

## Equities

27 June 2012 | 74 pages

# Facebook Inc (FB)

## Initiating With Neutral & \$35 PT – Easy To “Like,” Hard To Love

- Company Update
- Initiation of Coverage

■ **Significant Long-Term Potential Offset By Medium-Term Risk** — Facebook has established itself as an Internet Utility. It could become the largest ‘Net Platform one day in terms of Revenue & Profits, given the size & engagement of its user base and its biz model. But with a 50X 2013 P/E, much of this potential has been priced in. Further, FB appears to have hit a Fundamentals Air Pocket, given its decelerating MAU growth (27% in '12 vs. 48% in '11 – law of large numbers) and its softening ARPU growth (2% in '12 vs. 27% in '11 – economy, unmonetized Mobile channels, and correctly conservative Monetization strategy). Super-high multiples & Decelng growth don't mix well. Add a limited visibility Biz Model & an unproven Team and you have a Neutral.

■ **Biggest Investment Positives Are...** — 1. Substantial Market Opportunities – incl. a Global Internet Ad market that should reach \$130B by 2015; 2. An Almost Unassailable Position As THE Social Networking Leader – 900MM+ MAUs & 525MM+ DAUs; 3. Significant Network Effects advantages – probably greater than any ‘Net company; 4. Major Monetization Potential – currently generating less than \$5 in annual Revenue per MAU; & 5. Platform/Option Potential – with a massive, highly engaged user base, FB has the potential to layer in more Revenue streams over time...Ad Network, Transactions/Subscriptions revenue share, Digital Media sales, etc...

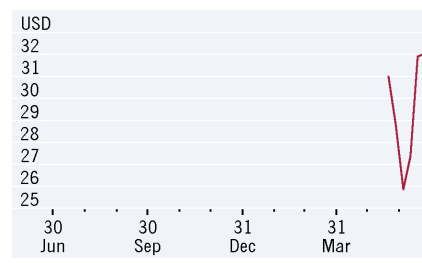
■ **Biggest Investment Risks Are...** — 1. Dual-Class Stock Structure – with questions about mngmt's views towards public shareholders; 2. Limited Appeal To Advertisers Today – based in part on our 800-person Ad Age Citi Panel survey; 3. Unclear Mobile Monetization – 30%+ of total usage today may not generate meaningful Revenue for a long time; 4. Zero Presence In Largest ‘Net Market – China; and 5. Lockup Expiration/Stock Supply Risk – which has materially impacted every other ‘Net IPO.

■ **Deriving Our \$35 PT** – We use a combination of P/E (40X our 2014 EPS of \$0.85), EV/EBITDA (15X our 2014 EBITDA of \$5.0B), and DCF. These are Premium Multiples, but we view the company's growth rate (30% EPS CAGR thru 2015) and Option Potential as supporting them.

■ **What Would Make Us... -- Bullish?** A material correction vs. our PT, clear signs of Mobile Monetization, evidence that Advertisers are aggressively engaging with FB, and the development of new Revenue streams. **Bearish?** Material appreciation above our PT, clear signs of FB user fatigue, lack of monetization improvements.

<b>Neutral</b>	<b>2</b>
Price (26 Jun 12)	US\$32.70
Target price	US\$35.00
Expected share price return	7.0%
Expected dividend yield	0.0%
<b>Expected total return</b>	<b>7.0%</b>
Market Cap	US\$69,915M

### Price Performance (RIC: FB.O, BB: FB US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
<b>2011A</b>	0.10A	0.12A	0.12A	0.16A	0.51A	na
<b>2012E</b>	<b>0.12A</b>	<b>0.11E</b>	<b>0.12E</b>	<b>0.15E</b>	<b>0.50E</b>	<b>na</b>
Previous	na	na	na	na	na	na
<b>2013E</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>0.64E</b>	<b>na</b>
Previous	na	na	na	na	na	na
<b>2014E</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>0.85E</b>	<b>na</b>
Previous	na	na	na	na	na	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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**Facebook Inc (FB)**  
27 June 2012

