

Still a Long Secular Runway

Benefiting from Secular Shift and Convergence

Summary

We believe that the internet industry still has a very long secular runway with digital marketing being 30% of total ad spending and ecommerce being 10% of total retail sales. For on-line advertising, we believe the shift to TV is the next green field opportunity at about 40% ad spend globally, driven by increased adoption of video advertising in mobile and messaging. For ecommerce, we believe that the convergence with advertising will drive further penetration, leveraging search advertising on the commerce platform to optimize conversions and voice search to enable brands selling direct to consumers. We are resuming coverage with Buy ratings on FB with a PT of \$230, Alphabet with a PT of \$1,220, and Amazon with a PT of \$1,250. We rate EBAY and TWTR Underperform with price targets of \$34 and \$14.50, respectively.

Key Points

Expect more time spend on mobile, driven by video and mobile messaging.

Mobile is now commanding 26% of time spent on media, compared to 8% in 2011. Going forward, we expect the usage of mobile to accelerate due to increased usage in video consumption from live streaming and mobile messaging as the app becomes a utility. By 2021, we expect mobile to command 44% of media time spend. Total digital time spend would surpass 65% from 47% in 2016. However, eMarketers estimates that digital ad spend will command at 48% of ad spending at 2021, or \$124bn in ad spending, leaving a potential upside of nearly 35%.

Secular shift from TV to online video advertising. We feel the biggest opportunity for mobile and digital to increase their overall ad budget penetration is against TV at 36% of US media spend and to a less extent, other traditional media platforms like print at 14% and directories at 2%. Although the shift from TV to online has been slow over the last few years, we see several indicators that could drive the shift faster including comparable measurement metrics for TV and online, and CPG advertising running parallel campaigns on TV and online.

Convergence of commerce and advertising: We are also seeing an Amazon and eBay introduced sponsored ads in their respective search results. In addition, we see voice search such as Amazon's Alexa as the next OS and a potentially a powerful advertising platform, allowing brands to sell to consumers directly. CPG represents the largest opportunity for ecommerce at total retail sales at nearly \$9.6tn globally and <1% of ecommerce penetration.

(continued)

Company	Symbol	Price (8/04)	Rating		PT
			Prior	Curr	
Alphabet, Inc.	GOOGL	\$945.79	-	Buy	\$1,220.00
Amazon.com, Inc.	AMZN	\$987.58	-	Buy	\$1,250.00
eBay Inc.	EBAY	\$35.62	-	U-P	\$34.00
Facebook, Inc.	FB	\$169.62	-	Buy	\$230.00
Twitter, Inc.	TWTR	\$16.29	-	U-P	\$14.50

Source: Bloomberg and Mizuho Securities USA

James Lee
Managing Director, Americas Research
+1 617 235 1743
J.Lee@us.mizuho-sc.com

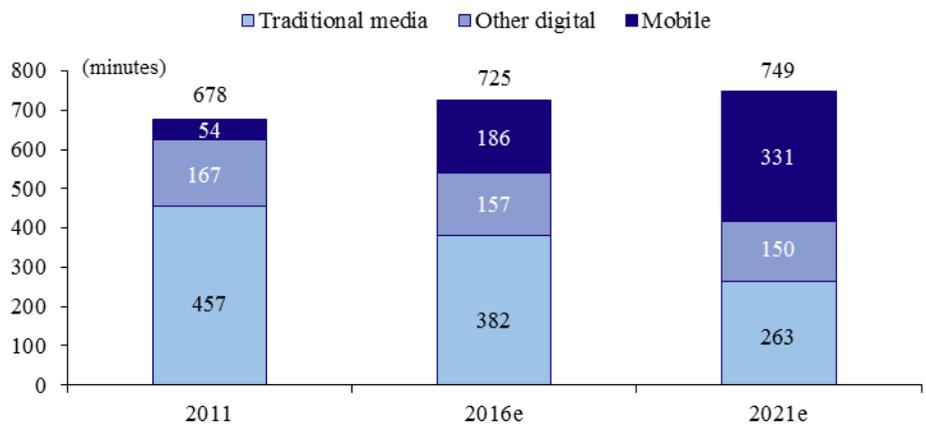
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Top picks: 1) FB: Buy rating and a \$230 PT. The company will be a primary beneficiary of time spent shifting onto mobile and video, taking share away from TV and traditional advertising. We estimate that new products yield 70% upside to revenue per user in 2019. **2) GOOGL:** Buy rating and a \$1,220 PT. Google has a diversified list of products that are not yet fully optimizing for monetization, including video, mobile search, travel meta search, mobile app advertising, and Cloud computing. Our upside analysis indicates nearly 30% potential to our rev/user estimate in 2019. **3) AMZN:** Buy rating and a \$1,250 PT. The company benefits from being a dominant player in ecommerce and cloud computing that have only 10% and 5% penetration rates, respectively. In addition, we see the convergence and advertising will deliver the next pillar of growth. Our upside analysis indicates nearly 35% potential to our EBITDA estimate in 2019.

Expect More Time Spend on Mobile, Driven by Video and Mobile Messaging

As highlighted in Exhibit 1, the smartphone has created nearly 10% additional media time per day for US consumers from 678 minutes in 2011 to 725 minutes in 2016. For mobile specifically, the media time tripled from 54 minutes per day to an estimated 186 minutes in 2016 due to the social media and video. In contrast, traditional media, including TV, radio, print and others, has declined 16% over the past 5 years from 457 minutes per day in 2011 to 382 in 2016.

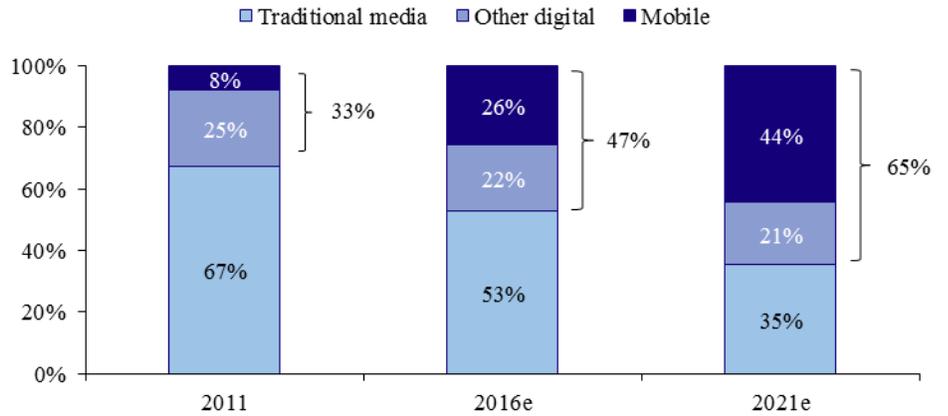
Exhibit 1: US Adults Average Daily Time Spent by Media



Source: eMarketer, MSUSA estimates

- ❑ **Digital at nearly 50% of time spent, driven by mobile.** As highlighted in Exhibit 2, as a % of time spent, mobile is now commanding 26% of time spent on media compared to 8% in 2011. As a result, the overall time spent on digital, including PC, increased to 47% in 2016 from 33% in 2011. At the same time, the % of time spent on traditional media has declined from 67% in 2011 to 53% in 2016.
- ❑ **Video streaming and mobile messaging are key drivers.** Going forward, we expect the growth of media time spent on mobile to accelerate due to increased video consumption from streaming and mobile messaging as the app becomes a utility.
- ❑ **Digital time spent to reach 65% of daily media time by 2021.** By 2021, we expect total media time will arrive at 749 minutes per day from 725 minutes in 2016. We expect mobile to command 44% of media time spend at 331 minutes per day. Total digital time spend would surpass 65% from 47% in 2016. On the contrary, we expect traditional media to decline to 35% of time spent in 2021 from 53% in 2016.

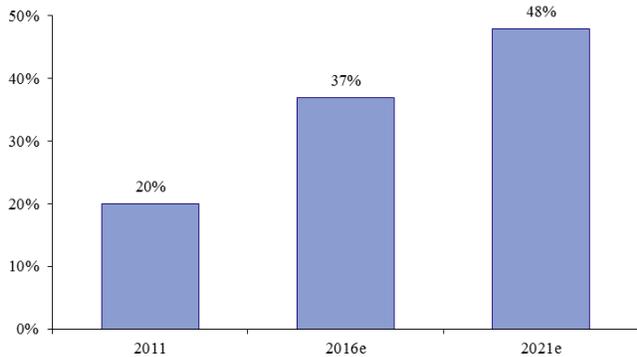
Exhibit 2: US Adults Average Daily Time Spent, by Media (%)



Source: eMarketer, MSUSA estimates

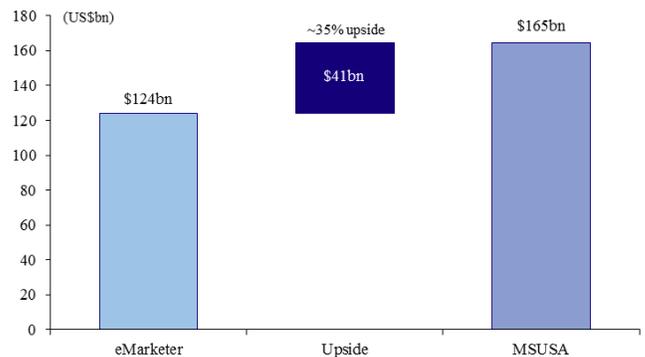
- However, eMarketer estimates that digital ad spend will command 48% of ad spending at 2021 (Exhibit 3), or \$124bn in ad spending, leaving a potential upside of nearly 35% as highlighted in Exhibit 4, if our media time spend estimate is correct and digital pricing reaches an equilibrium compared to time spent.

