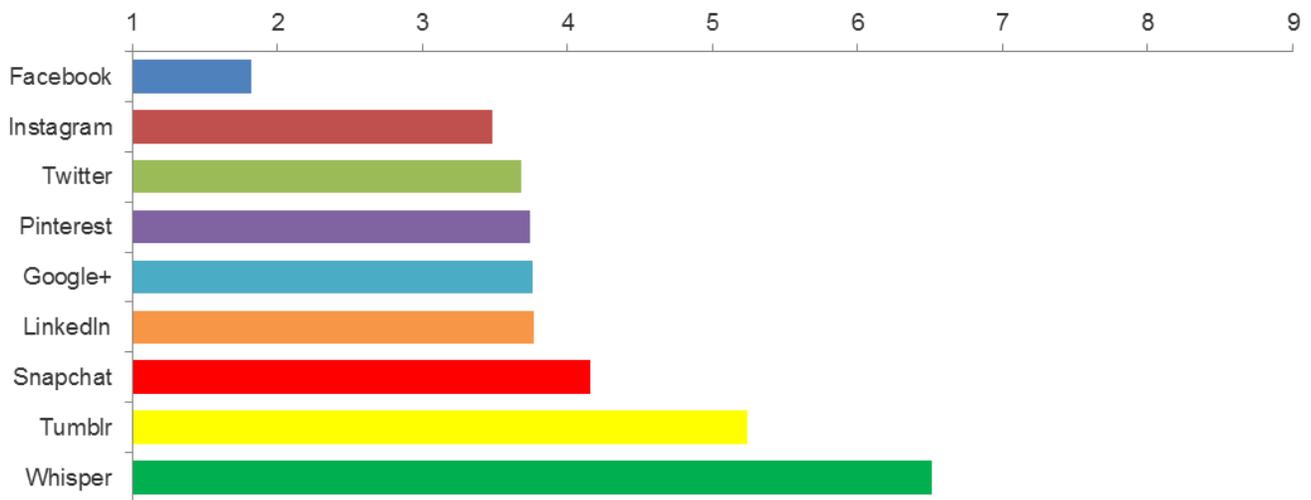


Source: MSUSA, SurveyMokey, N=1,026

2. Social Media on Mobile

Facebook continues to dominate social media on mobile device with its core Facebook app and Instagram for photo sharing. **What’s interesting is that Twitter, Pinterest, Google+, and LinkedIn were ranked similarly in terms of favorite social media apps, which indicate to us that there is a large market for specialized social media apps, and it is not a zero sum game with Facebook right now.**

Exhibit 9: Rank your favorite social media apps (1 is most favorite, 9 is least favorite, and N/A for apps you don't use).

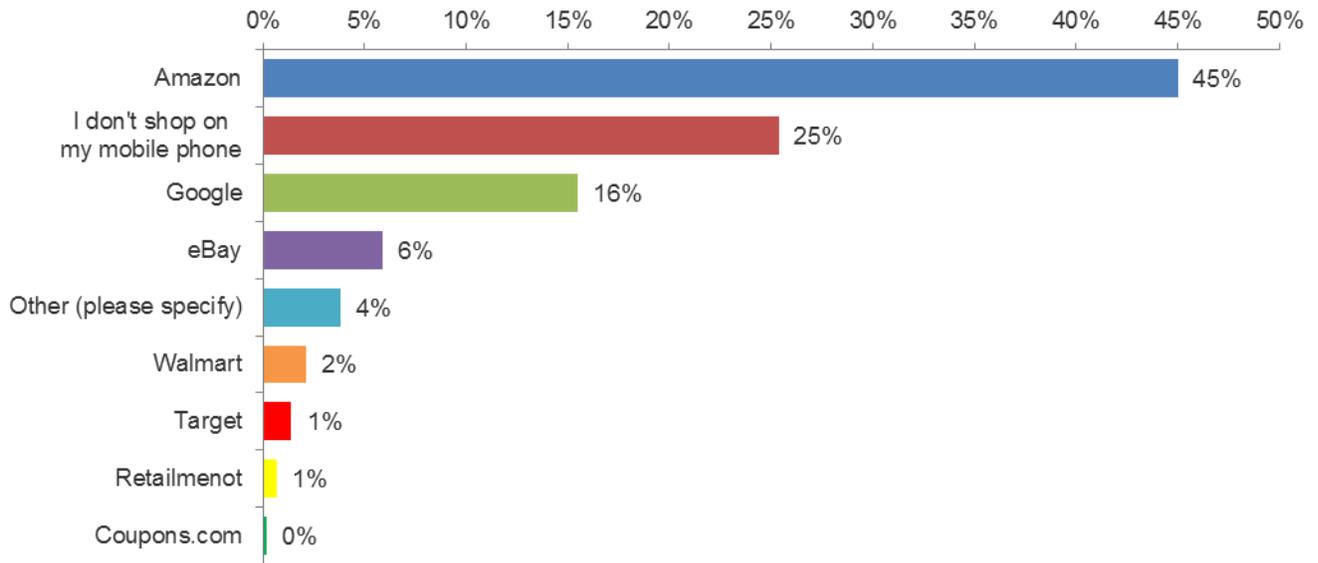


Source: MSUSA, SurveyMokey, N=1,026

3. mCommerce

Our survey confirmed a significant majority of consumers looking to make an online purchase on their smartphones will start with Amazon rather than a Google search for a product. With the breadth of its catalog offerings and in our view, the best customer service in the industry, we believe Amazon will continue to hold its significant lead over other retailers such as Walmart and Target. We also believe the quarter of respondents that do not shop on their smartphones represents a significant opportunity for Amazon to increase its mobile revenues. Smartphone owners are also 8x as likely to start their shopping experience on Amazon versus eBay, possibly highlighting consumers may prefer business models vertically integrating retail and supply chain operations versus marketplaces (i.e., eBay). This could also explain why SMB are listing their products on Amazon as 3P sales despite Amazon possibly competing directly with them as a retailer.

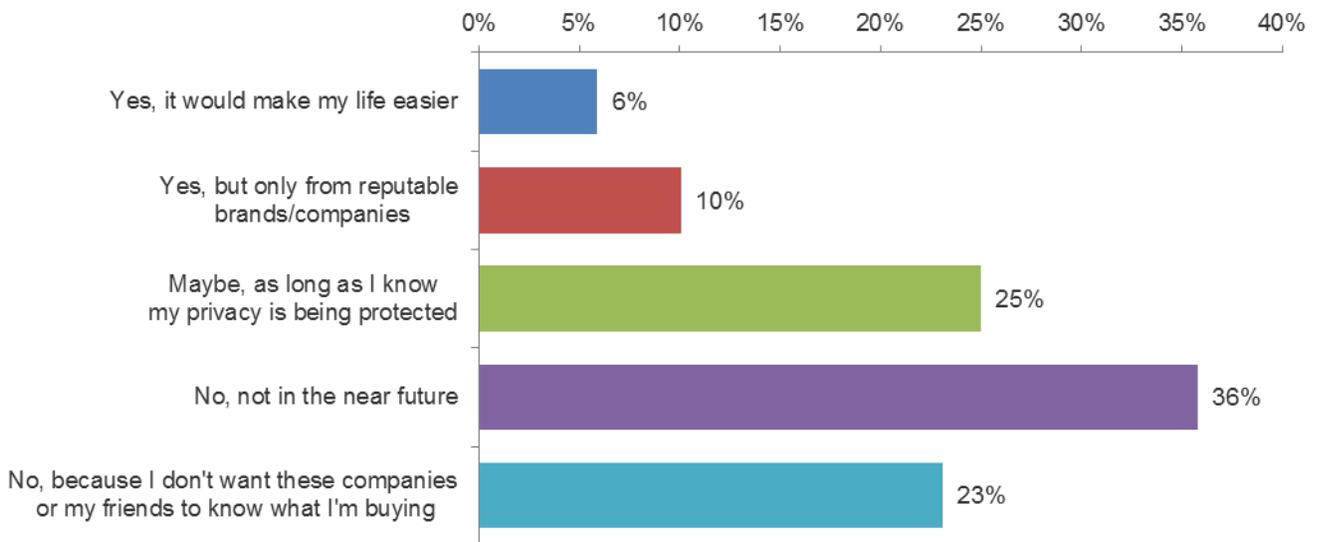
Exhibit 10: When Shopping on your Smartphone, Where do you begin your experience?



Source: Company reports and MSUSA.

More than 40% of respondents indicated that they would be receptive to a “Buy” button next to product ads on Facebook, Google, and Twitter – this is promising for those platforms as they seek to capture a portion of consumer purchase transactions.

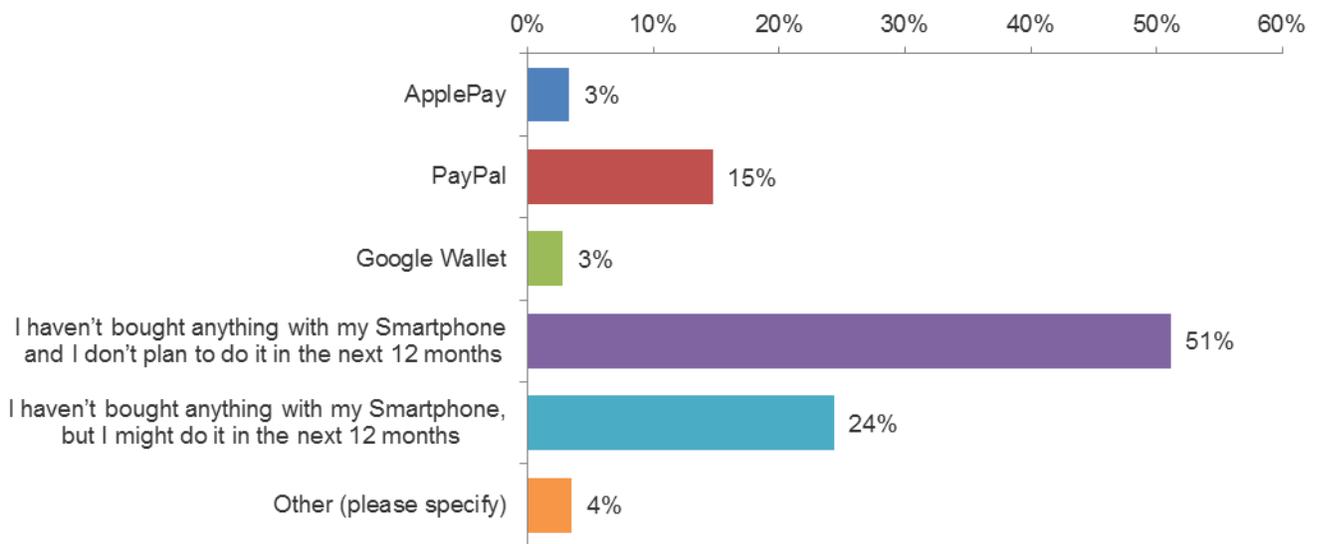
Exhibit 11: Some companies are planning to add a "Buy" button next to ads for products. Would you consider buying something if Facebook or Google or Twitter had "Buy" buttons on product ads?



Source: MSUSA, SurveyMokey, N=1,026

In the exhibit below, only 25% of respondents have tried mobile payment services. Perhaps more importantly, another quarter of respondents are interested in giving mobile payments a shot in the next year. According to our survey, PayPal, Apple, and Google account for roughly 85% of respondents who currently utilize mobile payments with PayPal having 5x as many users as Apple and Google each have. That said, we expect that gap will narrow with growing adoption for mobile payments from Apple and Google. Last month, Google released Android Pay on smartphones for mobile payments (Google Wallet has been reintroduced as a peer-to-peer payments app).

Exhibit 12: When using your Smartphone to pay for something at a physical store or restaurant, which payment service do you most often use?