FB.O: Fiscal year end 31-Dec						Price: US\$32.70; TP: US\$35.00; Market Cap: US\$69,915m; Recomm: Neutral					
Profit & Loss (US\$m)	2010	2011	2012E	2013E	2014E	Valuation ratios	2010	2011	2012E	2013E	2014E
Sales revenue	1,972	3,709	4,784	6,389	8,236	PE (x)	nm	64.4	65.5	51.2	38.3
Cost of sales	-492	-851	-1,242	-1,661	-2,141	PB (x)	35.3	15.6	8.0	7.4	6.8
Gross profit	1,480	2,858	3,542	4,728	6,095	EV/EBITDA (x)	na	29.5	24.8	16.0	11.2
Gross Margin (%)	75.1	77.1	74.0	74.0	74.0	FCF yield (%)	0.5	1.2	1.1	1.9	3.1
<b>EBITDA</b>	<b>1,170</b>	<b>2,078</b>	<b>984</b>	<b>2,847</b>	<b>3,975</b>	Dividend yield (%)	0	0	0	0	0
EBITDA Margin (%)	59.3	56.0	20.6	44.6	48.3	Payout ratio (%)	0	0	0	0	0
Depreciation	-139	-323	-500	-900	-1,300	ROE (%)	na	28.3	3.6	10.8	13.1
Amortisation	0	0	0	0	0	<b>Cashflow (US\$m)</b>	<b>2010</b>	<b>2011</b>	<b>2012E</b>	<b>2013E</b>	<b>2014E</b>
<b>EBIT</b>	<b>1,031</b>	<b>1,755</b>	<b>484</b>	<b>1,947</b>	<b>2,675</b>	EBITDA	1,170	2,078	984	2,847	3,975
EBIT Margin (%)	52.3	47.3	10.1	30.5	32.5	Working capital	-70	5	0	-30	-34
Net interest	0	0	0	0	0	Other	-397	-536	1,719	880	1,121
Associates	0	0	0	0	0	<b>Operating cashflow</b>	<b>703</b>	<b>1,547</b>	<b>2,703</b>	<b>3,698</b>	<b>5,062</b>
Non-op/Except	-24	-60	43	80	90	Capex	-293	-606	-1,812	-2,012	-2,212
<b>Pre-tax profit</b>	<b>1,007</b>	<b>1,695</b>	<b>527</b>	<b>2,027</b>	<b>2,765</b>	Net acq/disposals	-22	-2,423	-266	0	0
Tax	-404	-695	-244	-811	-1,106	Other	-9	6	-1	0	0
Extraord./Min.Int./Pref.div.	0	0	0	0	0	<b>Investing cashflow</b>	<b>-324</b>	<b>-3,023</b>	<b>-2,079</b>	<b>-2,012</b>	<b>-2,212</b>
<b>Reported net profit</b>	<b>603</b>	<b>1,000</b>	<b>283</b>	<b>1,216</b>	<b>1,659</b>	Dividends paid	0	0	0	0	0
Net Margin (%)	30.6	27.0	5.9	19.0	20.1	<b>Financing cashflow</b>	<b>781</b>	<b>1,198</b>	<b>6,850</b>	<b>0</b>	<b>0</b>
Core NPAT	636	1,185	1,250	1,725	2,392	<b>Net change in cash</b>	<b>1,157</b>	<b>-275</b>	<b>7,473</b>	<b>1,686</b>	<b>2,850</b>
<b>Per share data</b>	<b>2010</b>	<b>2011</b>	<b>2012E</b>	<b>2013E</b>	<b>2014E</b>	<b>Free cashflow to s/holders</b>	<b>410</b>	<b>941</b>	<b>891</b>	<b>1,686</b>	<b>2,850</b>
Reported EPS (\$)	0.26	0.43	0.11	0.45	0.59						
Core EPS (\$)	0.27	0.51	0.50	0.64	0.85						
DPS (\$)	0	0	0	0	0						
CFPS (\$)	0.30	0.66	1.08	1.37	1.81						
FCFPS (\$)	0.18	0.40	0.36	0.62	1.02						
BVPS (\$)	0.93	2.10	4.11	4.39	4.81						
Wtd avg ord shares (m)	2,332	2,332	2,503	2,700	2,800						
Wtd avg diluted shares (m)	2,332	2,332	2,503	2,700	2,800						
<b>Growth rates</b>	<b>2010</b>	<b>2011</b>	<b>2012E</b>	<b>2013E</b>	<b>2014E</b>						
Sales revenue (%)	na	88.1	29.0	33.6	28.9						
EBIT (%)	na	70.2	-72.4	302.4	37.4						
Core NPAT (%)	na	86.4	5.5	37.9	38.7						
Core EPS (%)	na	86.4	-1.7	27.9	33.7						
<b>Balance Sheet (US\$m)</b>	<b>2010</b>	<b>2011</b>	<b>2012E</b>	<b>2013E</b>	<b>2014E</b>						
Cash & cash equiv.	1,785	3,908	11,613	13,301	16,152						
Accounts receivables	373	547	654	873	1,125						
Inventory	0	0	0	0	0						
Net fixed & other tangibles	648	1,565	2,988	4,155	5,131						
Goodwill & intangibles	96	162	189	189	189						
Financial & other assets	88	149	850	1,136	1,464						
<b>Total assets</b>	<b>2,990</b>	<b>6,331</b>	<b>16,294</b>	<b>19,654</b>	<b>24,061</b>						
Accounts payable	29	63	175	234	301						
Short-term debt	106	279	410	547	705						
Long-term debt	367	398	404	404	404						
Provisions & other liab	326	692	4,630	6,604	9,186						
<b>Total liabilities</b>	<b>828</b>	<b>1,432</b>	<b>5,619</b>	<b>7,788</b>	<b>10,597</b>						
Shareholders' equity	2,162	4,899	10,675	11,866	13,464						
Minority interests	0	0	0	0	0						
<b>Total equity</b>	<b>2,162</b>	<b>4,899</b>	<b>10,675</b>	<b>11,866</b>	<b>13,464</b>						
<b>Net debt</b>	<b>-1,312</b>	<b>-3,231</b>	<b>-10,799</b>	<b>-12,350</b>	<b>-15,043</b>						
Net debt to equity (%)	-60.7	-66.0	-101.2	-104.1	-111.7						

For further data queries on Citi's full coverage universe please contact CIRA Data Services Americas at CIRADataServicesAmericas@citi.com or +1-212-816-5336  
For definitions of the items in this table, please click [here](#).



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## Our Call In A Nutshell

### **We are initiating coverage of Facebook (FB) with a Neutral Rating and a \$35 PT.**

There is lots to “like” about FB. Similar to Google and Amazon, Facebook has established itself as an Internet Utility. Facebook will soon have 1B Monthly Average Users (MAUs) and 600MM Daily Average Users (DAUs). By any comparison, these are startlingly impressive metrics. Facebook could, in fact, become the largest ‘Net Platform one day in terms of Revenue and Profits, given the size and engagement of its user base and its high-margin business model.