Exhibit 3: US Digital Ad Spend as % of Total Media Spend



Source: eMarketer, MSUSA estimates

Exhibit 4: US Digital Ad Spend Upside Scenario

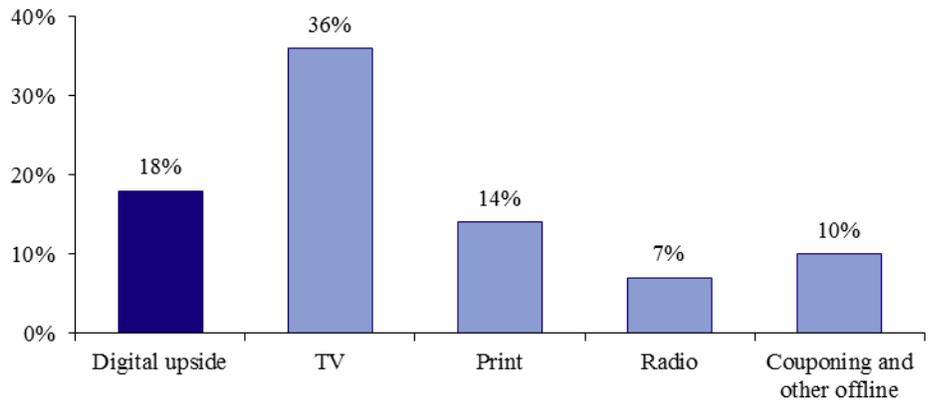


Source: eMarketer, MSUSA estimates

Secular Shift from TV to Online Video Advertising

As highlighted in Exhibit 5, we feel the biggest opportunity for mobile and digital is to increase their overall ad budget penetration is against TV at 36% of US media spend and to a less extent, other traditional media platforms like print at 14% and radio at 7%. We also see attractive opportunities from below-the-line promotional costs like couponing and other offline promotional spending, which is estimated to be equivalent to at least 10% of total media spend.

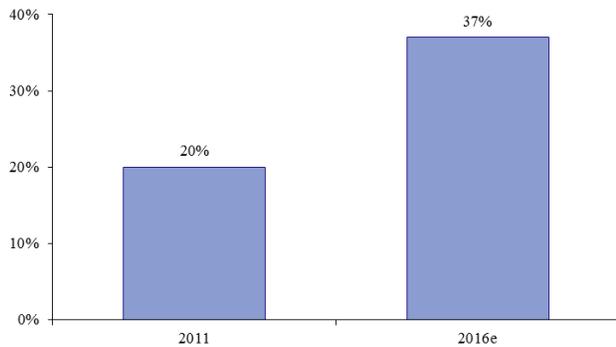
Exhibit 5: Where Could the Digital Ad Spend Upside Come From? % of Total Media Spend



Source: eMarketer, MSUSA estimates

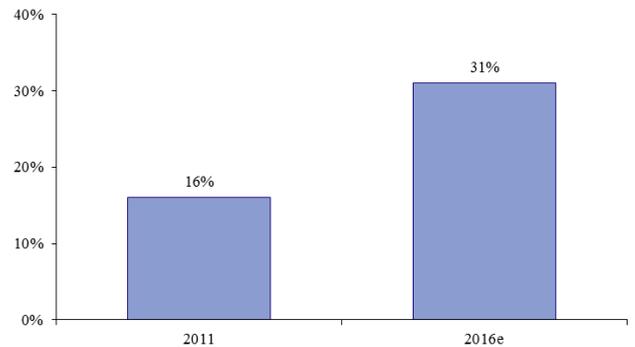
- TV TAM for US and global.** As highlighted in Exhibits 6 and 7, the shift of time spent in mobile and digital has caused the total internet spending to increase to 37% of total US ad spending in 2016 from 20% in 2011. This trend is consistent globally at 31% for internet ad spending in 2016, rising from 16% in 2011.

Exhibit 6: US Digital Ad Spend as % of Total US Ad Spend



Source: eMarketer, MSUSA estimates

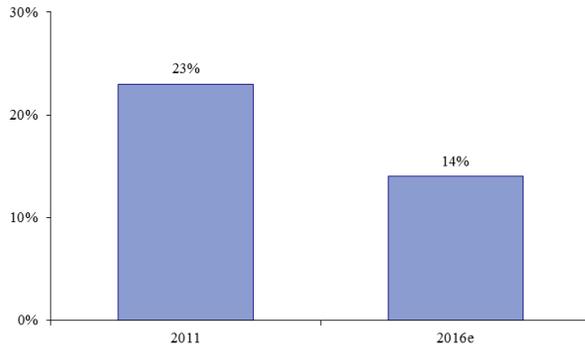
Exhibit 7: Global Digital Ad Spend as % of Total Global Ad Spend



Source: eMarketer, MSUSA estimates

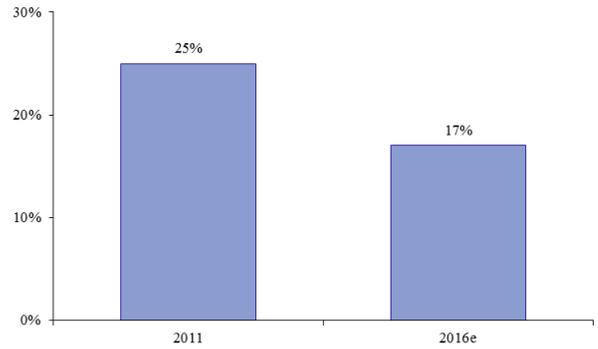
- ❑ This secular shift is taking place at the expense of Print, which declined to 14% of ad spending in 2016 from 23% in 2011 in the US and to 17% from 25% globally.
- ❑ The TV ad spending appears to be resilient over the same period, as the % of media spend share only declined modestly from 38% to 36% in the US and globally, the % of ad spending has increased to 42% from 37%. In fact, in the US, TV was still able to raise its prices in its annual upfront by around 10% last year (2016).
- ❑ However, we believe the secular shift story from TV remains very attractive for internet. We have seen several indicators that could potentially move the 40% TV budget online.

Exhibit 8: US Print Ad Spend as % of Total



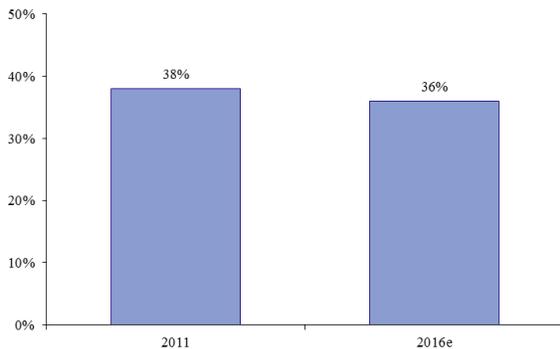
Source: eMarketer and MSUSA estimates

Exhibit 10: Global Print Ad Spend as % of Total



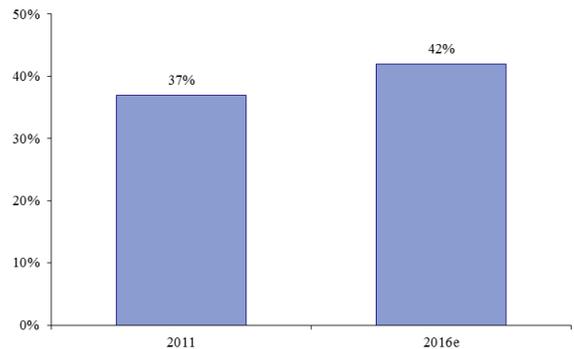
Source: eMarketer and MSUSA estimates

Exhibit 9: US TV Ad Spend As % of Total



Source: eMarketer and MSUSA estimates

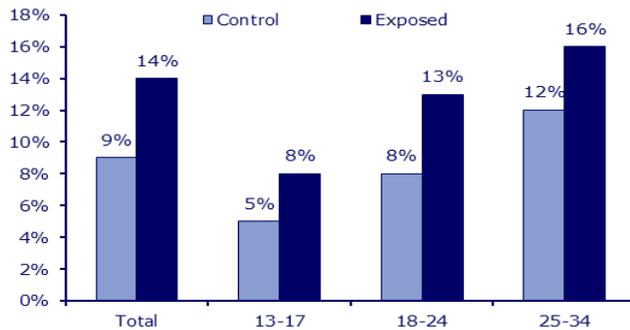
Exhibit 11: Global TV Ad Spend as % of Total