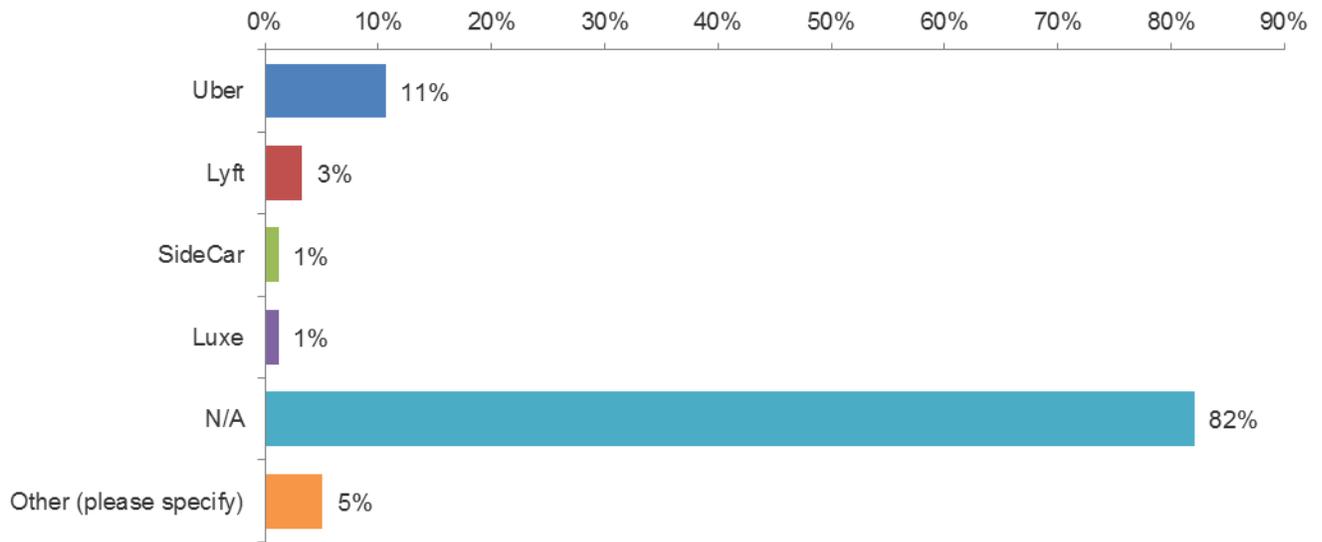


Source: Company reports and MSUSA estimates.

4. On-Demand Economy (Sharing Economy)

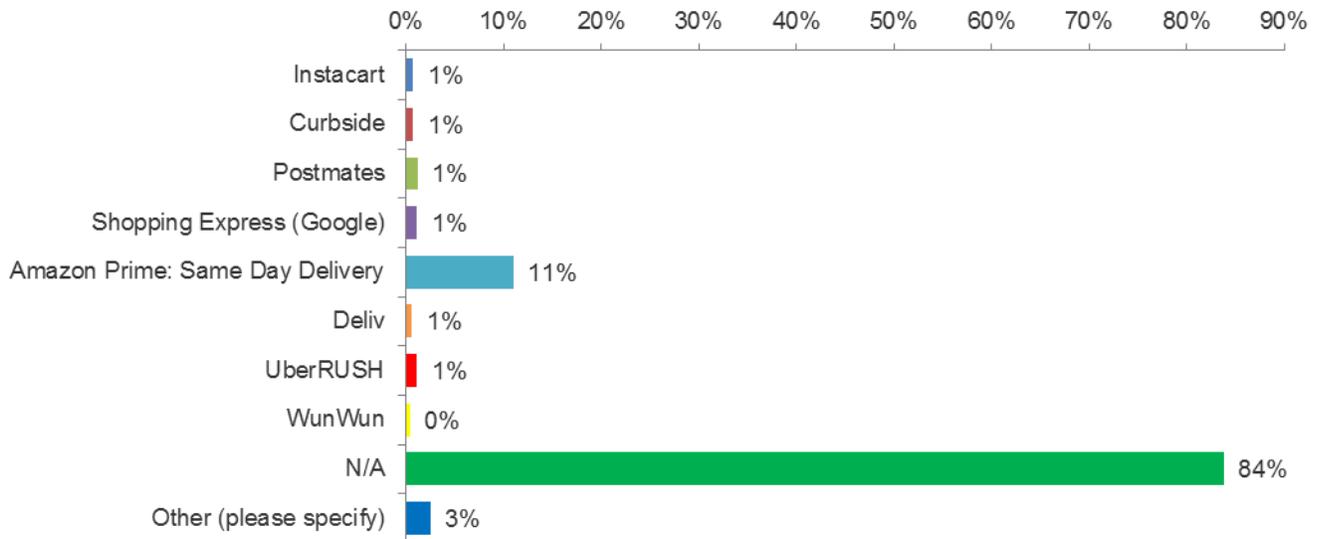
Platforms like Uber and Instacart have connected consumers with service providers, with mobile being the primary interface for that connection. For the on-demand economy, we found that the early companies in the category have outsized market share today as seen in the charts below. However, what is most interesting (especially for people outside San Francisco and New York) is that the vast majority of people do not use on-demand services, which tells us that these markets are still relatively nascent and there are large market opportunities for those companies.

Exhibit 13: Which of the following on-demand car services have you used in the past month?



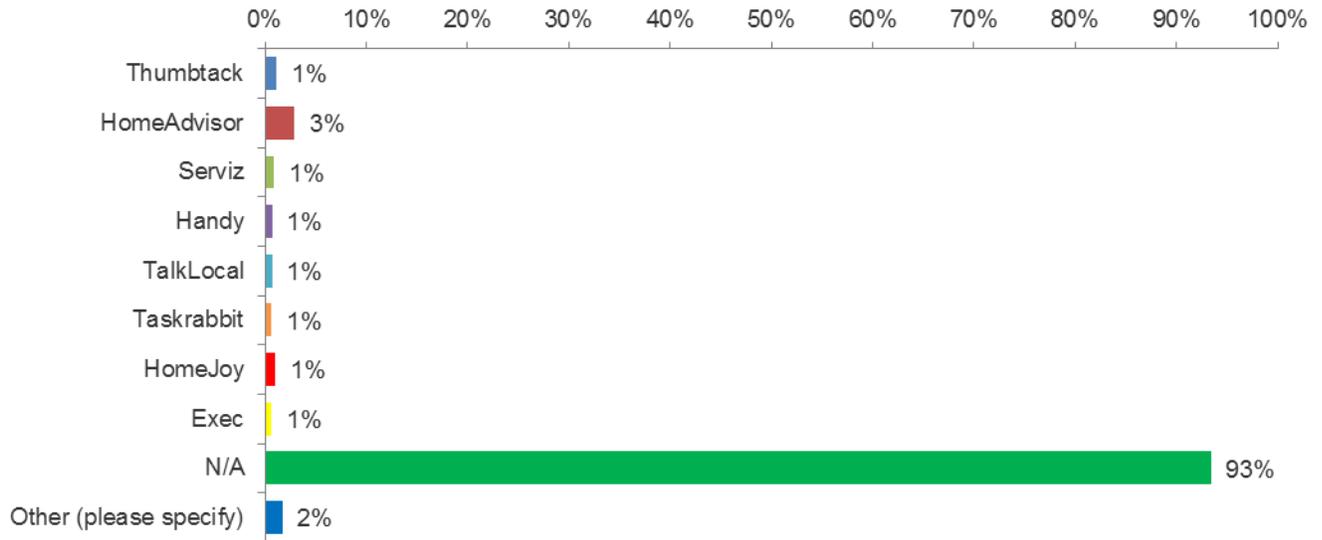
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 14: Which of the following on-demand same-day or next-day shopping delivery services have you used in the past month?



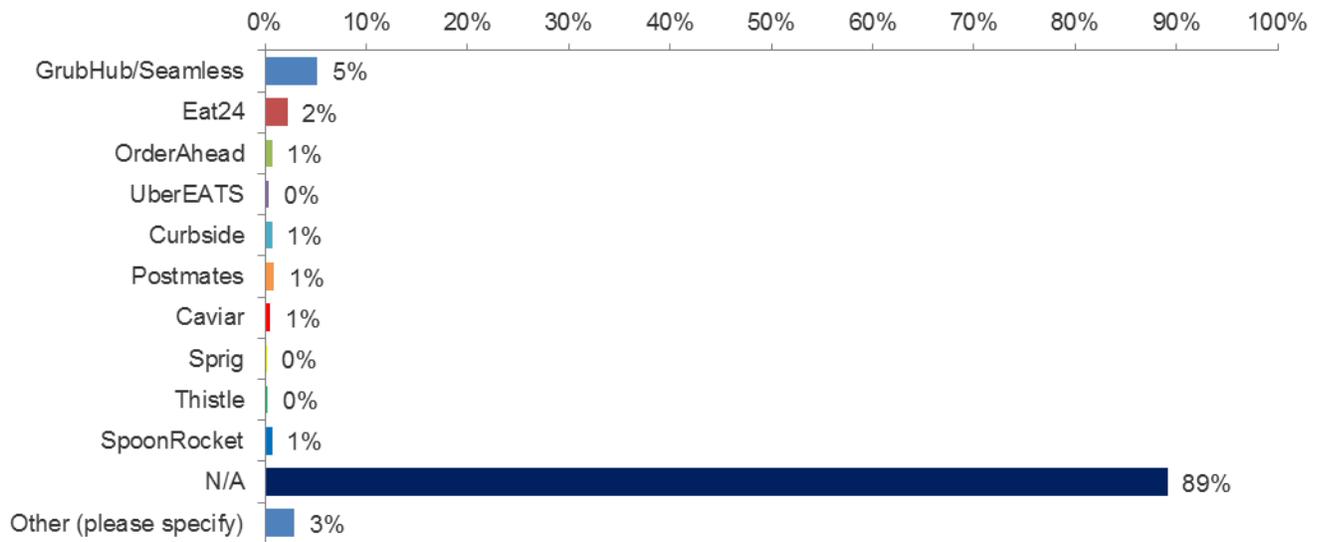
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 15: Which of the following on-demand home service apps have you used in the past month?



Source: MSUSA, SurveyMokey, N=1,026

Exhibit 16: Which of the following food delivery apps have you used in the past month?



Source: MSUSA, SurveyMokey, N=1,026

Internet & Interactive Entertainment Estimates

1. Online Advertising

The U.S. Online Advertising market in 2014 was approximately \$49.5 billion, and grew about 15% YoY. This represents about 28% of the total U.S. advertising market, and online advertising is now larger than TV network broadcasting advertising, which was about \$40.5 billion in 2014. We expect Search and Display advertising to decline over the next three years, especially as more ad dollars move towards mobile. We are expecting mobile advertising to grow at a 29% CAGR from 2014-2018, and video advertising to grow at a 16%+ CAGR over the same period.

Exhibit 17: U.S. Internet Advertising Revenue

(\$M)	2013A	2014A	2015E	2016E	2017E	2018E	CAGR '14-'18
Total U.S. Digital Ad Rev	\$42,911	\$49,451	\$56,314	\$63,275	\$69,125	\$73,947	11%
YoY Change	17%	15%	14%	12%	9%	7%	
Search	\$18,401	\$18,957	\$19,409	\$19,603	\$19,603	\$19,211	0%
YoY Change	9%	3%	2%	1%	0%	-2%	
% of Total	43%	38%	34%	31%	28%	26%	
Classifieds	\$2,652	\$2,670	\$2,684	\$2,697	\$2,711	\$2,724	
YoY Change	12%	1%	0%	0%	0%	0%	
% of Total	6%	5%	5%	4%	4%	4%	
Lead Generation	\$1,754	\$1,879	\$1,944	\$2,003	\$2,043	\$2,075	
YoY Change	2%	7%	3%	3%	2%	2%	
% of Total	4%	4%	3%	3%	3%	3%	
Mobile	\$7,144	\$12,511	\$18,193	\$24,271	\$29,468	\$34,182	29%
YoY Change	110%	75%	45%	33%	21%	16%	
% of Total	17%	25%	32%	38%	43%	46%	
Email	\$130	\$0	\$0	\$0	\$0	\$0	
YoY Change	-17%	--	--	--	--	--	
% of Total	0%	0%	0%	0%	0%	0%	
Display Related Ads	\$12,829	\$13,433	\$14,085	\$14,702	\$15,302	\$15,754	4%
YoY Change	7%	5%	5%	4%	4%	3%	
% of Total	30%	27%	25%	23%	22%	21%	
Banner Ads	\$7,914	\$8,011	\$8,036	\$7,956	\$7,796	\$7,485	-2%
YoY Change	2%	1%	0%	-1%	-2%	-4%	
% of Total	18%	16%	14%	13%	11%	10%	
Rich Media	\$1,325	\$1,385	\$1,429	\$1,471	\$1,510	\$1,546	3%
YoY Change	19%	5%	3%	3%	3%	2%	
% of Total	3%	3%	3%	2%	2%	2%	
Sponsorships	\$766	\$774	\$778	\$780	\$781	\$780	0%
YoY Change	-9%	1%	0%	0%	0%	0%	
% of Total	2%	2%	1%	1%	1%	1%	
Digital Video	\$2,824	\$3,264	\$3,842	\$4,495	\$5,214	\$5,944	16%
YoY Change	22%	16%	18%	17%	16%	14%	
% of Total	7%	7%	7%	7%	8%	8%	

Source: PWC & Interactive Advertising Bureau and MSUSA

Given that newspapers and consumer magazines generated about \$30 billion of ad revenue in 2014, and that National Broadcast and Cable TV generated about \$70B of ad revenue last year, we believe that the secular shift to online advertising remains very strong.