But with a 50X 2013 P/E, part of this FB potential has almost surely been priced in. Further, FB appears to have hit a Fundamentals Air Pocket, given its decelerating MAU growth (27% in '12 vs. 48% in '11 – law of massive numbers) and its soft ARPU growth (2% in '12 vs. 27% in '11 – economy, unmonetized Mobile channels, and correctly conservative Monetization strategy). Combine this with a limited visibility Business Model and an unproven Management Team, and you have a Neutral Rating.

We detail in this report what we consider to be all the major Investment Positives and Risks. We summarize the biggest ones here:

**Biggest Investment Positives Are...** — 1. Substantial Market Opportunities – incl. a Global Internet Ad market that should reach \$130B by 2015; 2. An Almost Unassailable Position As THE Social Networking Leader – 900MM+ MAUs & 525MM+ DAUs; 3. Significant Network Effects advantages – probably greater than any ‘Net company; 4. Major Monetization Potential – currently generating less than \$5 in annual Revenue per MAU; 5. Platform/Option Potential – with a massive, highly engaged user base, FB has the potential to layer in more Revenue streams over time...Ad Network, Transactions/Subscriptions revenue share, Digital Media sales, etc...

**Biggest Investment Risks Are...** — 1. Dual-Class Stock Structure – with questions about management’s views towards public shareholders; 2. Limited Appeal To Advertisers Today – based on our proprietary survey work and our 800-person Ad Age Citi Panel survey; 3. Unclear Mobile Monetization – 30%+ of total usage today may not generate meaningful Revenue for a long time; 4. Zero Presence In Largest ‘Net Market – China; and 5. Lockup Expiration/Stock Supply Risk – which has materially impacted every other ‘Net IPO.

**Our \$35 Price Target is based on three different valuation methodologies.** On a P/E basis, we apply a 40X multiple to our 2014 EPS of \$0.85. On an EV/EBITDA basis, we apply a 15X multiple to our 2014 EBITDA of \$5.0B. And our 10-Year DCF is based on an 11% WACC and a 5% Future Growth Rate. These are Premium Multiples, but we view the company’s growth rate (30% EPS CAGR thru 2015) and Option Potential as supporting them. 2014 is also a bit of a stretch in terms of our valuation frameworks. But we are nearing the point (usually Fall), when we typically forward our valuation frameworks a year – i.e. starting this Fall, most of our one-year forward Price Targets will be based on 2014. Finally, we’d add that given Facebook’s relatively robust and mature margin structure, a straightforward P/E valuation framework is probably suitable. Over time we would expect to rely just on this methodology.

**So what would change our mind?** In thinking through the factors that would change our investment opinion, we boil it all down to **three fundamental key questions**.

**1. How long will it take FB to effectively monetize its Mobile usage?** Implicit in the question is our belief that Facebook will eventually effectively monetize this usage. Perhaps not as well as its desktop usage. But effectively, nonetheless. But the challenges here are significant. Entrenched user expectations of an ad-free Mobile

experience will be one hurdle. Another will be finding the right format that is both useful, but not intrusive. Facebook Mobile advertising also faces limitations related to the fact that currently little of its advertising is location-specific, a big advantage for companies like Google, Yelp, and Zillow that offer location-specific tools for users. What is implied in our forecasts is that Mobile Monetization for FB won't be material until perhaps 2014.

**2. How long will it take FB to work well with Madison Avenue?** Our 800-person Ad Age Citi Panel survey as well as extensive direct discussions with a large number of leading advertisers and ad agencies elicited a surprisingly mixed reaction to advertising campaigns on Facebook. FB has clearly become at least an "Experimental Buy" for major Brand Advertisers, but few of the ones we spoke with – including several on Facebook's Strategic Advisory Council – were willing to make full budget commitments to the platform. Limited creative options, less-than-robust tracking and data analytics tools, and a somewhat uncooperative attitude were cited as negative factors by the advertisers we spoke with. We would expect Facebook to address these over time – just as Google did in its first years as a public company. But the timing is very uncertain.

**3. How many more Zyngas are there out there for FB?** This question speaks to the platform potential of Facebook. Facebook has already been able to generate a material (10%+) of its Revenue via a revenue-share deal with Zynga, the leading Online Gaming company. We assume that over time, many more companies will be able to generate large customer/subscriber/revenue bases off of Facebook, which would give FB the ability to extract tax-like Revenue streams. (Think Apple's 30% "tax" on AppStore sales.) Identifying these new Revenue streams and the timing of their materiality will be key.

Bringing this all back to the P&L and the stock, our take is that clear signs of Mobile Monetization, evidence that Advertisers/Marketers are aggressively engaging with FB, and the development of new Platform Revenue streams would all combine to drive a material acceleration in FB's Revenue and EPS growth. And this – at a reasonable valuation – would make us more constructive.

Going the other way, evidence of Facebook user fatigue or declining engagement along with a lack of monetization improvements would – at the current high valuation bar – make us destructive.