Source: eMarketer and MSUSA estimates

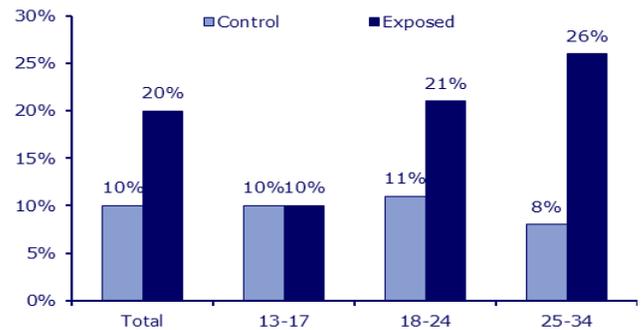
- ❑ **Online providing TV-like measurement.** Online video platforms like Facebook, YouTube, Snapchat and Twitter are all positioned to go after TV advertising, offering TV-like measurement tools such as the partnerships with Nielsen and Millward Brown to enable advertisers to benchmark platforms on a comparable basis.
- ❑ **Optimized for reach and frequency.** These new video platforms are optimized for reach and frequency, similar to TV advertising. At the same time, the adjustment to ad buying online is relatively easy for TV ad buyers in terms of targeting and measurement.
- ❑ **Brand lift studies with Nielsen and Millward Brown.** As highlighted in Exhibits 12 and 13, brand lift and ad-recall studies are also provided by online video platforms on Snapchat. In the same case study, it shows that the incremental lift for ad recall for males and females. These metrics can be used to benchmark against other online platforms and most importantly, against TV. The brand lift studies take about four to six weeks to produce, much faster than TV, which takes nearly twice as long.

Exhibit 12: Ad Recall Study for Males



Source: Large independent New York based digital agency contracted with MSUSA. Due to privacy policy we cannot disclose its name

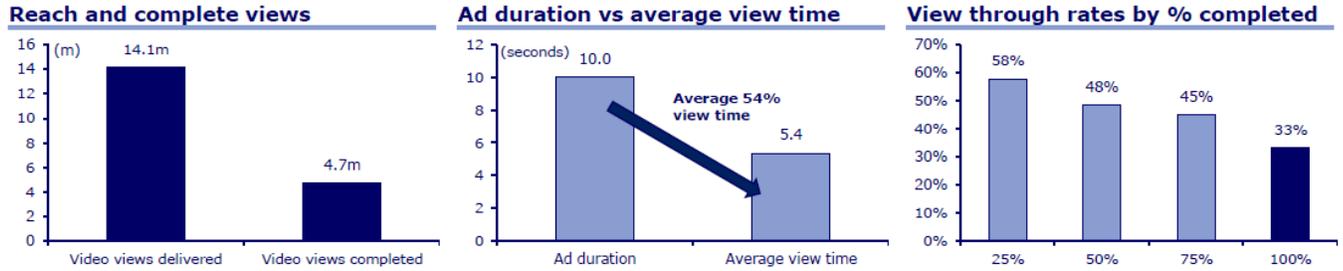
Exhibit 13: Ad Recall Study for Females



Source: Large independent New York based digital agency contracted with MSUSA. Due to privacy policy we cannot disclose its name

- ❑ **Deeper metrics available online, but not on TV.** As highlighted in Exhibit 14, a recent case study from an entertainment company shows that Snapchat’s ad reporting includes more detailed metrics such as delivered video views, completed video views (at various critical stages like 25% or 100% completion) and more, which TV advertising can’t provide yet.

Exhibit 14: Example of Snapchat’s Deep Ad Metrics



Source: Large independent New York based digital agency contracted with MSUSA. Due to privacy policy we cannot disclose its name

- ❑ **CPG running parallel campaigns.** We are seeing leading indicators based on agency checks, giving us incremental confidence on the overall long-term secular shift from TV to online. Although the shift from TV is still very early, we see the entrainment vertical allocating spending to online for promoting movie trailers. In addition, we are seeing more advertisers like CPG running parallel campaigns on TV and online to measure brand impact on a comparable basis. An example of the early success came from a major beverage advertiser, as its video ad campaigns were performing much better on FB than on TV.
- ❑ **Brand advertising moving to performance.** We believe that brand advertisers are starting to move from demographic targeting based on age and gender to audience based targeting based on transactions and CRM data that offer stronger user intent. Studies done by offline measurement company Datalogix (part of the Oracle Marketing Cloud) shows that CPG companies like P&G are looking to do performance branding using retail POS data to track the performance of its brand campaigns. As highlighted in Exhibit 15, Datalogix uses the purchasing data from loyalty cards to create audience segmentation. With that in mind, the POS data needs to tie with identities of the media platform, *making platforms with identity with connectivity and scale the winners, in our view.*

Exhibit 15: How Facebook Partners with Datalogix to Provide Offline Measurement



Source: Company reports, MSUSA

Mobile Messaging is the Next OS

As mobile messaging becomes a utility over time, we believe it could turn into the default OS for mobile users, potentially replacing the browser. For example, WeChat (Tencent Holdings Ltd., 700-HK, covered by Mizuho Securities Asia Analyst Jin Yoon, Buy) in China has already done that because it provides many functions from communications, information and commerce. We believe that Asia is the roadmap for FBM (Facebook Messenger) and Snapchat in the US for building their presence inside the platform: discovery is easier and customer acquisitions are cheaper.

- ❑ **WeChat provides a product roadmap for FBM in terms of brand accounts.** WeChat’s brand accounts enable customer service, commerce and payment, and advertising as highlighted in Exhibit 16. We see FB also starting to offer comparable products on FBM.

Exhibit 16: WeChat's Brand Accounts Provide Customer Services, Ecommerce, Payment and Advertising



Source: Company website, MSUSA

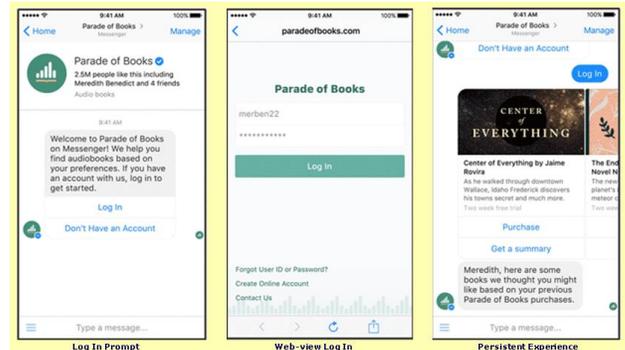
- **Account linking.** As highlighted in Exhibit 17, once a user enters the brand account for JD.com on WeChat, he/she can log in to their account through the personal center, where the account summary is deployed with all the details. FBM offers the same feature for brands to connect with existing customers, but within the chatting UI as shown in Exhibit 18. The chatbot shows what the user has seen last and the payment is still done on the e-commerce company's website/mobile app.

Exhibit 17: WeChat Provides Account Linking in Brand Accounts



Source: Company website, MSUSA

Exhibit 18: How FBM Account Linking Works



Source: Swyt Media

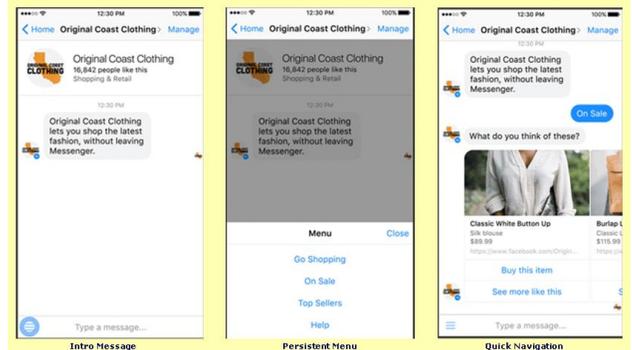
- ❑ **Persistent menu.** For the ecommerce sector, WeChat offers persistent menus to assist users in their shopping navigation. As highlighted in Exhibit 19 on JD’s brand page, users can quickly click on the shopping tab for desired items in order to add to cart for making a purchase. FBM also recently started offering persistent menus, as shown in Exhibit 20. As we can tell, FBM’s menus are designed to center on the chatting interface. When the user clicks the “on sale” button, the chat bot will retrieve selected items in the carousel format. Another set of menus appear to the user in order to buy the item or view more selections similar to it.