Mobile will be the biggest growth driver for the next several years, and we expect the mobile ad market to grow from approximately \$13 billion in 2014 to nearly \$34 billion in 2018, representing a four year CAGR of 29%. We expect display ads on mobile to more than triple from \$5 billion in 2014 to over \$17 billion by 2018, as the mix-shift of ad dollars moves from mobile search to display. We expect that Facebook should be one of the biggest beneficiaries of this trend, followed by Google, which owns AdMob, YouTube and the Google Content Network.

Exhibit 18: U.S. Mobile Advertising Revenue

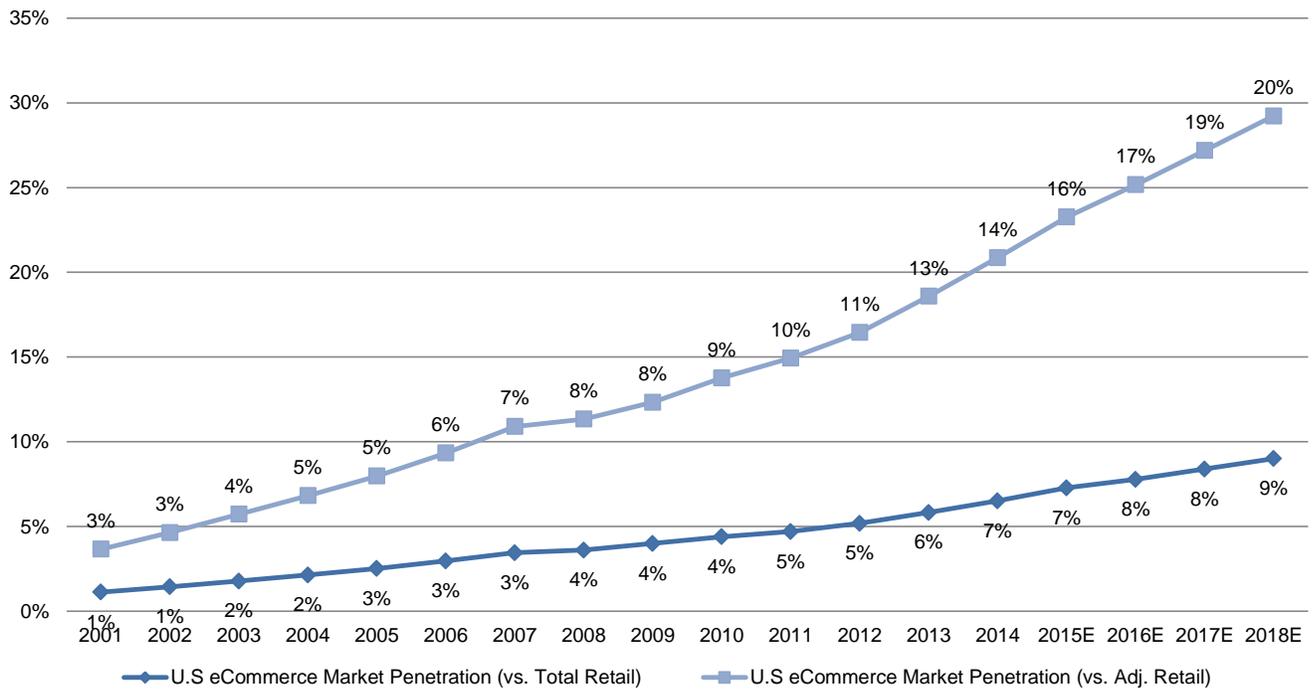
(\$M)	2013A	2014A	2015E	2016E	2017E	2018E	CAGR '14-'18
U.S. Mobile Ad Revenue	\$7,144	\$12,511	\$18,193	\$24,271	\$29,468	\$34,182	29%
YoY Change	110%	75%	45%	33%	21%	16%	
Mobile Search	\$3,801	\$6,531	\$9,315	\$11,893	\$13,555	\$15,040	23%
YoY Change	119%	72%	43%	28%	14%	11%	
% of Total	53%	52%	51%	49%	46%	44%	
Mobile Display	\$2,886	\$5,180	\$7,714	\$10,922	\$14,203	\$17,228	35%
YoY Change	80%	79%	49%	42%	30%	21%	
% of Total	40%	41%	42%	45%	48%	50%	
Mobile Other	\$457	\$801	\$1,164	\$1,456	\$1,709	\$1,914	24%
YoY Change	572%	75%	45%	25%	17%	12%	
% of Total	6%	6%	6%	6%	6%	6%	

Source: PWC & Interactive Advertising Bureau and MSUSA eCommerce Market

2. U.S. eCommerce Market

The U.S. eCommerce market in 2014 was approximately \$305 billion, and grew 14% YoY. This represents just 7% penetration of the overall U.S. retail market in 2014, which was around \$4.7 trillion. See the supporting statistics from the US Department of Commerce and ComScore in the exhibit below.

Exhibit 19: U.S. eCommerce Market



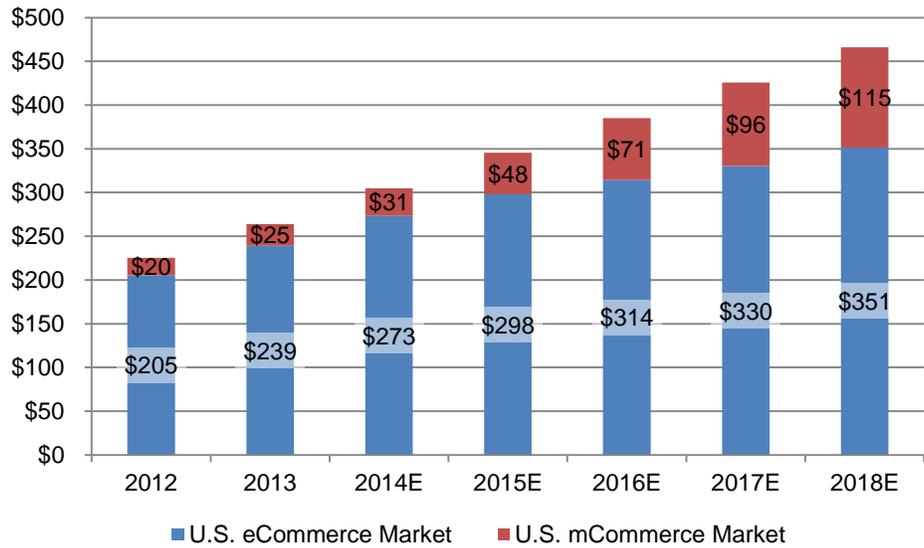
Source: Department of Commerce, ComScore and MSUSA

Why has penetration of eCommerce lagged that of online advertising? We believe that people have shifted their media consumption habits to online vs. offline at a much faster pace than people willing to buy items online. Furthermore, people may need items in a more timely fashion and are not willing to even wait two to three days for products to be shipped.

However, many companies are trying to reduce the friction of buying online in order to serve the immediacy need. Amazon is testing Amazon Prime Now for delivery within an hour of an order (Amazon is testing this in very few markets). Google Shopping Express also provides same or next day delivery (although our recent experience has found that delivery times have been pushed to overnight or even two days now).

We believe that there is a shift to mobile commerce (mCommerce) as well. We expect that mCommerce will grow from \$31 billion in 2014 to \$115 billion by 2018, or a 38% CAGR over this time period. We also expect that about 1/4 of all online commerce sales will take place on mobile devices by 2018.

Exhibit 20: U.S. eCommerce Market



Source: Department of Commerce, ComScore and MSUSA

In terms of winners, we believe that Amazon is the clearest winner to take outsized share of the eCommerce market: If it ‘ain’t Prime, it ain’t mine.’ eBay has had several fits and starts over the years, but continues to be a strong marketplace with over 157 million active buyers and 25 million sellers. We believe that Google, Facebook, Twitter and other media companies may help accelerate the shift to online commerce as they are introducing “buy” buttons within ads on their sites. This should help reduce the friction to buying, especially on mobile devices. Finally, we expect to see traditional retailers utilize their assets (stores) to become mini-delivery centers such that people can buy online and get items delivered within the same day or next day, or can pick up the item the same day.

3. Global Interactive Entertainment Market

The global video games market is expected to grow from \$70.1 billion this year to \$93.2 billion by 2019. Growth in the market re-accelerated in 2013 to 8% vs. 3% in 2012, and modestly accelerated again in 2014 to 9% due to strong interest in next-gen consoles (PS4 and XBOX One), as well as a number of solid title releases by publishers. In-game advertising, per PWC, is one of the fastest growing areas, followed by app-based social/casual games. Console-based games are expected to grow around 4% from 2014-2019.

Exhibit 21: U.S. eCommerce Market

Global Video Games Rev by Component (\$ in MM\$)	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E	'14-'19 CAGR (%)
Global video games advertising	\$2,340	\$2,572	\$2,842	\$3,194	\$3,565	\$3,957	\$4,375	\$4,749	10.8
Global social/casual gaming revenue (US dollar millions)									
Global app-based social/casual gaming revenue	10,037	11,562	13,094	14,486	15,809	17,135	18,577	19,816	8.6
Global browser-based social/casual gaming revenue	2,744	2,872	2,887	2,852	2,815	2,777	2,738	2,703	(1.3)
Total global social/casual gaming revenue	12,781	14,434	15,981	17,338	18,624	19,911	21,314	22,519	7.1
Global traditional gaming revenue (US dollar millions)									
Total global total console games revenue	24,377	24,784	26,381	27,488	28,601	29,672	30,779	31,851	3.8
Total global total pc games revenue	20,327	22,846	25,573	27,387	28,920	30,443	32,072	34,059	5.9
Total global traditional gaming revenue	44,704	47,631	51,954	54,875	57,521	60,114	62,851	65,909	4.9
Total global video games consumer	\$57,485	\$62,065	\$67,935	\$72,213	\$76,145	\$80,025	\$84,165	\$88,429	5.4
Total Global Video Games Revenue	\$59,825	\$64,637	\$70,777	\$75,406	\$79,710	\$83,982	\$88,541	\$93,177	5.7