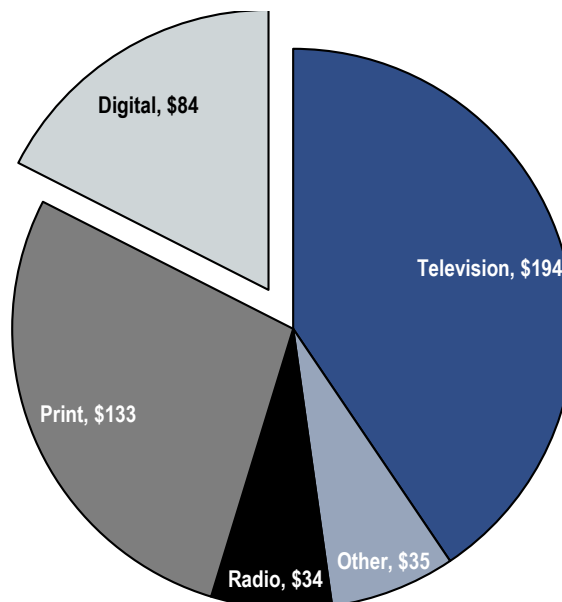
OK, that's enough of that. Now onto our detailed take on FB's Key Investment Positives & Risks, along with our Valuation Framework, and Review of FB's Business Model and its different Ad products.

# Key Investment Positives

## 1) Significant Market Opportunities

IF Facebook executes well over the next 5-10 years, it should be able to tap into several large market opportunities. The first is Advertising, which currently accounts for 85% of Facebook's Revenue. At a broad stroke, there is currently almost \$500B in annual Advertising spend globally, per Zenith Optimedia, with up to 18% or \$84B spent via Digital Channels.

Figure 1. 2012E Global Ad Spend



Source: Citi Investment Research and Analysis; Zenith Optimedia

Approximately 1-2% of Global Ad spend has migrated Online each of the past several years. Given the consistent growth in Internet usage vs. other Media, we would expect this level of migration to continue going forward, both in the U.S. and globally. The now material contribution of Mobile devices to overall Internet usage along with signs that TV Ad budgets (long the largest ad bucket) are beginning to migrate Online, could actually accelerate that migration. But we'll stick with the simple projection that an incremental 1%-2% of overall Ad dollars will migrate Online annually over the next 5-10 years.

Figure 2. Global Advertising Market

(\$ MMs)	2008	2009A	2010A	2011A	2012E	2013E	2014E	2015E
<b>Global Advertising Market</b>	469,480	417,857	442,292	456,033	489,325	515,342	552,823	577,647
Y/Y Change	-1%	-11%	6%	3%	7%	5%	7%	4%
<b>Global Internet Ad Mkt</b>	59,434	61,381	70,515	80,122	92,278	105,033	117,388	129,865
Y/Y Change	18%	3%	15%	14%	15%	14%	12%	11%
<b>Internet as % of Total</b>	13%	15%	16%	18%	19%	20%	21%	22%
Y/Y Change (bps)	207	203	125	163	129	152	85	125

Source: PriceWaterhouseCoopers Global Entertainment & Media

For fun with numbers, assume GDP-esque (3%) annual growth in global Advertising and that ongoing 1%-2% migration and you get to \$180B in global Internet Advertising spend by 2020. That constitutes a very significant market opportunity for Facebook, which currently accounts for only 4%-5% of global Internet Advertising. Below, we detail FB's current and projected share of global and regional Internet Ad Spend.

**Figure 3. Facebook's Regional and Global Online Advertising Revenue & Share**

(\$ in MM\$)	2010	2011	2012E	2013E	2014E	2015E
<b>North America Online Market</b>	28,106	32,503	37,032	41,499	45,932	50,414
FB North America Rev	1,071	1,583	1,846	2,293	2,795	3,253
FB Share	4%	5%	5%	6%	6%	6%
<b>EMEA Online Market</b>	23,245	26,281	29,848	33,679	37,733	41,698
FB Europe Rev	624	1,181	1,455	1,941	2,505	3,095
FB Share	3%	4%	5%	6%	7%	7%
<b>Asia Pacific Online Market</b>	18,000	19,995	23,851	28,079	31,714	35,506
FB Asia Pacific Rev	142	313	478	742	1,062	1,427
FB Share	1%	2%	2%	3%	3%	4%
<b>Total Online Advertising Market</b>	<b>70,515</b>	<b>80,122</b>	<b>92,278</b>	<b>105,033</b>	<b>117,388</b>	<b>129,865</b>
FB Global Advertising Revenue	1,866	3,153	3,892	5,167	6,655	8,192
FB Ad Rev As A % Of Online Ad Mkt	3%	4%	4%	5%	6%	6%

Source: Citi Investment Research and Analysis; PriceWaterhouseCoopers Global Entertainment & Media

There are at least two major caveats to these market thoughts. The first is that FB's ability to monetize effectively its massive usage is still unproven. FB has literally become the world's meeting place. But that doesn't mean distractive/intrusive advertising will work in that meeting place. Facebook has potentially very powerful targeting capabilities, but these aren't proven yet. Facebook claims that socially enabled advertising is inherently more effective than "regular" advertising, and there is some evidence to support this. But social relevance can only be part of the solution. (Our extensive marketer survey work, detailed later, supports this point.) The second major caveat is that a very large (40%+) portion of Internet Advertising to date is in the form of Direct Marketing or Search. There is obviously a dominant player in that segment, and while Facebook will always have the option to enter the Search market (either organically or via a partnership), its success in that segment would have to be considered highly uncertain. Technical and execution challenges, along with entrenched consumer habits, would probably be too severe to overcome.

All that said, the simple point remains that Facebook faces a very large market opportunity in terms of Advertising. It currently has a very small share of that. And we could see that share increasing materially in the future, IF FB executes well. For more fun with numbers, were Facebook's share of Global Internet Advertising to double to 10% by 2020, it could generate as much as \$18B in Advertising Revenue that year, which would imply a 22% 9-year CAGR, a very impressive feat.