Exhibit 19: WeChat Provides Persistent Menus in Brand Accounts



Source: Company website, MSUSA

Exhibit 20: How FBM Persistent Menu Works



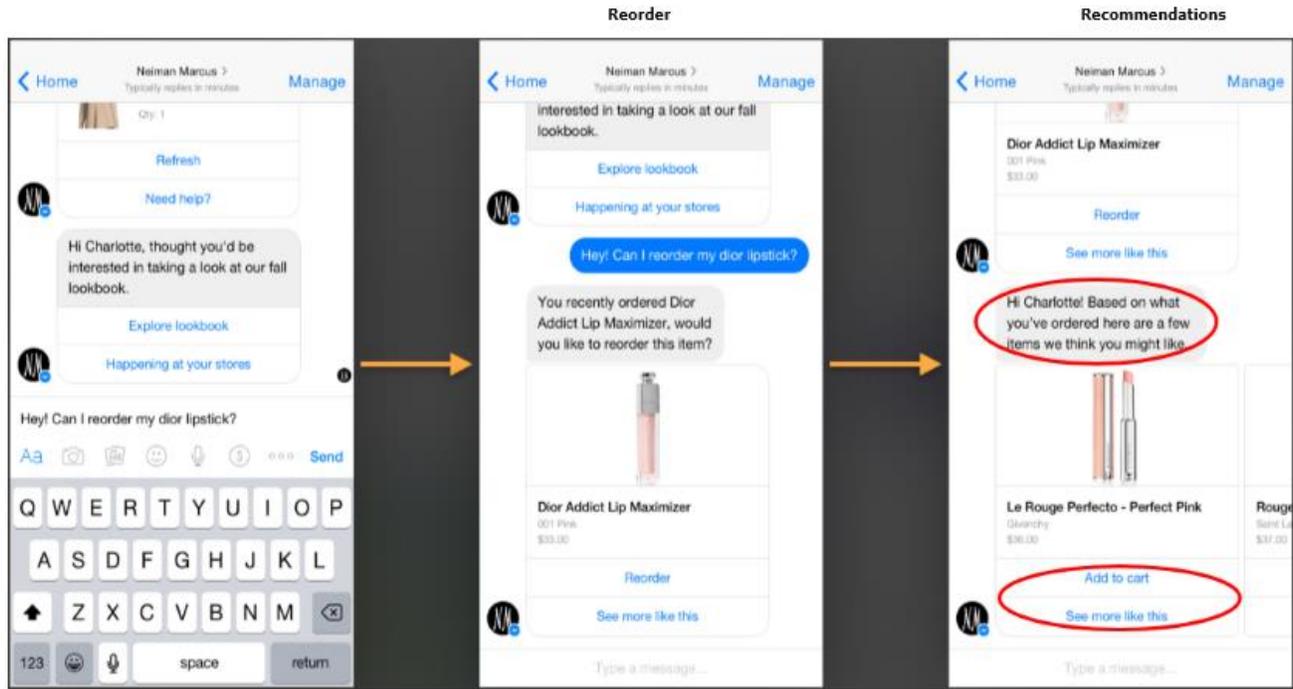
Source: Swyft Media

We are anticipating the following revenue opportunities for mobile messaging in the US and the Western World:

- ❑ **Local search.** We believe this a green field opportunity for FB as the company has approximately 70 SMB pages on its platform and only a small fraction of them are advertisers. This low adoption could be due to the competitive pricing and the complexity in using FB’s self-serve ad management system called Power Editor. Although Graph Search has been introduced for a few years in the Newsfeed, the commercial intent is low as users typically engage with friends instead of looking for things to buy or places to go. In addition, the newsfeed is passive UI, similar to watching TV, so it is less suitable for search that requires an active mindset. However, we believe that commercial searches are more suitable in mobile messaging using Asia as a proxy. In that region, consumers often use mobile messaging to do social gathering to decide where to meet, to eat and to be entertained. That said, we believe that FB should integrate Graph Search into messaging as a way to resolve the discovery issue for SMBs.
- ❑ **Personalized search and recommendations.** Based on case studies from mobile app developer Linc Global, FB continues to cultivate chat bots as a way for businesses to connect with users. In order to drive utility, the social media platform believes that these interactions should be highly frequent, improving existing consumer experience (vs. email) and increasing business efficiency (vs.

call center). Based on case studies from Linc Global, retailers save in general 25% in call center costs related to questions on shipping status. As highlighted in Exhibit 21, retailer Neiman Marcus is using FBM for customer reordering, and after the transaction is done, the chatbot recommends new products that the customer may like.

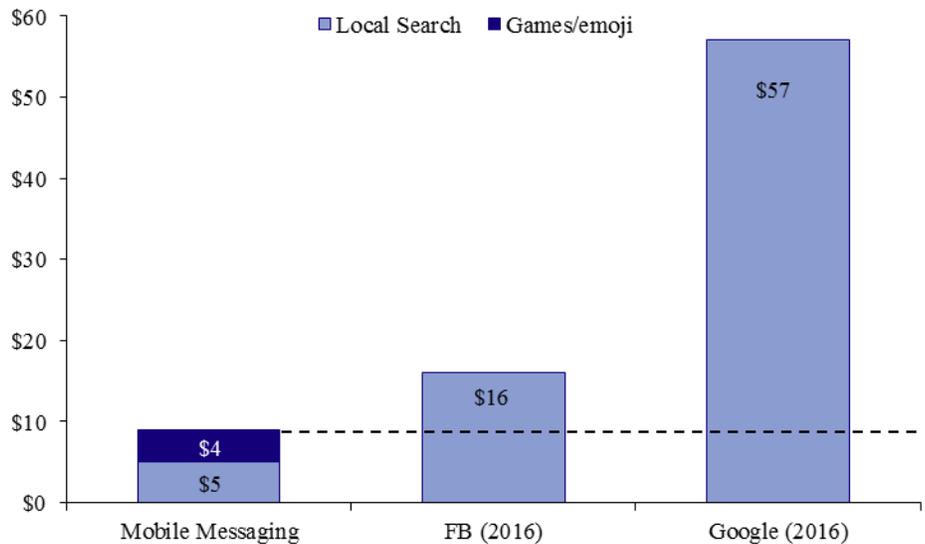
Exhibit 21: Facebook Messenger Chatbot for Re-Ordering and Recommendation



Source: Linc Global, MSUSA

- **Monetization for mobile messaging is attractive.** As highlighted in Exhibit 22, using Asia mobile messaging players like WeChat and Line as a proxy, games/emoji yields about \$4 revenue per user. For local search, we believe that YELP is the best proxy at \$5 revenue per user. At \$9 revenue per user combined, it is very attractive when comparing to FB at \$16, or nearly 50%, and Google at \$57, or nearly 20%.

Exhibit 22: Mobile Messaging Monetization vs. FB and Google



Source: MSUSA estimates

Convergence of Commerce and Advertising

We are also seeing a convergence between commerce and advertising as Amazon and eBay are both introducing sponsored ads in their respective search results. This strategy makes sense in our view, as it enables third-party (3P) merchants to increase their visibility on the ecommerce platform and thus improve the conversion rate. In turn, that ultimately results in improved monetization for Amazon and eBay. In addition, we see voice search, such as Amazon’s Alexa, as the next OS and a potentially a powerful advertising platform.

- **Sponsored search on AMZN.** As highlighted in Exhibit 23, Amazon’s product search ads appear above or below organic search results. Our prior case study with ad agency CPC Strategy indicates that this ad unit has the most potential because of Amazon’s high search volume, so the supply of inventory is favorable, and the placement location is prominent.

Exhibit 23: Amazon Sponsored Search Products

GustBuster Classic 46-inch Automatic Golf Umbrella
by GustBuster
\$34.95 - \$49.95 Prime
Some colors are Prime eligible
More Buying Choices
\$35.95 new (3 offers)
★★★★★ 028
Product Features
Golf umbrella with pinchless open and close release system
Clothing, Shoes & Jewelry: See all 82,155 items

Sponsored
LifeTek Travel Umbrella Automatic 9-Rib WindProof 210T Fabric with Teflon
by LifeTek
\$34.95 \$40.05 Prime
Some sizes/colors are Prime eligible
★★★★★ 284

Sponsored
PLEMO Umbrella, Automatic Folding Compact Rain Umbrella | High Density Waterproof Fabric, Aluminum Ribs/Shaft...
by Plemo
\$19.99 \$54.09 Prime
Get it by **Wednesday, Nov 4**
★★★★★ 10

Source: CPC Strategy

- As highlighted in Exhibit 24, case studies show the ROI for AMZN search ads is already on par with Google’s PLAs (product listing ads), indicated by strong user intent on the platform. Pricing in terms of eCPM (effective cost per thousand impressions) is about 10x lower than PLAs due to lower CTRs (click-through-rate). That said, we think that Amazon needs to improve its algorithm for ad delivery in order to drive relevancy.