Global Video Games Rev by Component (YoY Change)	2012A	2013A	2014A	2015E	2016E	2017E	2018E	2019E
Global video games advertising	11.4%	9.9%	10.5%	12.4%	11.6%	11.0%	10.6%	8.5%
Global social/casual gaming revenue								
Global app-based social/casual gaming revenue	18.4%	15.2%	13.2%	10.6%	9.1%	8.4%	8.4%	6.7%
Global browser-based social/casual gaming revenue	5.4%	4.7%	0.5%	-1.2%	-1.3%	-1.4%	-1.4%	-1.3%
Total global social/casual gaming revenue	15.4%	12.9%	10.7%	8.5%	7.4%	6.9%	7.0%	5.7%
Global traditional gaming revenue								
Total global total console games revenue	-10.4%	1.7%	6.4%	4.2%	4.0%	3.7%	3.7%	3.5%
Total global total pc games revenue	16.5%	12.4%	11.9%	7.1%	5.6%	5.3%	5.4%	6.2%
Total global traditional gaming revenue	0.1%	6.5%	9.1%	5.6%	4.8%	4.5%	4.6%	4.9%
Total global video games consumer	3.1%	8.0%	9.5%	6.3%	5.4%	5.1%	5.2%	5.1%
Total Global Video Games Revenue	3%	8%	9%	7%	6%	5%	5%	5%

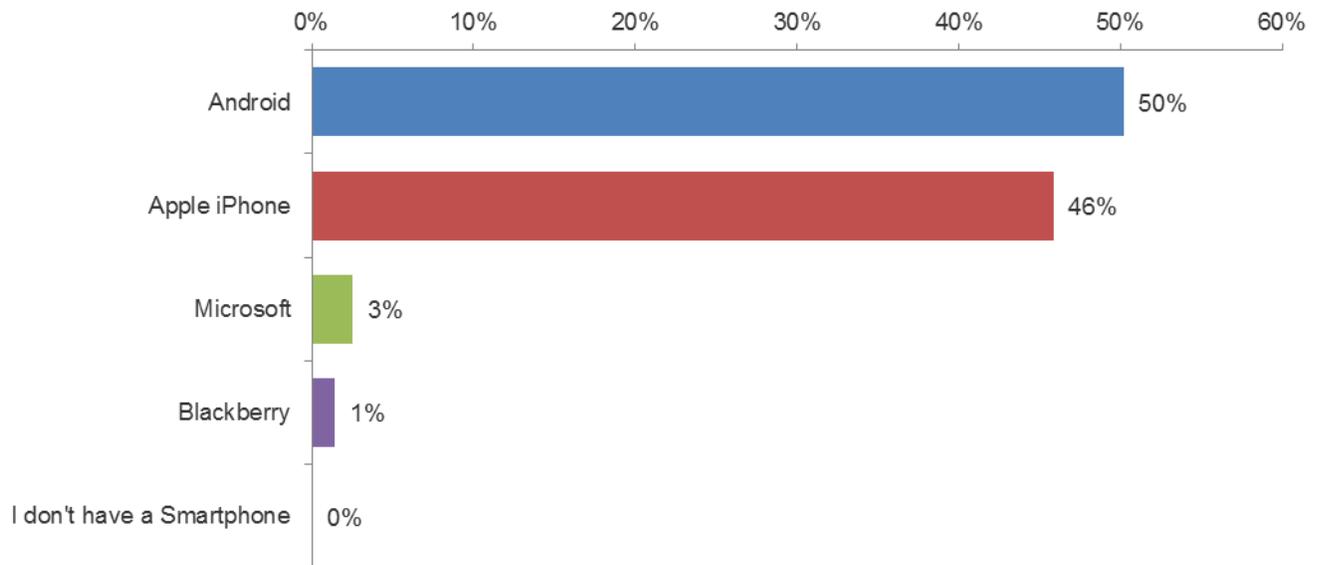
Source: Department of Commerce, ComScore and MSUSA

Appendix: Mobile Market Survey

Below is the full survey from our mid-June 2015 mobile state affairs. Please contact us if to discuss any of the additional findings, or for copies of the raw data or charts.

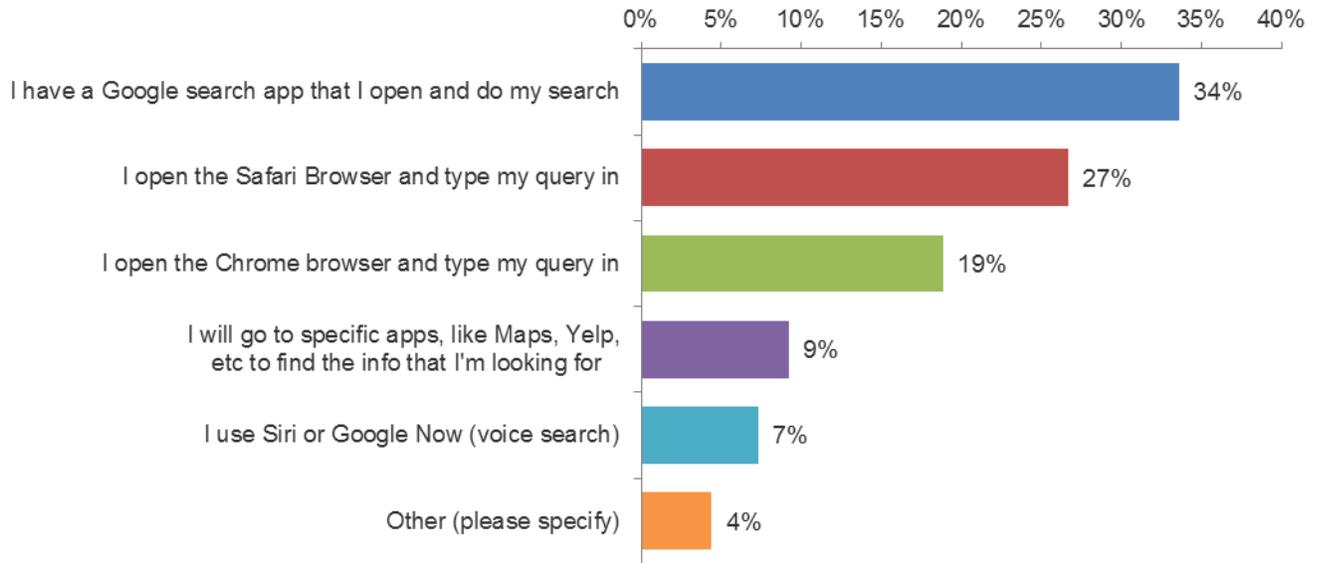
1. Mobile Overview

Exhibit 22: What type of Smartphone do you use?



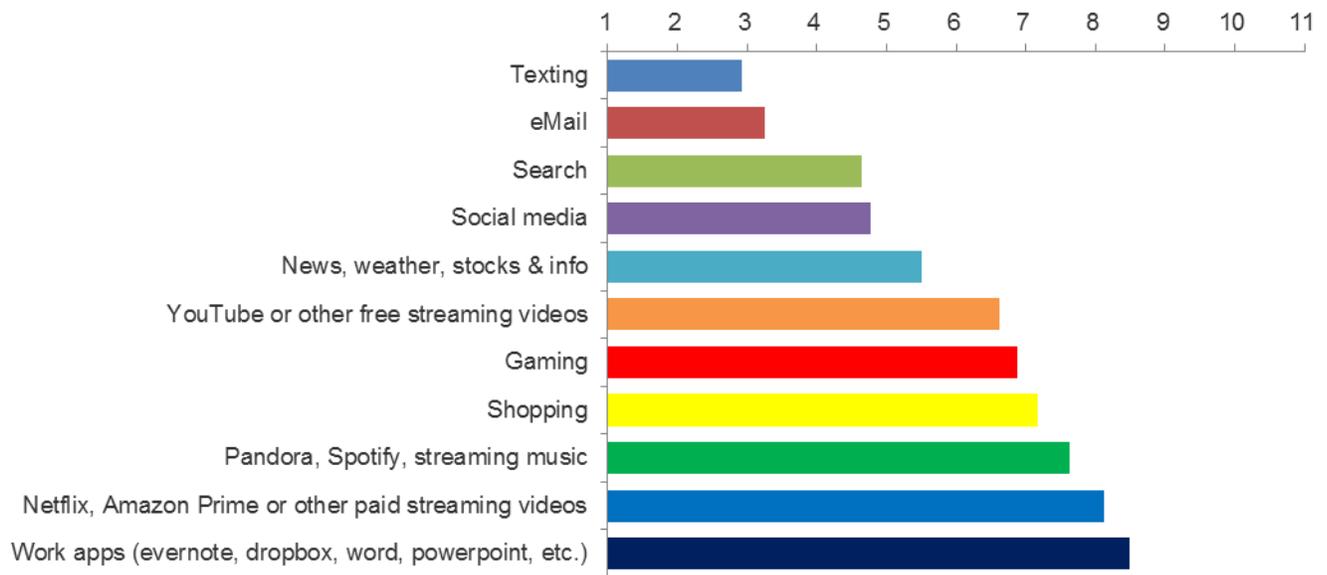
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 23: When you need go online when using your Smartphone, where do you go most often to find information?



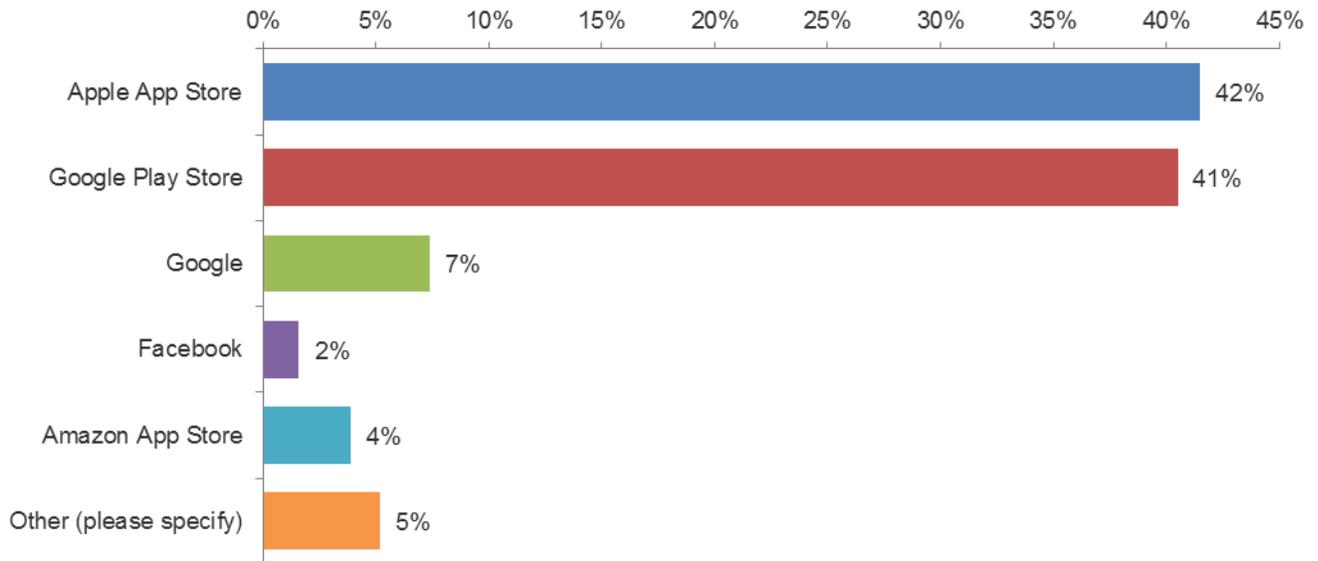
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 24: When you are on your mobile device, how do you spend your time? (1=most time spent, 11 = least time/no time spent)



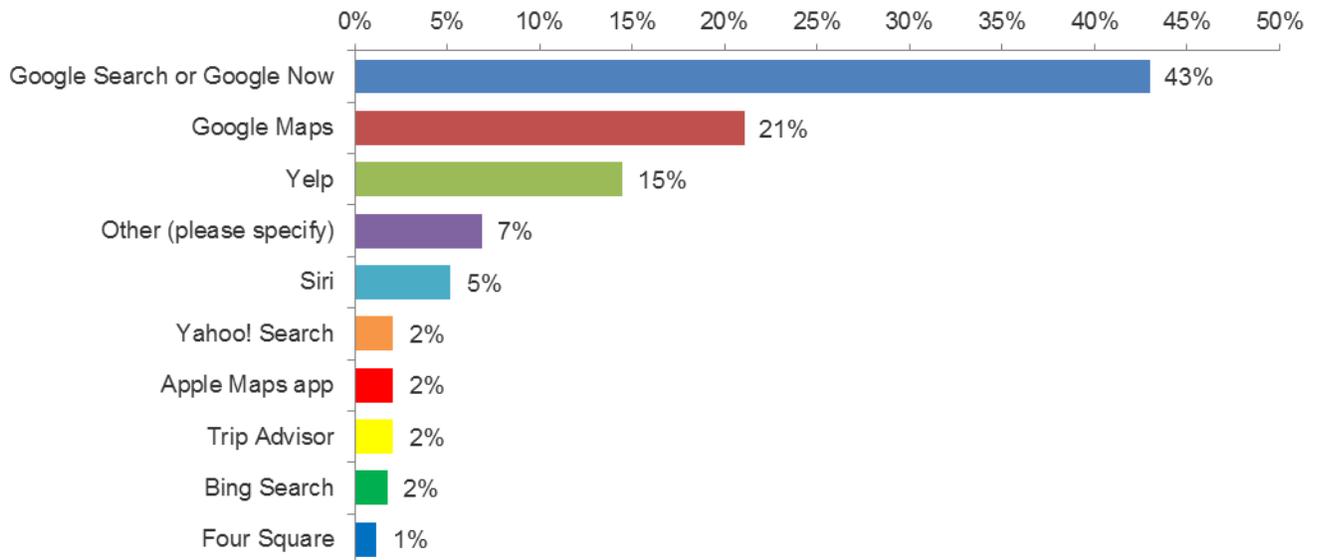
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 25: 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?