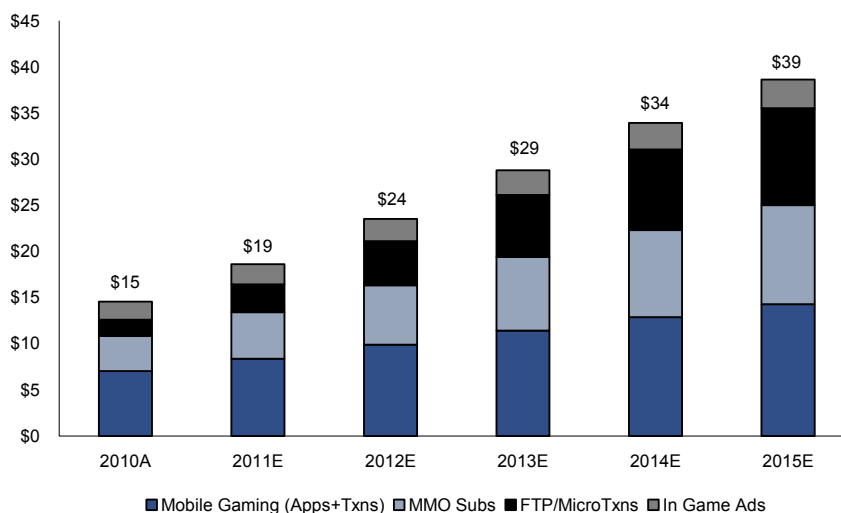
The second large market opportunity for Facebook is currently labeled Payments & Other. We believe a more accurate description might be Platform Commerce Revenue Share. Unfortunately, that doesn't quite roll off the tongue... Already, Facebook generates approximately 15% of its revenue from a processing fee FB charges developers when users purchase virtual or digital goods from them on the Facebook platform. This is akin to the 30% revenue share or tax that Apple charges developers when consumers purchase their apps via the Apple App store. Far and away the largest component of this segment so far has been Zynga games, where the purchase

of virtual goods by players of CastleVille and other games on Facebook has directly contributed 10% of FB's total revenue.

Sizing this market opportunity is almost impossible because it's very unclear just how much commercial activity – purchases of virtual and physical goods, downloads of digital media products, subscription services – will actually take place via Facebook. In theory, this market opportunity could be bigger than Facebook's Advertising opportunity. And in practice, we believe that this is FB's goal, when it states that it expects all activity to be social in the future – activities between consumers and well as activities between consumers and businesses.

To start putting some numbers around this opportunity, below we provide our forecasts for the Global Online Gaming Market, including Apps, Subscriptions, Virtual Goods Transactions, and in-Game Advertising. By 2015, we estimate this market to approach \$40B in size. Were a portion – say 15% -- to migrate towards the FB platform and were Facebook to maintain its 30% "processing fee," this could translate into almost \$2B of Payment & Other Revenue for Facebook by 2015. That's a large market opportunity...

Figure 4. Global Online Gaming Market (\$ Billions)



Source: 1) PwC Global Media and Entertainment Outlook: 2010-2015; 2) Citi Investment Research and Analysis

## 2) The Dominant Leader In The Social Networking Sector

Just as Google became synonymous with Search, so too has Facebook become synonymous with Social Networking. Although there are other Social Networking sites and services out there – Google+, Twitter, etc... -- it's very clear who dominates the sector. Two quick exhibits make the point. First, in March, Facebook had 4X as many worldwide Unique Visitors as the #2 site, Twitter. LinkedIn is a potential competitor, but its business orientation makes it a highly improbable social competitor anytime soon. And the two China-based Social Networks (QQ and Pengyou) face the challenge of building up any usage base at all beyond the Chinese borders. Yes, it's hard to see Facebook ever gaining material traction in China without regime change (tho this seems inevitable to us one day). But a Network with close to a billion active members throughout the world is a dramatically impressive accomplishment.



**Figure 5. Global Unique Visitors**

In MMs	Nov-2011	Dec-2011	Jan-2012	Feb-2012	Mar-2012	Apr-2012
Social Networking	1,185	1,189	1,217	1,216	1,254	1,245
<b>Facebook</b>	<b>793</b>	<b>794</b>	<b>806</b>	<b>790</b>	<b>806</b>	<b>809</b>
Twitter	168	176	182	178	188	190
Google Plus	67	89	88	89	96	128
QQ.com Microblogging	86	87	96	106	120	113
LinkedIn	95	89	100	100	107	103
Pengyou	50	53	58	63	80	78

Source: Citi Investment Research and Analysis; comScore

Per the second exhibit, Facebook also has materially greater User Engagement – as measured by the amount of time each of its users spends on Facebook vs. the amount of time users spend on other Social Networking sites. Per the data from comScore below, the average Facebook user spends 16 times as much per month as the average user does on Twitter, 21 times as much as the average user does on LinkedIn, and 46 times as much as the average user does on Google+. The simple point is that Facebook has become the dominant Social Network in terms of overall users as well as in terms of overall usage.