Exhibit 24: Performance of Amazon Sponsored Products (Native Search)

	Art Supplies	Hardware	Total	Comments
Ad spending				
Impressions	11,970,032	15,436,308	27,406,340	
CTR	0.19%	0.34%	0.27%	Low CTR vs PLAs @2%
Clicks	23,053	51,847	74,900	
CPC	\$0.23	\$0.33	\$0.30	Comparable to PLAs @\$0.40
Cost	5,393	16,879	22,272	
eCPM	\$0.45	\$1.09	\$0.81	Lower relative to PLAs @\$8
Conversions and revenues				
Clicks	23,053	51,847	74,900	
Conversion Rate	4.5%	3.5%	3.8%	Comparable to PLAs
Conversions	1,029	1,814	2,843	
AOV	\$25.01	\$44.00	\$37.13	
Total Conversion Value (sales revenue)	25,732	79,817	105,549	
KPIs				
CPA	\$5.24	\$9.30	\$7.83	
AOV	\$25.01	\$44.00	\$37.13	
Return on Ad Spend	4.8	4.7	4.7	Comparable to PLAs

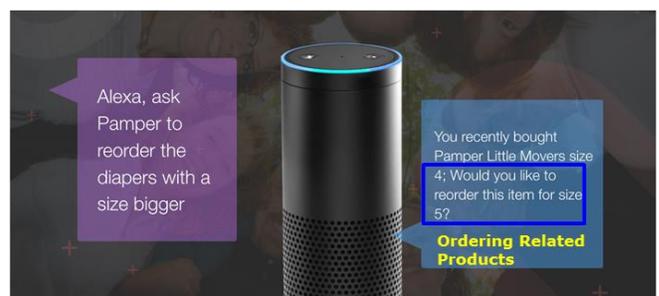
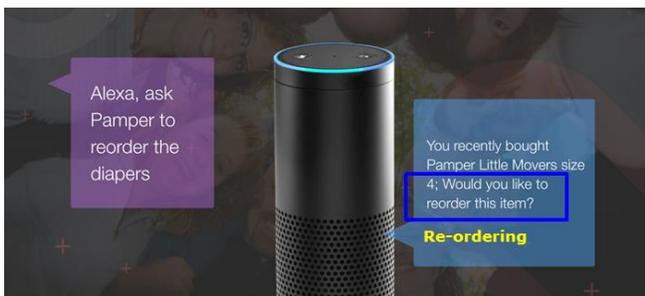
Source: CPC Strategy

- Currently, we believe that Amazon is cautious on user experience and limits the ad inventory. As CTRs start to improve with better bidding algorithm, CPC Strategy believes that AMZN’s search ads should experience pricing leverage through improved CTRs and increase the supply of ad inventory.

As a comparison, Amazon’s Asia counterpart Alibaba makes nearly \$20 based on its advertising monetization mostly from search.

- ❑ **Voice search: the next ad platform.** We also believe that voice search can become the next powerful advertising platform as Amazon continues to invest heavily into the Alexa ecosystem. From our checks, we think that voice search would enable standardized product companies like CPG to access directly to consumers, bypassing the retail channel.
- ❑ As highlighted in Exhibits 25, the case study of a leading CPG company, P&G, with app developer Linc Global, that leveraged repeat orders of diapers. Alexa recalls the last order size. The consumer can ask the diaper bot for a bigger size and bot immediately responds. The case study demonstrates the benefit of upselling as the bot can offer a complementary product like the wipe to the same consumer. Based on testing from Linc Global, the upselling rate using Alexa is very impressive at around 60%.

Exhibit 25: Alexa Recalls the Last Order Information to Re-order, Re-order Similar Products and to Up-sell/cross-sell



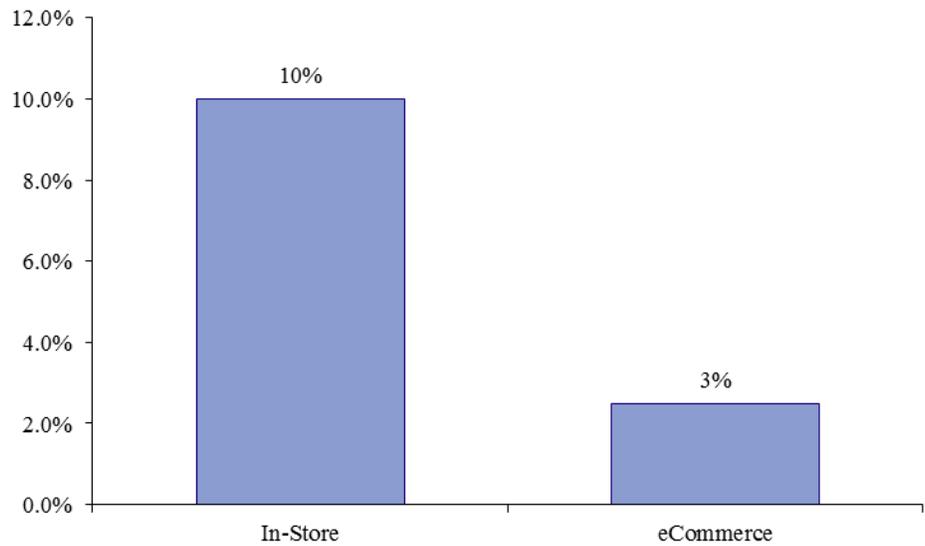
Source: Linc Global

- ❑ We believe that voice search will be an effective marketing platform because (1) it is a unique operating system developers can build upon; and (2) the platform could be disruptive to the retail industry, allowing CPG brands to directly connect with consumers and bypass big box stores. We believe that incremental TAM for voice search is attractive as CPG commands retail revenues of \$9.6tn globally.

Machine Learning Driving Higher Advertising Performances

We believe that machine learning will continue to innovate and improve creative, targeting, and measurement for online advertising. As highlighted in Exhibit 26, the current ecommerce conversion rate is about 3% compared to 10% in retail stores. Using machine learning, we believe that the algorithm for ad delivery will be optimized, thus delivering ads to more relevant audience.

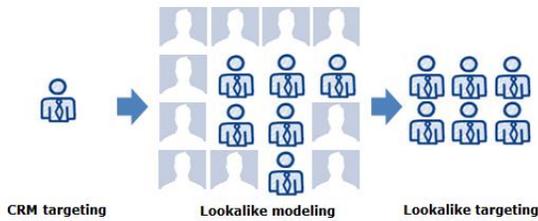
Exhibit 26: Commerce Conversion on Machine Learning vs. In-Store



Source: Linc Global, MSUSA estimates

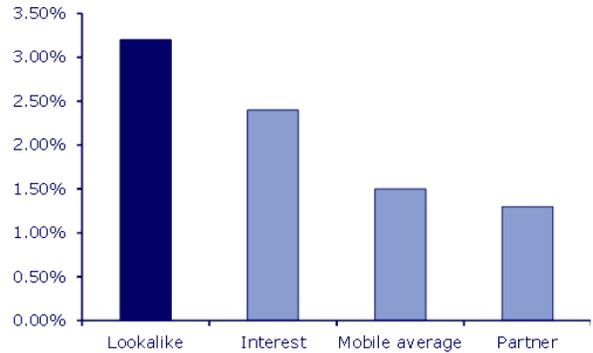
- ❑ **Lookalike targeting.** Facebook is providing a tool that enables advertisers to reach scale by leveraging its advertiser CRM data, creating a lookalike list targeting Facebook’s user base. As highlighted in Exhibit 27, this model can look at the attributes of the advertiser’s existing customer base and look for similar traits within Facebook’s community. They could be based on demographics, interests or locations.

Exhibit 27: How Lookalike Model Works



Source: MSUSA

Exhibit 28: CTR Comparison for Various FB Targeting Tools



Source: Mixpo

- Looking at the case study from ad agency Mixpo (Exhibit 28), it appears that using the CRM data to drive lookalike modeling yields strong relevance and engagement at a 3% CTR.
- Ad sequencing.** FB now has a full suite of ad products from at the top of the marketing funnel to drive awareness to at the bottom to drive conversion. The company is working on optimizing the sequence of ad delivery to better connect brand and performance campaigns. For example, as highlighted in Exhibit 29, FB can drive awareness using a video ad at the starting point of the consumer journey and subsequently deliver a carousel ad to reinforce that initial impression. Finally, a page post ad is sent with an offer or buy button to drive the conversion.