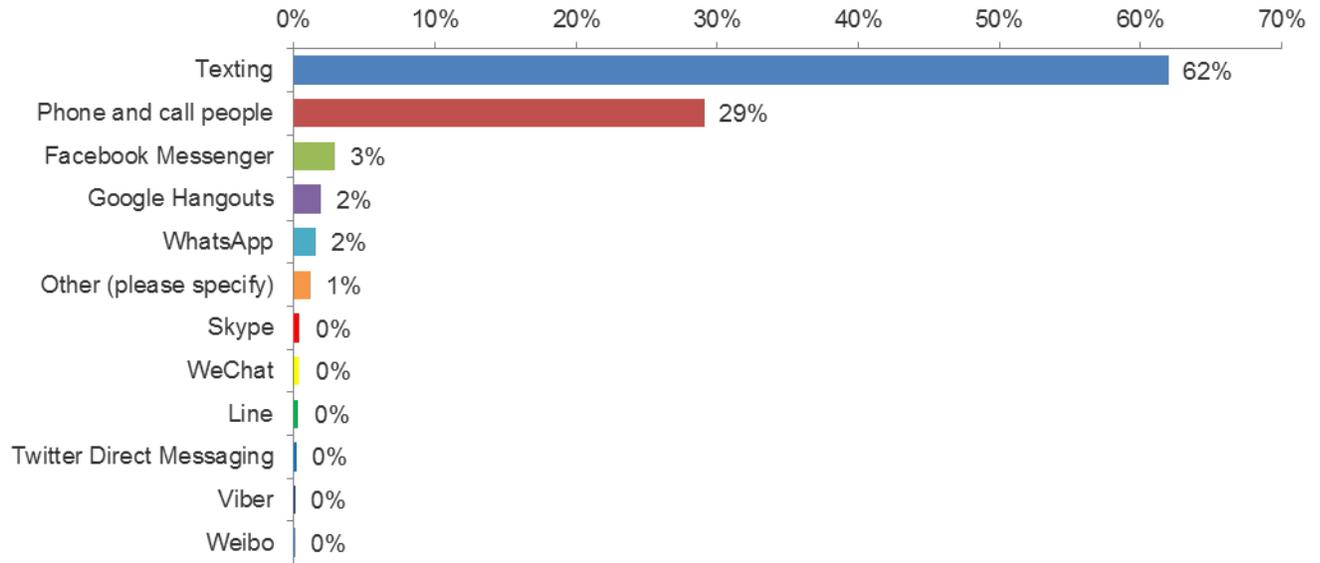
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 26: When you are using your mobile phone to find a local restaurant or store, what app or mobile site do you most often use?



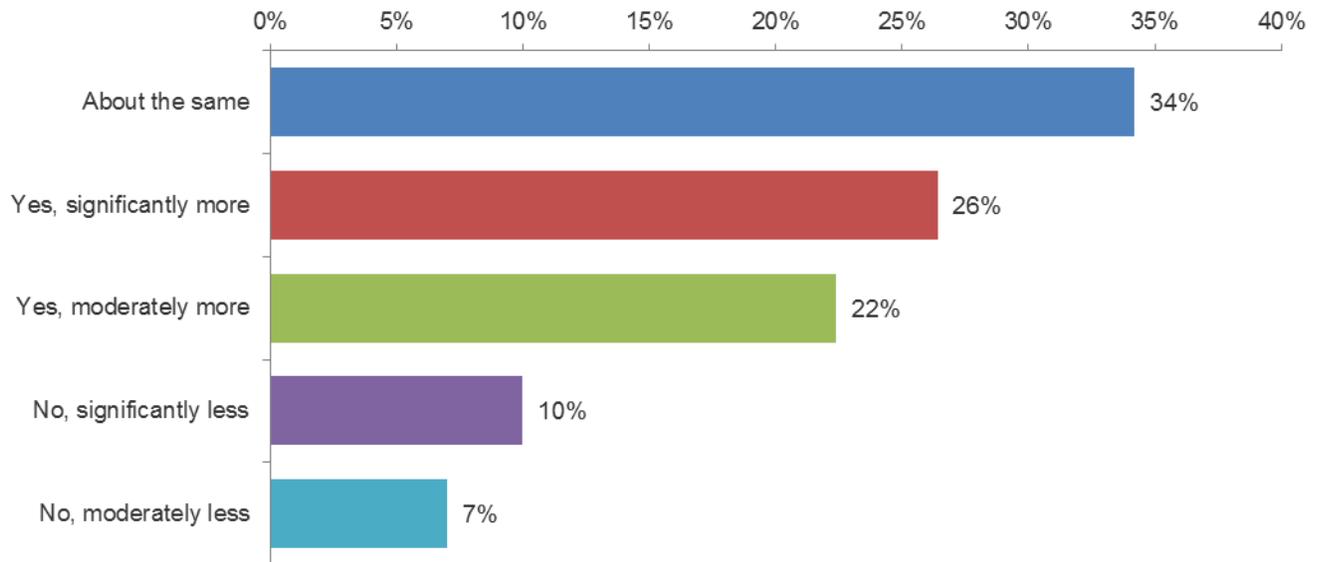
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 27: When communicating with others on your Smartphone what is your most frequent method of talking with people?



Source: MSUSA, SurveyMokey, N=1,026

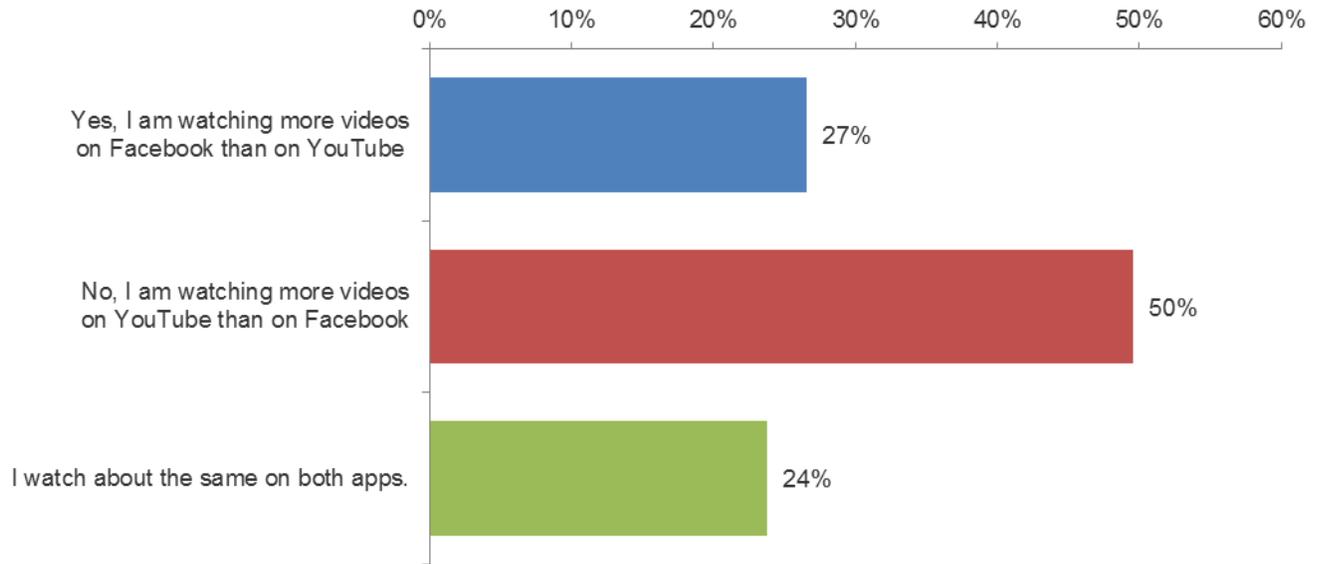
Exhibit 28: When comparing today versus a year ago, are you accessing the Internet from your phone more than your computer?



Source: MSUSA, SurveyMokey, N=1,026

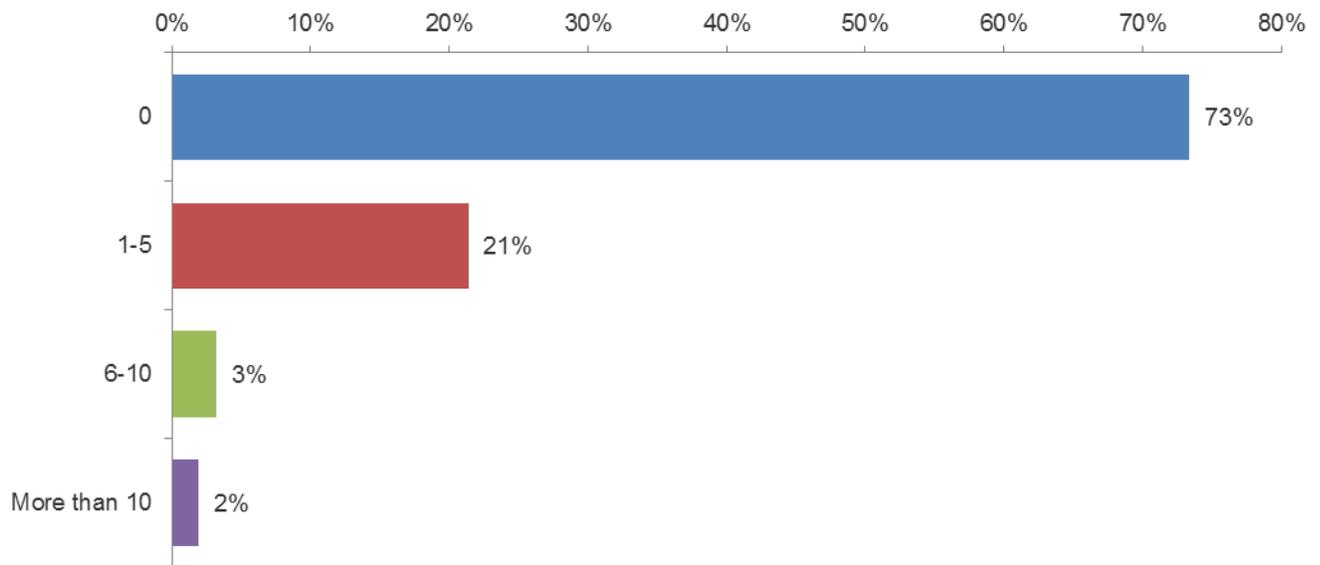
2. Facebook Vs. Google

Exhibit 29: Over the last 3 months, do you find yourself watching more online videos via Facebook than YouTube?