**Figure 6. Global Average Monthly Minutes Per User**

	Oct-2011	Nov-2011	Dec-2011	Jan-2012	Feb-2012	Mar-2012	Apr-2012
<b>Facebook</b>	<b>379</b>	<b>365</b>	<b>377</b>	<b>405</b>	<b>387</b>	<b>369</b>	<b>365</b>
Tumblr	82	82	87	89	90	89	92
Pinterest	72	77	71	89	53	47	39
Twitter	20	21	21	21	21	21	23
LinkedIn	15	16	14	17	17	16	17
Google Plus	0	3	4	3	3	3	8

Source: Citi Investment Research and Analysis; comScore

### 3) Significant Network Effects

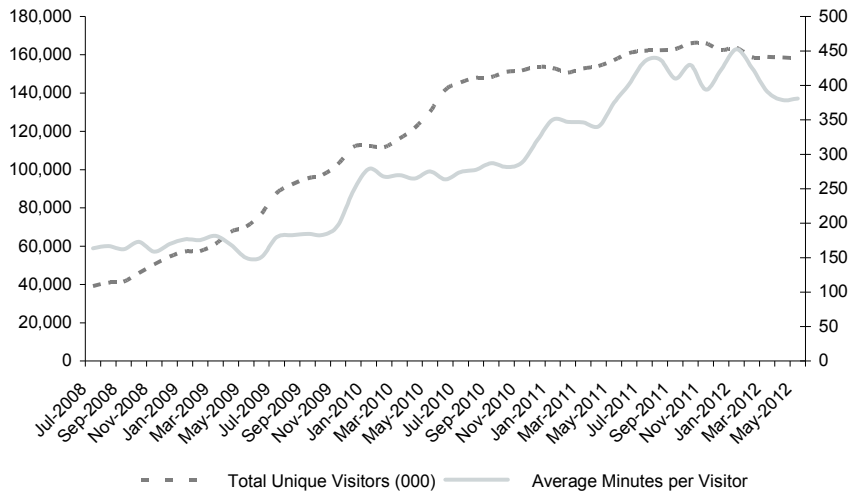
“Network effects” is likely one of the most over-used expressions in consumer technology. But it’s hard not to acknowledge its presence with Facebook. The platform becomes more useful every time a user’s friends or acquaintances join the network. Arguably, Facebook benefits from extreme network effects. For in order for a current Facebook user to find another social network as engaging or useful, not only would that person’s friends have to migrate toward the other social network, but that person’s friends’ friends would have to migrate, and so forth.

One quick caveat to the above is that personal networks that become too large can become less useful in terms of targeting. What we’re thinking of here are the Sponsored Stories ads, whereby Advertisement/Brand Likes by one’s friends can show up in one’s NewsFeed. Truth be told, while one may have 200 friends on Facebook, one may only trust/be interested in the Brand Likes of a dozen of one’s closest friends. There is a Tragedy of the Commons risk involved here with too large of a network. That said, there are likely algorithmic solutions for this risk...so back to our storyline...

Network Effects are a hard feature to prove, but there well might be reasonable support in the following exhibit, which compares the growth in U.S. Facebook users with the amount of time spent per Facebook user. Over the last three years, we have seen both of these metrics grow. Per comScore, U.S. Unique Visitors to FB have risen from 40MM to 160MM, while Monthly Usage Minutes Per Visitor have grown from 150 to

400. Our interpretation is that as individual users' Friends lists have grown on Facebook, the value of the network has increased for each user, leading them to spend more time on Facebook. That's something like...Network Effects...

Figure 7. U.S. Growth In Users vs. Time Spent Per User



Source: comScore, Citi Investment Research and Analysis

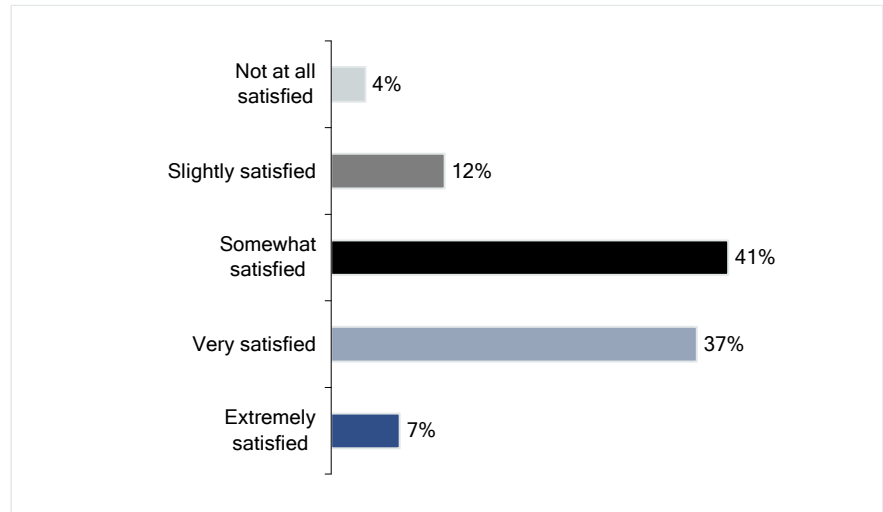
#### 4) A Relatively Solid Value Proposition For Users

Facebook has such broad consumer adoption that it readily lends itself to survey analysis. So we did that. And overall we found relatively high levels of user satisfaction.

Using SurveyMonkey, we recently surveyed 1,181 Facebook users, applying a series of different questions to test users' views on the usefulness of the service. Asked their level of satisfaction with the service, 7% said they were Extremely Satisfied, 37% said they were Very Satisfied, and 41% said they were Somewhat Satisfied. Those are solid – though, frankly and surprisingly, not dramatically positive – results. Perhaps for a bit of context, we'd note that prior to its mid-2011 PR fiasco, Netflix had 71% of their users describing themselves as Satisfied with 50% describing themselves as Extremely Satisfied.