Exhibit 29: How FB Sequencing Ads Work

Sequenced for CTA Creative A: top of the funnel for general branding messaging / awareness - 4 days



Sequenced for CTA Creative B: middle of the funnel for product information / consideration - 4 days



Sequenced for CTA Creative C: bottom of the funnel for call-to-action for email sign-up / conversion - 4 days



Source: Company blog

Incremental TAM Analysis

As highlighted in Exhibit 30 and 31, we summarized our expected incremental digital media penetration by segment. By 2021, we expect incremental digital revenues of \$226bn, or an increase of 141% from 2016, supporting our view that Internet's fundamentals still have a long runway.

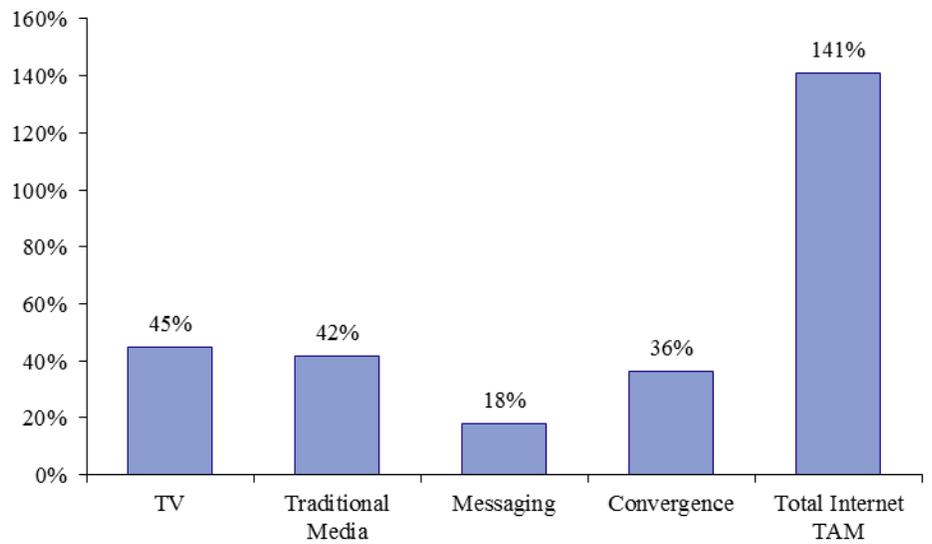
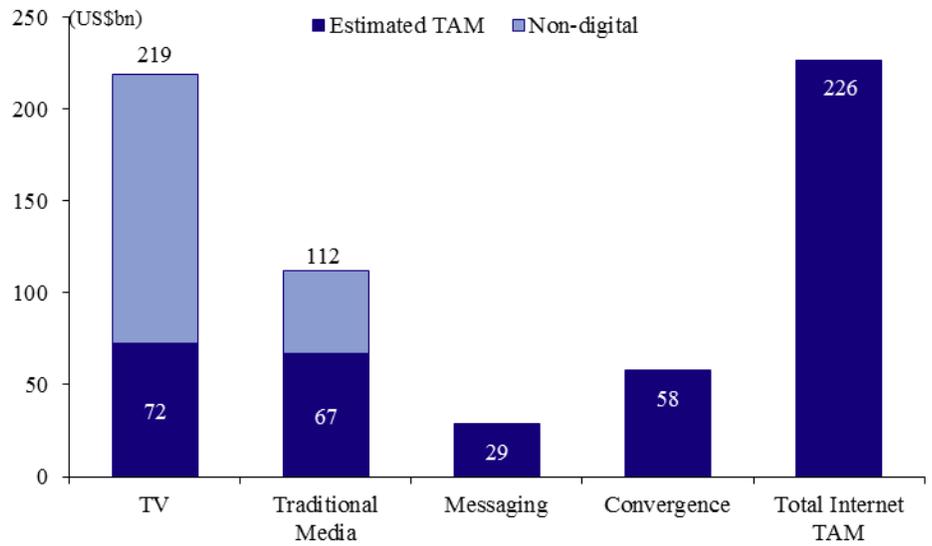
- **TV.** As highlighted in Exhibit 30, we expect that one-third, or \$72bn, of the nearly \$220bn TV ad spending (per eMarketers) could potentially go to digital. This segment could provide a lift of 45% to digital spending of \$161bn in 2016. We believe our assumption is reasonable as the Print business has declined one-third over the last 5 years and two-thirds over the last 10 years.
- **Other traditional Media.** As highlighted in Exhibit 30, we expect that 60% of the over \$110bn traditional media ad spending (per eMarketers), including print, radio and OOH (out-of-home) could potentially go to digital, or \$67bn. This segment could provide a lift of 42% to digital spending in 2016.
- **Mobile messaging.** As highlighted in Exhibit 30, we expect that mobile messaging to yield \$9 revenue user, \$5 from local advertising (using Yelp as a proxy) and \$4 from virtual items (using Asian mobile messaging platforms WeChat and Line as a proxy). The global TAM would be \$29bn when multiplying it by the 3.2bn internet users. Please refer to page 6 for detailed assumptions for Mobile Messaging.
- **Convergence.** As highlighted in Exhibit 30, we estimate that advertising could add a five percentage points of take rate for the ecommerce business. Taking global ecommerce TAM of \$1.1tn (per Euromonitor) and multiply it by 5%, we get \$58bn of addressable opportunities. Our checks with merchants indicate that they are willing to pay an incremental 5% of GMV to gain visibility on major ecommerce platforms like Amazon.

Exhibit 30: Commerce Conversion on Machine Learning vs. In-Store

(US\$bn)	TV	Traditional Media	Messaging	Convergence	Total
Market Size	219	112	29	1,163	
Penetration	33.0%	60.0%	100.0%	5.0%	
TAM	72	67	29	58	226
Users (bn)	3.2	3.2	3.2	3.2	3.2
Rev/user	\$22.58	\$21.00	\$9.00	\$18.17	\$70.75
Common size	32%	30%	13%	26%	100%
Incremental TAM	45%	42%	18%	36%	141%

Source: eMarketer, Euromonitor, MSUSA estimates

Exhibit 31: Estimated Incremental Digital Media Penetration by Segment



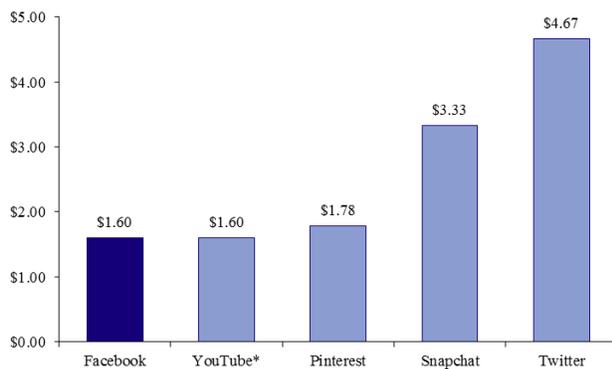
Source: eMarketer, MSUSA estimates

Recommendations

We refer the reader to the individual reports published with this industry analysis for our detailed company-specific views.

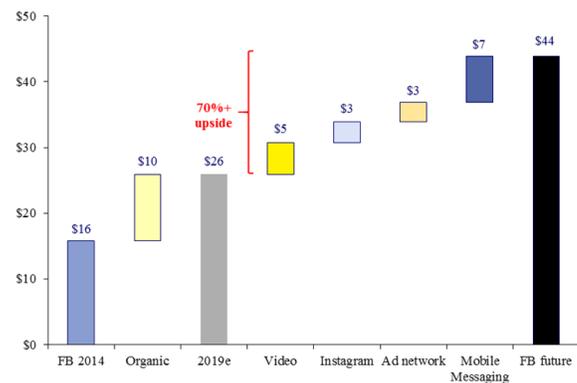
- Facebook – A Double Leverage Internet Play.** MSUSA is resuming coverage of FB with a Buy rating and a Target Price of \$230, representing 16x 2019 EBITDA plus cash vs. an estimated growth rate of ~30%. The company has a unique advantage of double leverage in both pricing and inventory growth. Pricing leverage is achieved through highly engaging ad formats such as video (Exhibit 32) and best-of-class targeting that yields a higher ROI for advertisers. Inventory leverage is achieved by delivering Facebook’s ad formats and leveraging data in across multiple properties such as Instagram, FAN and mobile messaging. That said, we believe Facebook has many levers to harness its monetization potential beyond our model in terms of revenue per user. As highlighted in Exhibit 33, our upside analysis indicates over 70% upside compared to our 2019 forecast.