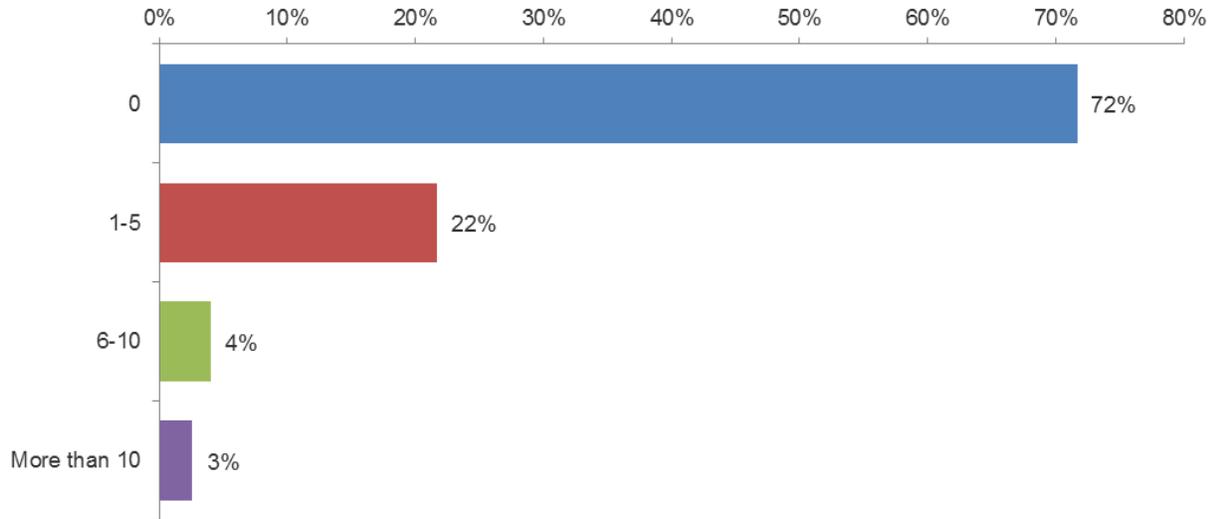
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 30: How many apps have you downloaded from Facebook in the past year?



Source: MSUSA, SurveyMokey, N=1,026

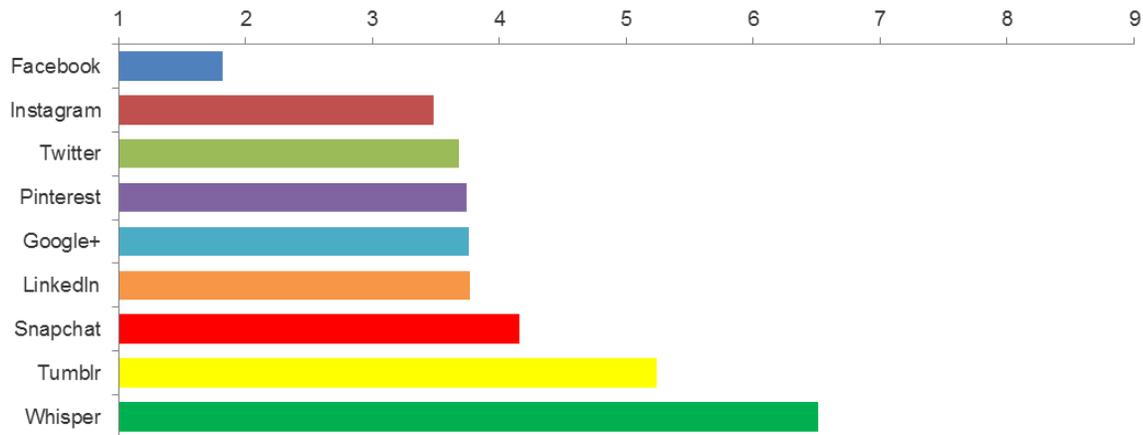
Exhibit 31: How many apps have you downloaded from Google Search in the past year? (Not Google Play app store)



Source: MSUSA, SurveyMokey, N=1,026

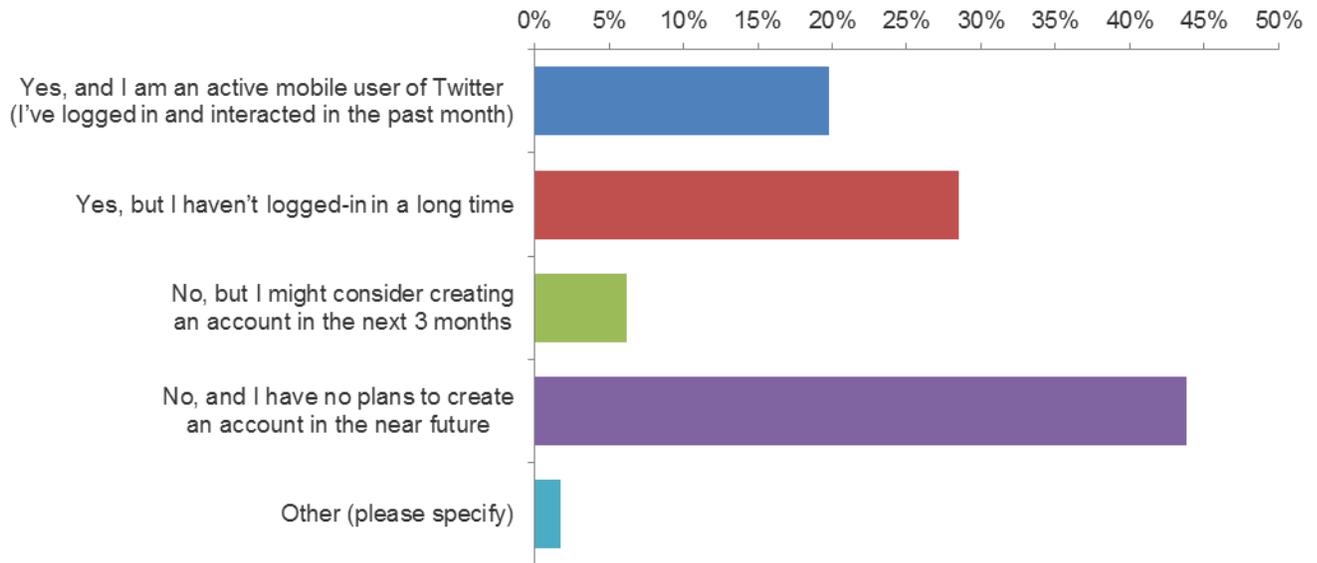
3. Social Media Trends on Mobile

Exhibit 32: Rank your favorite social media apps (1 is most favorite, 9 is least favorite, and N/A for apps you don't use).



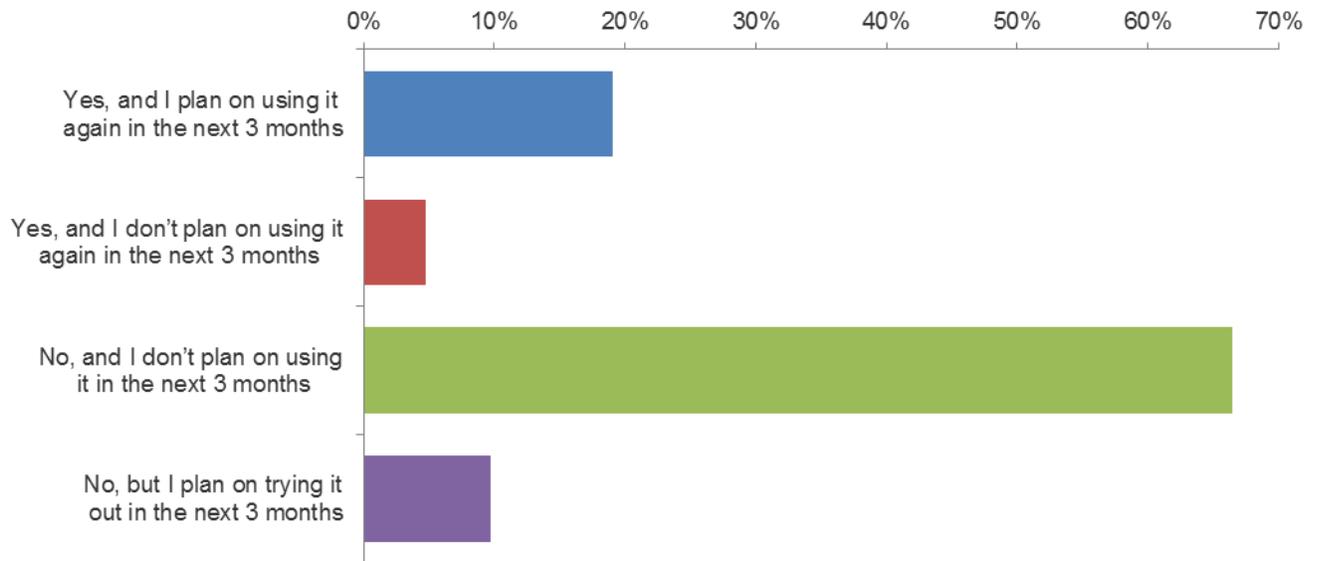
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 33: Do you have a Twitter account?



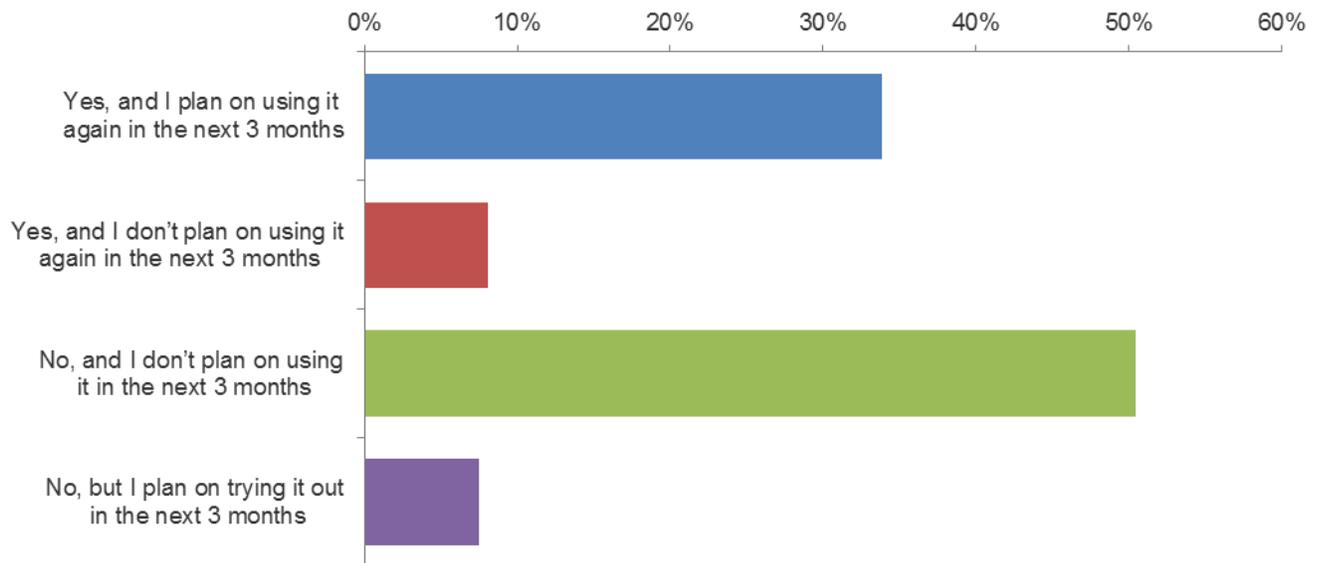
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 34: Have you used Snapchat in the past 3 months?