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**Figure 8. Overall Satisfaction With FB**



Source: Citi Investment Research and Analysis (n = 1,181)

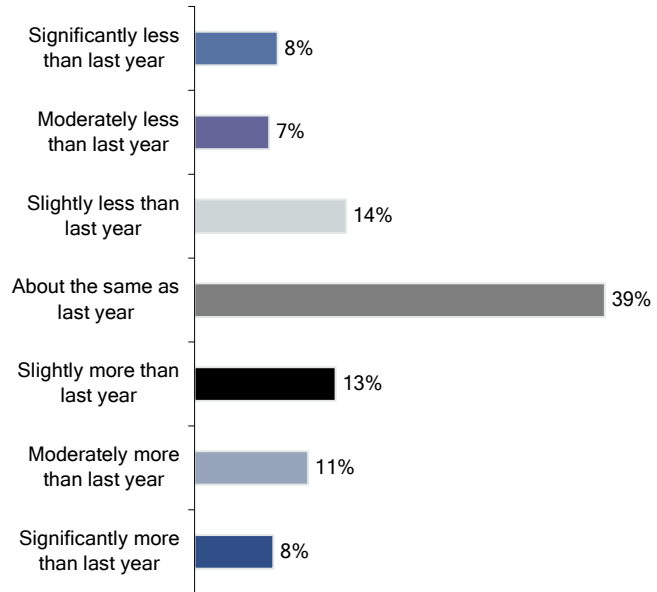
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Survey respondents indicated that their favorite Facebook features were staying in touch with family and friends, pictures, ease of use, and finding old friends. Their least favorite aspects of Facebook were privacy issues, games, timeline, the frequency of changes to the user interface, and apps. These findings were generally in-line with our expectations.

As perhaps more evidence of the relatively solid value proposition of Facebook to users, our survey also asked whether users were spending more or less time with Facebook. At the margin, we found relatively consistent levels of usage with Facebook -- 39% of survey respondents reported using FB about the same in this year as last year, 31% said they use it more, and 29% said they use it less. Graphed out below, it actually looks like a relatively smooth (horizontal) Bell Curve.

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Figure 9. Do You Use Facebook More Or less Than Last Year

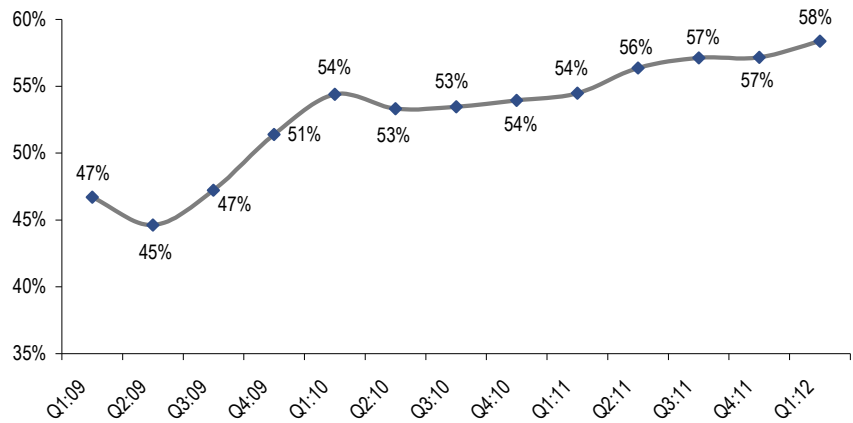


Source: Citi Investment Research and Analysis (n = 1,181)

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Using company data, perhaps the clearest evidence of the rising satisfaction of FB users is the rising level of Daily Engagement on the site. In the exhibit, we have created our Daily Usage Index (DUI) tracking, which shows the % of Monthly Average Users on Facebook who are Daily Average Users. The fact that this % has been steadily rising over time – from 47% in Q1:09 to 59% in Q1:12 – indicates that FB users find the site increasingly useful/relevant/engaging/etc... That's pretty clear evidence that satisfaction levels are rising.

Figure 10. Citi Daily Usage Index DUI Tracking -- Daily Active Users As % Of Monthly Actives

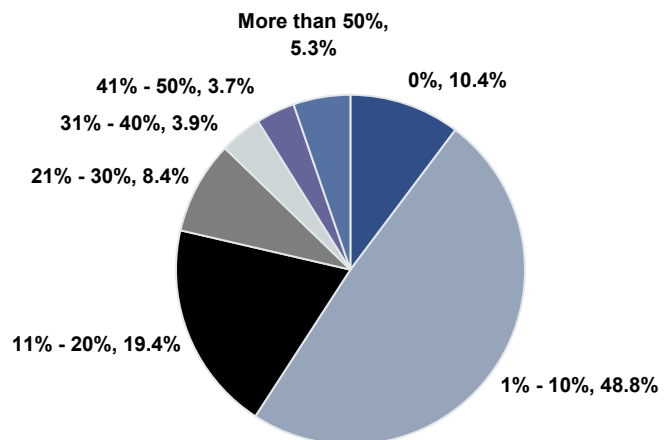


Source: Citi Investment Research and Analysis; comScore

## 5) A Relatively Solid Value Proposition For Advertisers

In order to test Facebook's direct appeal to advertisers, we conducted an extensive survey of Marketers with Advertising Age. We surveyed a total of 800+ marketers (400-600 responded to each of the questions), and the results were generally positive, with several very important caveats. To begin, when we asked what % of the marketer's overall marketing budget was being designated for use in Social Media, we found that 49% spend 1-10% on Social, with 40% spending 11%+. That's pretty significant penetration for such a new advertising medium. It suggests that Social Media has already established itself with Advertisers.

Figure 11. What % of your company's overall marketing budget has been designated for use in social media?