Exhibit 32: Comparison of eCPM per second viewing cross major platforms



Source: Large independent New York based digital agency contracted with MSUSA. Due to privacy policy we cannot disclose its name. , MSUSA *refers to TrueView ads only

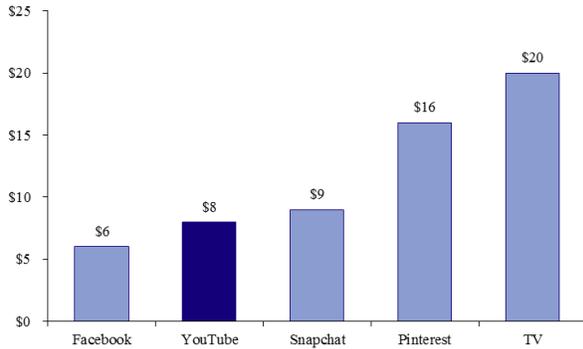
Exhibit 33: FB Rev/user Upside Scenario Analysis



Source: MSUSA estimates

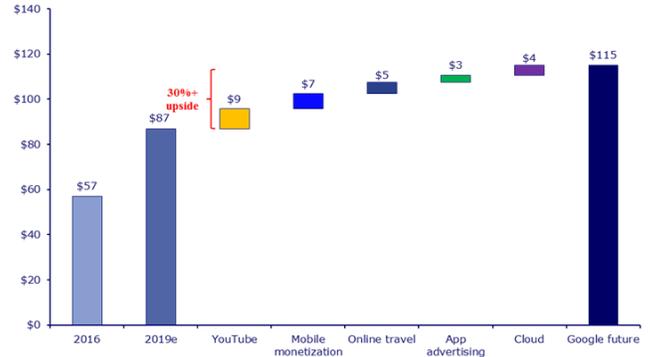
- Alphabet – Optimizing Monetization.** MSUSA is resuming coverage of Alphabet with a Buy rating and a Target Price of \$1,220, representing 12.5x 2019 EBITDA against our estimated growth rate of nearly 20%. The company is benefiting from positive secular trends of online advertising and closing the monetization gap of mobile against PC with new technologies. That said, we believe Alphabet has many levers to harness its monetization potential beyond our model in terms of revenue per user, including gaining share from TV ads budget (given its attractive pricing as highlighted in Exhibit 34), closing the mobile monetization gap, online travel, mobile app advertising and cloud computing. As highlighted in Exhibit 35, our analysis indicates a potential for 30% upside compared to our 2019 forecast.

Exhibit 34: Video Ads CPM Comparisons



Source: Adparlor

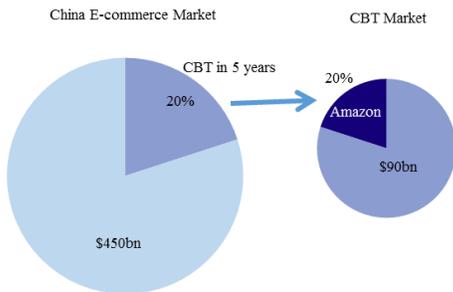
Exhibit 35: GOOGL Rev/user Upside Scenario



Source: MSUSA estimates

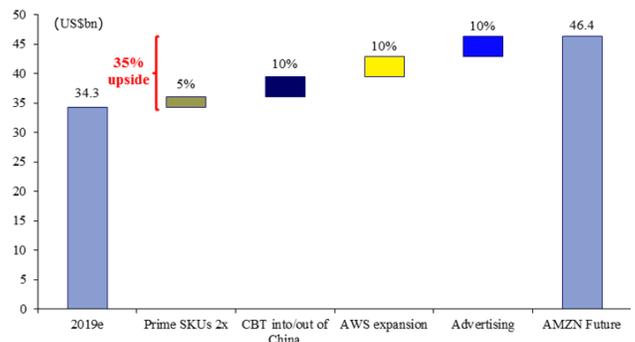
- Amazon – Raising Profitability by Further Disrupting Retail.** MSUSA is resuming coverage of Amazon with a Buy rating and a Target Price of \$1,250, representing 17x 2019 EBITDA against an estimated growth rate of 32%. We expect margins to expand over time with a positive mix shift to higher-margin products in core commerce, CBT and cloud computing. Most importantly, we believe the next pillar of growth will likely come from advertising through voice search, allowing brands to sell to consumers directly. That said, we believe Amazon has many levers to harness its monetization potential beyond our model in terms of EBITDA growth. Our upside analysis indicates a 35% upside compared to our 2019 EBITDA forecast.

Exhibit 36: China E-commerce and CBT Market Size



Source: CECRC, MSUSA estimates

Exhibit 37: AMZN EBITDA Upside Scenario



Source: MSUSA estimates

- **eBay – Seeking Increased Efficiency.** MSUSA is resuming coverage of eBay with an Underperform rating and a PT of \$34, representing 14x 2019 non-GAAP EPS plus cash. The company is in a transitional period of upgrading its user experience through structured data implementations and product page upgrades while revamping its merchant tools to drive efficiency and close the gap with peers. In addition, we view increased competition in CBT also as a risk. We believe eBay is a turnaround story and we would likely be constructive if technology improvements drive sustainable GMV growth and the competition pressure for CBT abates.

Twitter – Managing Transitions. MSUSA is resuming coverage of TWTR with an Underperform rating and a PT of \$14.50, representing 11x 2019 EBITDA compared to an estimated growth rate of 7%. The company is going through another phase of transition to become video centric by adding premium content and livestream on top of its current video ad offerings. In addition, ad buying on TWTR is also moving to reach & frequency focused, allowing large agency holding companies and TV ad buyers to more easily transition to its platform but increasing ad load. As a result, we expect that increased supply, competition and TWTR's premium pricing are likely to yield further pricing pressure on TWTR's business.

Exhibit 29: Global Media Comp Sheet (in \$Mils Expect Per Share)

Segment Company	Global											Emerging Markets					
	GOOGL	FB	AMZN	EBAY	TWTR	Z	CRTO	EXPE	PCLN	TRIP	SNAP	BIDU	BABA	CTRP	Tencent	YNDX	MELI
Rating	BUY	BUY	BUY	U-P	U-P	NR	NR	NR	NR	NR	NR	Buy*	Buy*	Buy*	Buy*	NR	NR
Price	945.79	169.62	987.58	35.62	16.29	45.24	49.32	151.35	2,032.77	39.51	13.52	226.05	153.33	57.70	39.83	29.61	260.47
Shares (F/D)	703.5	2,951.0	492.0	1,091.0	738.3	180.1	65.6	154.5	50.1	146.9	1,157.2	347.6	2,573.0	473.3	9,494.0	372.8	44.2
Market Cap	665,366	500,549	485,889	38,861	12,027	8,150	3,237	23,386	101,767	5,804	15,646	78,568	394,518	27,311	378,142	11,037	11,502
Net Debt	(90,758)	(35,452)	(13,768)	(2,305)	(2,497)	(139)	(188)	1,271	2,866	(475)	(972)	(5,631)	(8,956)	1,085	(2,176)	(728)	(174)
Enterprise Value	574,608	465,097	472,121	36,556	9,529	8,011	3,049	24,658	104,632	5,329	14,673	72,937	385,562	28,396	375,966	10,310	11,328
Net Cash per Share	129.01	12.01	27.98	2.11	3.38	0.77	2.87	(8.23)	(57.25)	3.23	0.84	16.20	3.48	(2.29)	0.23	1.95	3.94

Estimates

Revenue 2017e	88,428	39,176	169,453	9,388	2,365	1,063	947	10,202	12,461	1,626	972	12,761	34,126	4,046	33,213	1,549	1,293
Revenue 2018e	105,287	51,710	207,881	9,890	2,443	1,290	1,153	11,620	14,414	1,821	1,865	15,602	44,936	5,298	43,583	1,879	1,732
Revenue 2019e	122,792	65,172	252,395	10,434	2,650	1,545	1,373	13,007	16,557	1,995	2,995	18,506	57,174	6,733	53,767	2,256	2,201
Growth '16-'17	20%	42%	25%	5%	-6%	26%	30%	16%	16%	10%	140%	24%	48%	46%	51%	18%	53%
Growth '16-'18	20%	37%	24%	5%	-2%	23%	26%	15%	16%	11%	115%	23%	40%	38%	41%	19%	43%
Growth '16-'19	19%	33%	23%	5%	2%	22%	23%	14%	16%	10%	95%	22%	35%	34%	35%	20%	38%

EBITDA 17e	43,454	25,387	18,606	3,339	680	228	296	1,849	4,710	326	(687)	2,950	15,172	610	13,104	502	273
EBITDA 18e	53,132	32,208	25,013	3,456	740	313	377	2,230	5,485	349	(501)	3,811	19,868	1,114	16,728	635	380
EBITDA 19e	61,556	40,068	35,119	3,756	772	413	478	2,636	6,297	414	(87)	4,843	24,955	1,599	20,342	816	510
Growth '16-'17	19%	40%	20%	-3%	-9%	57%	32%	14%	14%	-7%	50%	31%	43%	na	45%	14%	22%
Growth '16-'18	21%	33%	27%	0%	-1%	47%	30%	18%	15%	0%	4%	30%	37%	na	36%	20%	30%
Growth '16-'19	19%	30%	32%	3%	1%	42%	29%	18%	15%	6%	-43%	29%	33%	na	31%	23%	32%