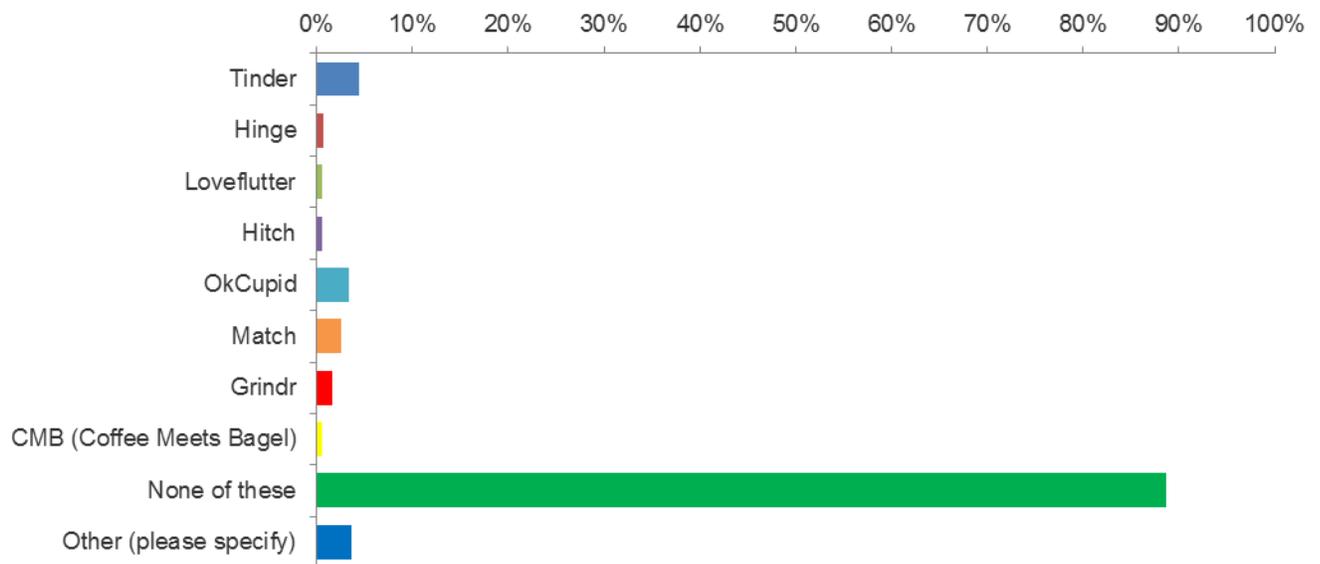
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 35: Have you used Pinterest in the past 3 months?



Source: MSUSA, SurveyMokey, N=1,026

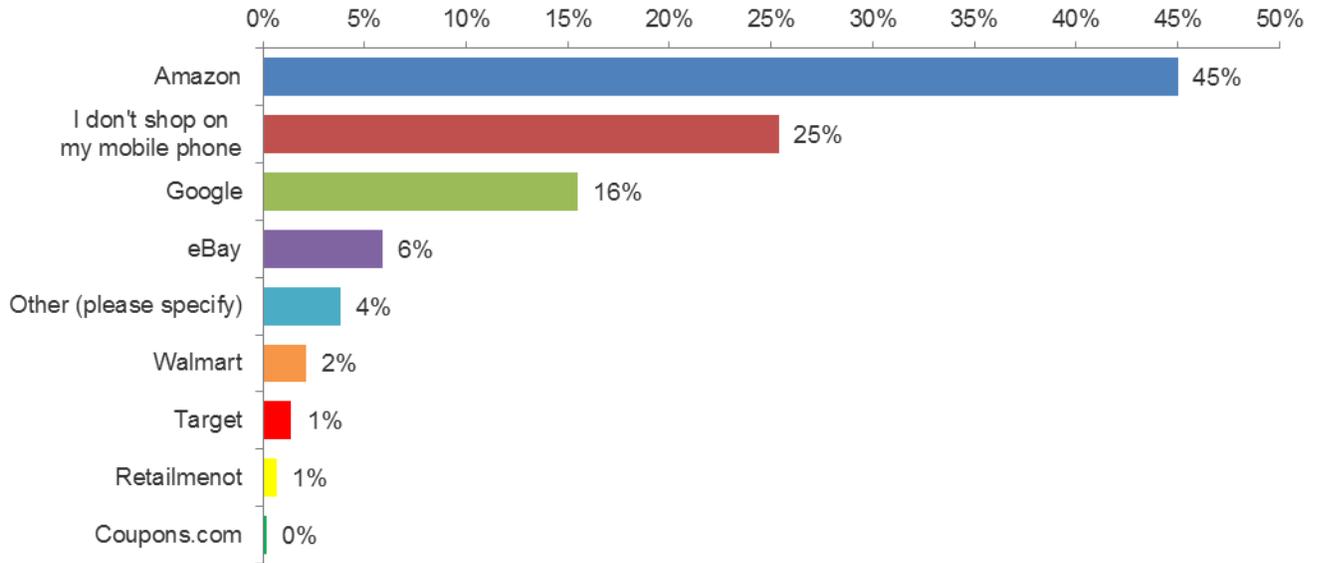
Exhibit 36: Which of the following apps have you used to meet people in the last 3 months? (Select all that apply).



Source: MSUSA, SurveyMokey, N=1,026

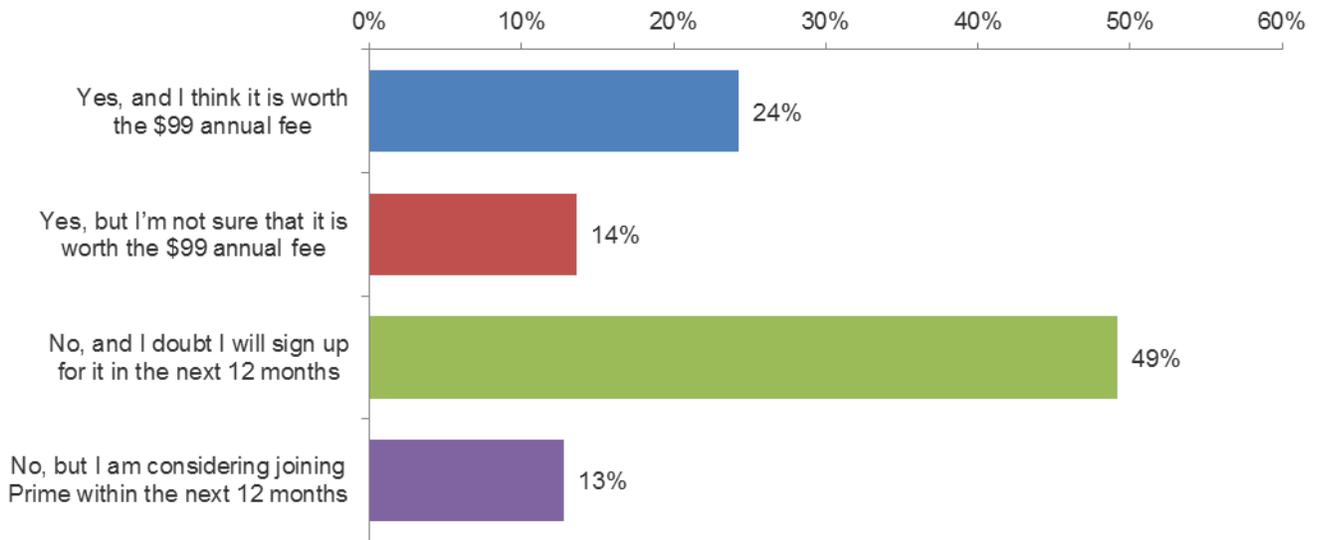
4. mCommerce

Exhibit 37: When Shopping on your Smartphone, Where do you begin your experience?



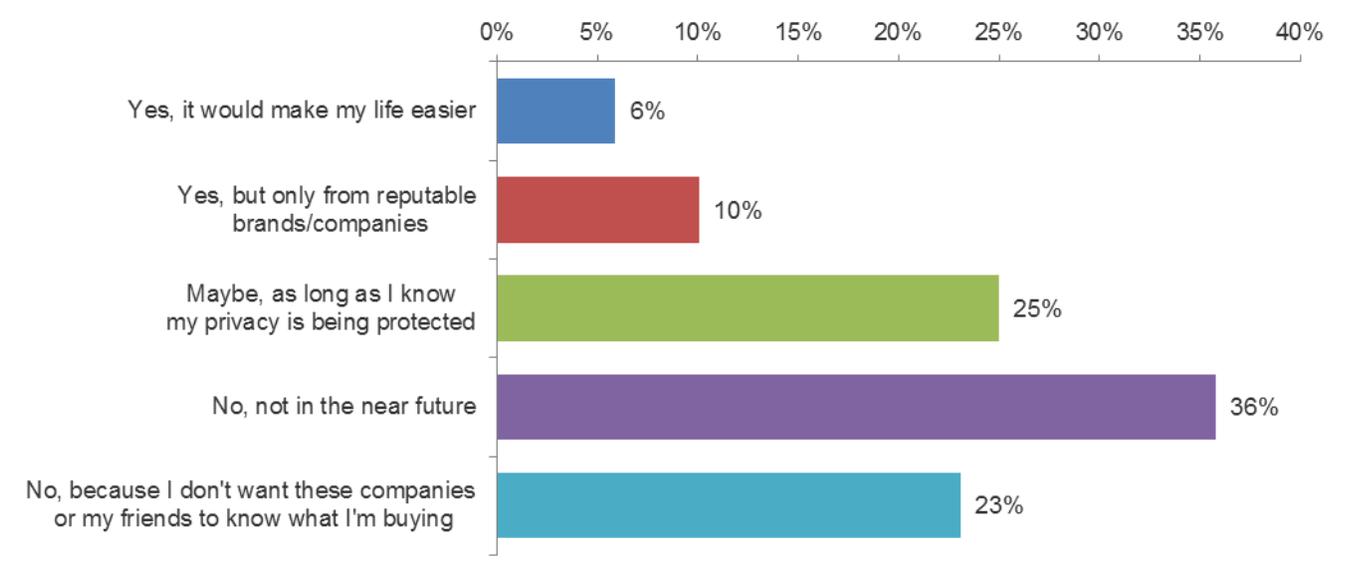
Source: Company reports and MSUSA.

Exhibit 38: Are you an Amazon Prime member?



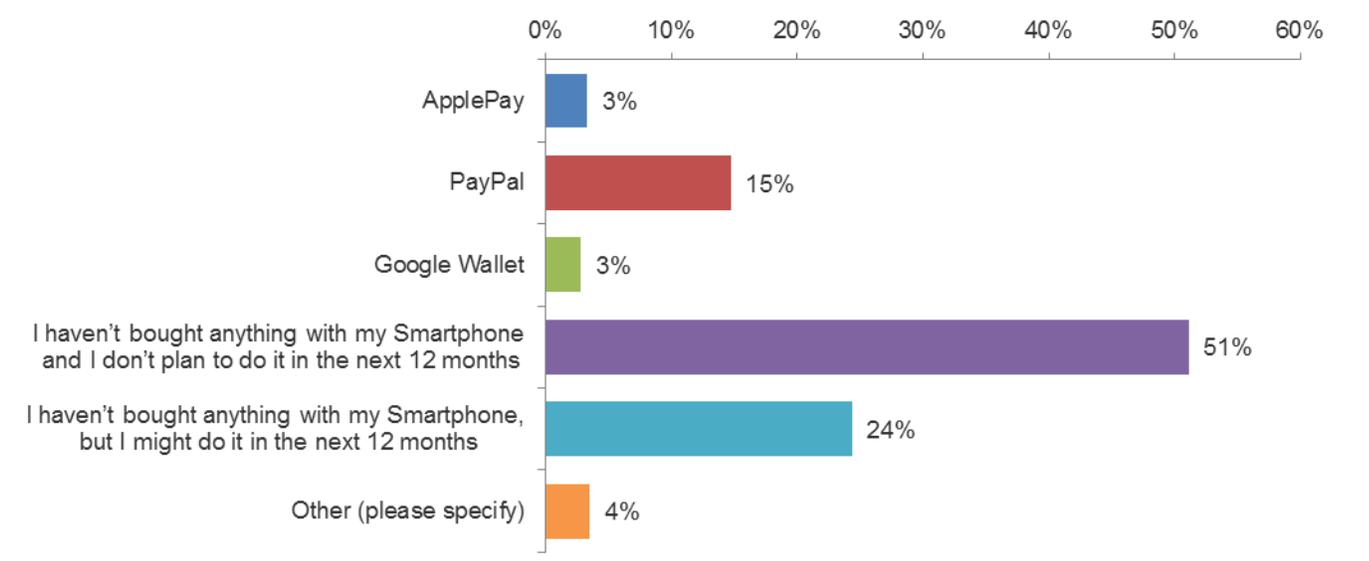
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 39: Some companies are planning to add a "Buy" button next to ads for products. Would you consider buying something if Facebook or Google or Twitter had "Buy" buttons on product ads?



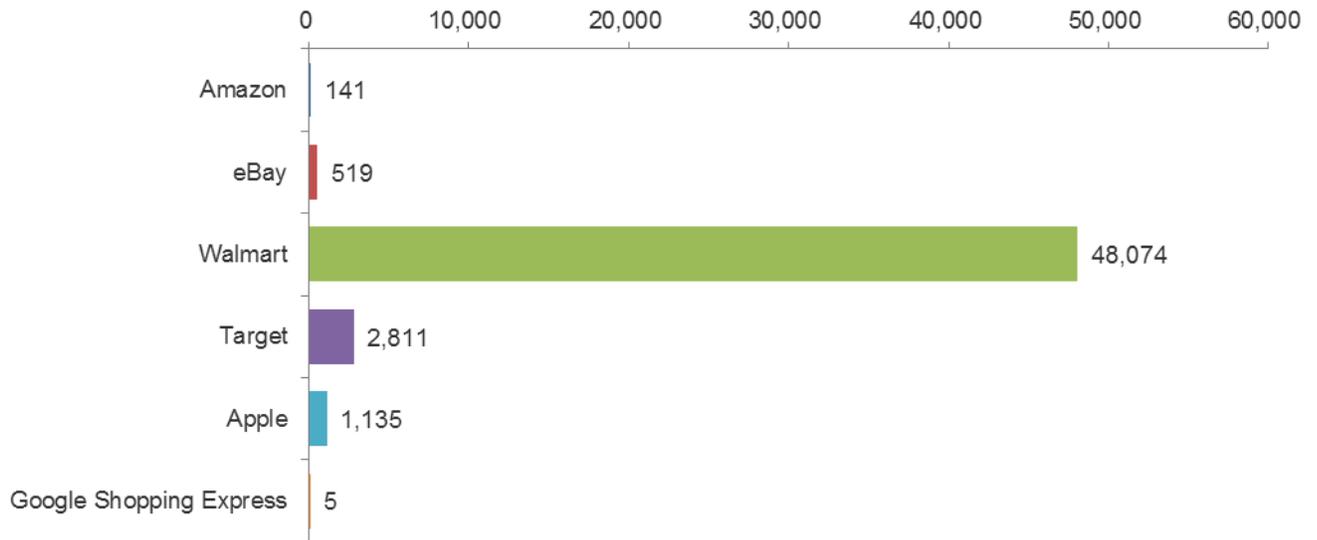
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 40: When using your Smartphone to pay for something at a physical store or restaurant, which payment service do you most often use?



Source: Company reports and MSUSA estimates.

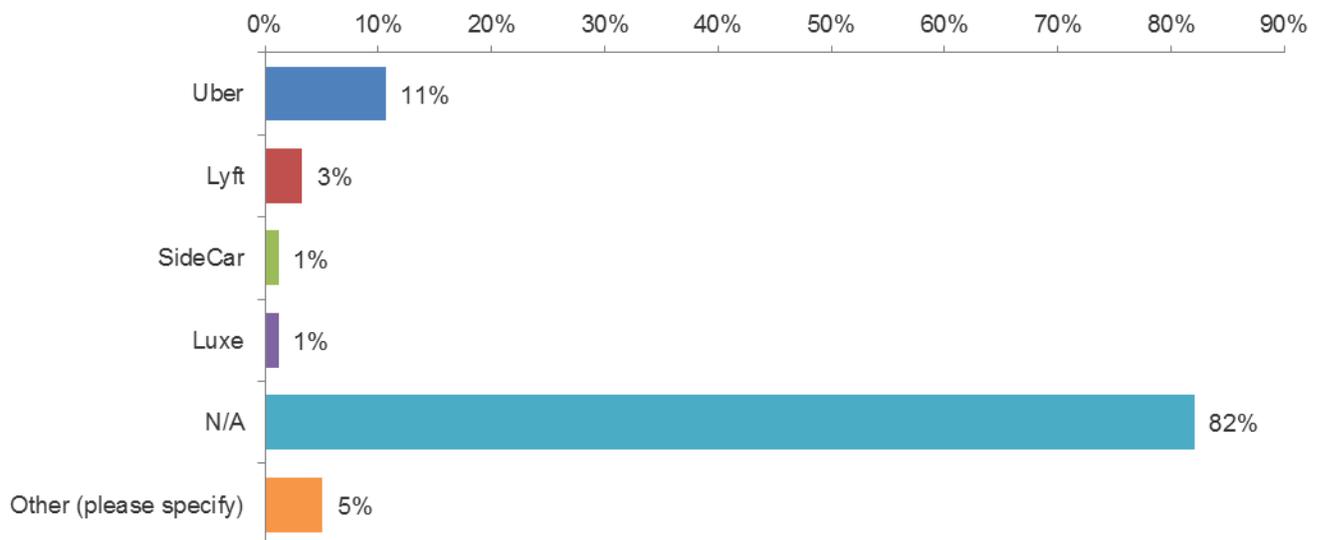
Exhibit 41: About how much money have you spent on online shopping from the following sites or apps in the past 30 days?



Source: Company reports and MSUSA estimates.

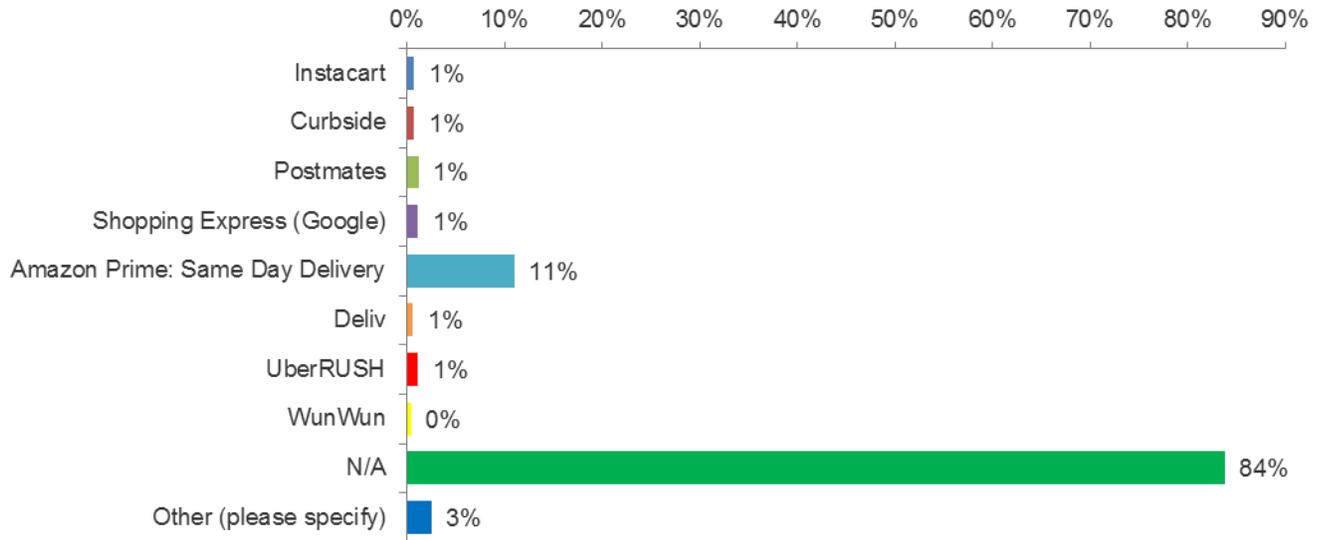
5. Sharing Economy

Exhibit 42: Which of the following on-demand car services have you used in the past month?



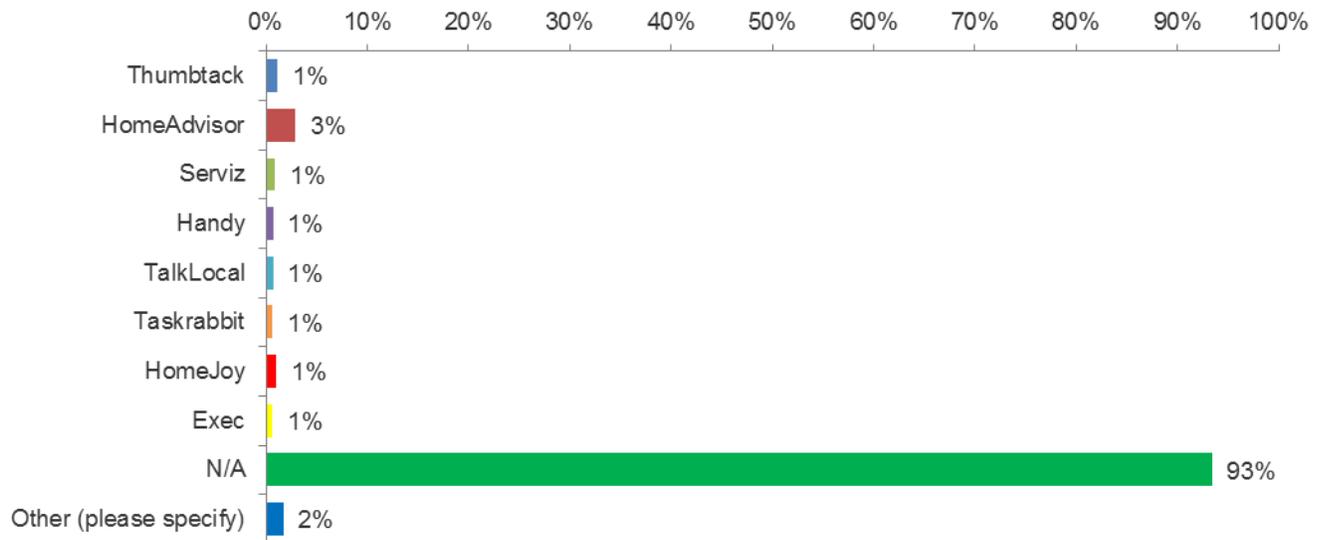
Source: MSUSA, SurveyMokey, N=1,026

Exhibit 43: Which of the following on-demand same-day or next-day shopping delivery services have you used in the past month?



Source: MSUSA, SurveyMokey, N=1,026

Exhibit 44: Which of the following on-demand home service apps have you used in the past month?



Source: MSUSA, SurveyMokey, N=1,026

Companies Mentioned (prices as of 6/24)

Activision Blizzard Inc (ATVI- Buy \$25.44)	Amazon.com, Inc. (AMZN- Buy \$440.84)
eBay Inc. (EBAY- Neutral \$61.61)	Electronic Arts Inc. (EA- Buy \$67.68)
Facebook Inc. (FB- Buy \$88.86)	Google Inc. (GOOGL- Neutral \$558.57)
Netflix, Inc. (NFLX- Neutral \$655.85)	Take-Two Interactive Software, Inc. (TTWO- Buy \$28.60)
Yahoo! Inc. (YHOO- Buy \$40.94)	

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Neutral:	Stocks for which the anticipated share price appreciation is within 10% of the share price.
Underperform:	Stocks for which the anticipated share price falls by 10% or more.
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Prior to October 3, 2011

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Rating Distribution

(As of 6/24)	% of coverage	IB service past 12 mo
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Hold (Neutral)	45.12%	18.92%
Sell (Underperform)	1.22%	0.00%

For disclosure purposes only (NYSE and FINRA ratings distribution requirements), our Buy, Neutral and Underperform ratings are displayed as Buy, Hold and Sell, respectively. However, our Buy, Neutral and Underperform ratings are determined on a relative basis (please refer to definitions above).

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