Non-GAAP EPS 17e	41.76	5.84	13.30	2.02	0.30	0.47	2.45	5.15	74.08	1.14	(2.63)	6.61	4.52	1.03	0.90	0.84	4.12
Non-GAAP EPS 18e	49.29	7.12	17.51	2.18	0.36	0.85	3.14	6.74	86.57	1.28	(0.75)	8.62	5.89	1.71	1.17	1.12	5.60
Non-GAAP EPS 19e	57.07	8.95	25.03	2.35	0.41	1.14	3.95	8.17	99.71	1.54	(0.44)	10.89	7.64	2.42	1.44	1.48	7.64
Growth '16-'17	22%	38%	5%	7%	-18%	na	18%	15%	13%	-19%	392%	19%	33%	78%	42%	12%	19%
Growth '16-'18	20%	29%	17%	7%	-2%	na	23%	23%	15%	-4%	19%	25%	31%	72%	35%	22%	27%
Growth '16-'19	18%	28%	25%	8%	3%	na	24%	22%	15%	3%	-7%	25%	31%	61%	31%	25%	30%

EBITDA Margin

2017e	49%	65%	11%	36%	29%	21%	31%	18%	38%	20%	-71%	23%	44%	15%	39%	32%	21%
2018e	50%	62%	12%	35%	30%	24%	33%	19%	38%	19%	-27%	24%	44%	21%	38%	34%	22%
2019e	50%	61%	14%	36%	29%	27%	35%	20%	38%	21%	-3%	26%	44%	24%	38%	36%	23%

Valuation

EV/Sales 2017	6.5	11.9	2.8	3.9	4.0	7.5	3.2	2.4	8.4	3.3	15.1	5.7	11.3	7.0	11.3	6.7	8.8
EV/Sales 2018	5.5	9.0	2.3	3.7	3.9	6.2	2.6	2.1	7.3	2.9	7.9	4.7	8.6	5.4	8.6	5.5	6.5
EV/Sales 2019	4.7	7.1	1.9	3.5	3.6	5.2	2.2	1.9	6.3	2.7	4.9	3.9	6.7	4.2	7.0	4.6	5.1
EV/EBITDA 2017	13.2	18.3	25.4	10.9	14.0	35.2	10.3	13.3	22.2	16.3	(21.4)	24.7	25.4	46.5	28.7	20.5	41.5
EV/EBITDA 2018	10.8	14.4	18.9	10.6	12.9	25.6	8.1	11.1	19.1	15.3	(29.3)	19.1	19.4	25.5	22.5	16.2	29.8
EV/EBITDA 2019	9.3	11.6	13.4	9.7	12.3	19.4	6.4	9.4	16.6	12.9	(169.1)	15.1	15.5	17.8	18.5	12.6	22.2
P/E 2017	22.6	29.0	74.3	17.6	53.7	96.4	20.1	29.4	27.4	34.7	(5.1)	34.2	33.9	55.8	44.2	35.3	63.2
P/E 2018	19.2	23.8	56.4	16.4	45.6	53.1	15.7	22.5	23.5	30.9	(18.0)	26.2	26.0	33.8	34.2	26.4	46.5
P/E 2019	16.6	18.9	39.5	15.2	39.8	39.5	12.5	18.5	20.4	25.7	(30.9)	20.8	20.1	23.9	27.7	20.1	34.1
Cash-adj.P/E 2017	19.6	27.0	72.2	16.6	42.6	94.7	18.9	31.0	28.2	31.8	(4.8)	31.7	33.1	58.0	43.9	33.0	62.3
Cash-adj.P/E 2018	16.6	22.1	54.8	15.4	36.1	52.2	14.8	23.7	24.1	28.4	(16.9)	24.3	25.4	35.1	34.0	24.7	45.8
Cash-adj.P/E 2019	14.3	17.6	38.3	14.3	31.5	38.8	11.8	19.5	21.0	23.6	(29.0)	19.3	19.6	24.8	27.6	18.7	33.6

Source: FactSet, MSUSA estimates, Note: *Rating by Mizuho Securities Asia Analyst Jin Yoon, estimates from FactSet consensus

Price Target Calculation and Key Risks

Alphabet, Inc.

Valuation:

Our PT of \$1,220 is based on 12.5x EV/EBITDA compared to a CAGR of nearly 20% and forecasted revenue per user of \$87 in 2019. We believe there could additionally be about 30% upside on an ARPU basis from new revenues yet to be built into our model. We remain confident in its ability to improve mobile conversions over time. The company remains one of the most structural stories in the space as mobile monetization continues to improve

Risks:

We believe failure in managing Apple's leverage on mobile search will negatively impact Google's mobile business. Mobile CPC may continue to decrease if the company fails in creating personalized, targeted and measurable ads on mobile devices to better measure cross-device conversions and drive performance.

Amazon.com, Inc.

Valuation

Our PT of \$1,250, based on 17.1x EV/EBITDA compared to a CAGR of 32%. We are still seeing about 35% upside for EBITDA in 2019 from products such as CBT, advertising, expanding Prime products, and AWS upsells.

Risks

Competition. Amazon's Marketplaces business competes with traditional department, warehouse, discount and general merchandise stores, and also with online shopping channels. Changes in the retail industry may impact the company's ability to attract and retain buyers and sellers. Taxation-related risks. Sellers on Amazon's Marketplaces may be subject to sales tax or required to submit tax-related reporting, which could negatively impact the business. Expansion-related risks. Amazon is rapidly expanding into the global market in terms of product sourcing and infrastructure capacity. This expansion increases the complexity of the business and may place a strain on the efficiency of its operations. Regulatory scrutiny. Expansion to non-commerce businesses. The company is aggressively investing in non-commerce business such as smartphones and digital videos, where competitors are more innovated and operating at a larger scale.

eBay Inc.

Valuation

Our PT of \$34, based on 13.5x 2019 plus cash, which is at the high-end of historical PE for the past two years. We believe eBay is a turnaround story and we will be constructive if tech infrastructure improvements drive a sustainable accelerated GMV growth and the competition pressure for CBT becomes more stable.

Risks

If the company's structured data execution improves overall conversion meaningfully, we might see GMV and revenue growth accelerating.

If the company manages to catch up with peers in vendor technology/support offerings, we might see GMV and revenue growth accelerating.

If the company manages to provide more competitive CBT offerings to both vendors and buyers, we might see GMV and revenue growth accelerating.

Facebook, Inc.

Valuation:

Our PT of \$230 is based on 16x 2019 EV/EBITDA compared to a CAGR of ~30% and rev per user of \$26 in 2019e. We are still seeing ~70% upside on an ARPU basis from new rev yet to be built into our model.

Risks:

Competition: The internet industry is evolving quickly and Facebook faces competition from both established enterprises and emerging startups. Investment in new technology and products: Facebook's future acquisition of, and investment in, technology and products involve significant risks and may adversely impact its operating results. Privacy issue: Facebook's advertising model is based on access to users' information. Failure to properly protect/share users' data from/with developers and advertisers could damage Facebook's brand reputation and lead to potential government regulatory investigations, which could negatively impact the business.

Twitter, Inc.

Price Target:

Our \$14.50 target price is based on 11x '19 EV/EBITDA vs a 4% EBITDA CAGR ('17-'19). The stock currently trades at 13x '19 EV/EBITDA, compared to FB's 12x. We do not believe TWTR should trade at a premium as we view FB as best of the class in the internet ad sector

Key Risks:

If the company manages to come up with better ad unit innovations that improve targeting and measurement, some DR ad dollars will flow back to TWTR from other digital channels.

If live stream products ramp up well with significant traffic and engagement improvement, we might see a larger amount of TV ad budget moving to the platform.

Companies Mentioned (prices as of 8/04)

Alibaba Group Holding LTD (BABA \$157.50)
 Expedia Inc (EXPE \$145.92)
 Snap Inc. (SNAP- RS \$13.02)

Baidu Inc (BIDU \$229.45)
 JD.com Inc (JD \$48.15)
 Yelp Inc. (YELP- RS \$41.69)

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- NR:** No Rating - not covered, and therefore not assigned a rating.

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(As of 8/04)	% of coverage	IB service past 12 mo
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Hold (Neutral)	51.74%	33.58%
Sell (Underperform)	5.79%	46.67%

For disclosure purposes only (NYSE and FINRA ratings distribution requirements), our Buy, Neutral and Underperform ratings are displayed as Buy, Hold and Sell, respectively.

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