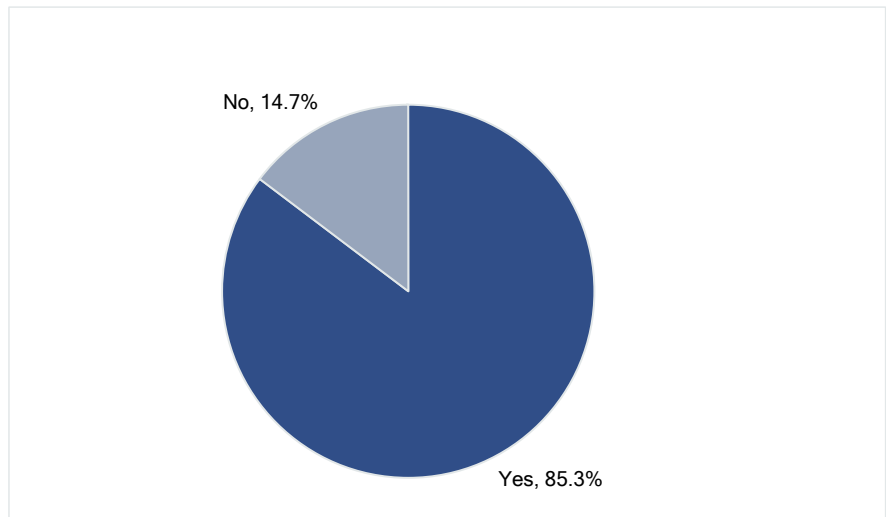


Source: Ad Age Advisory Panel Citi Facebook Survey (n=617)

Next, we found that most marketers have specifically adopted Facebook in some fashion. In our Ad Age survey, 85% of marketers noted that they use Facebook as a marketing tool (through branded FB pages and/or actual ad spend on FB). This is quite remarkable and is evidence that FB currently has brands and marketers engaged on the platform.

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**Figure 12. Do You Currently Use Facebook As A Marketing Tool**



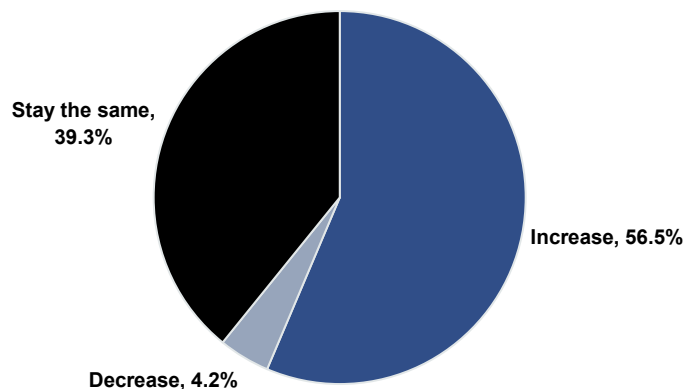
Source: Ad Age Advisory Panel Citi Facebook Survey (n=538)

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Finally, 56% of survey respondents expect their Facebook budgets to increase over the next year. That's a positive indicator of FB's value proposition to Advertisers. The caveat here is that a large percentage, 39%, expect their FB spend to be about the same over the next year. Which is why the headline to this Positive is: "A Relatively Solid...".

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**Figure 13. Over The Next Year, I Expect My FB Ad Budget To:**



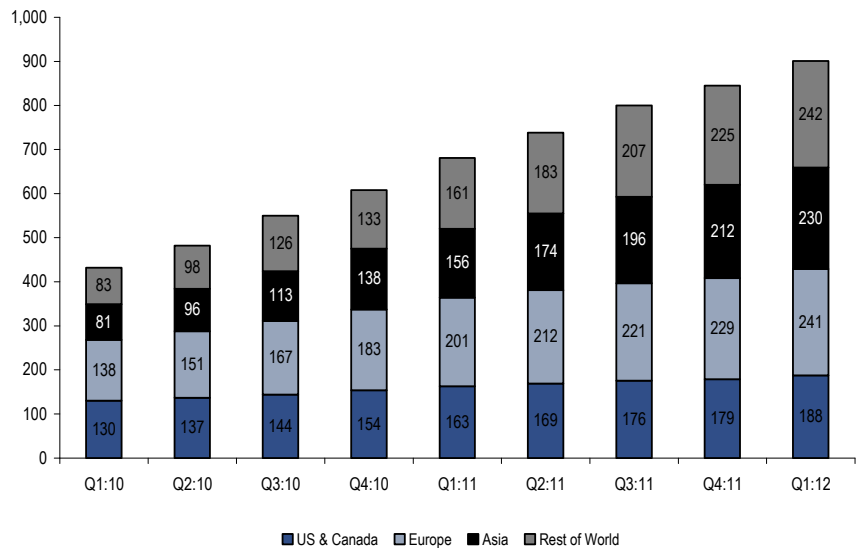
Source: Ad Age Advisory Panel Citi Facebook Survey (n=448)

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6) Substantial International Presence

Over the last 15 years we have seen several Consumer Internet companies generate substantial International presences – i.e. 50%+ of their usage and Revenue from outside the U.S. Amazon.com, eBay, Google all come to mind. LinkedIn and Groupon appear to be heading in that direction as well. Facebook appears to have followed right in these footsteps. Already, 80% of FB’s almost 1B users reside outside the U.S., with a tad over 25% of its user base in each Europe, Asia, and the Rest of World. That kind of large and diverse user base will surely be a significant positive in terms of driving Facebook’s long-term Revenue opportunities.

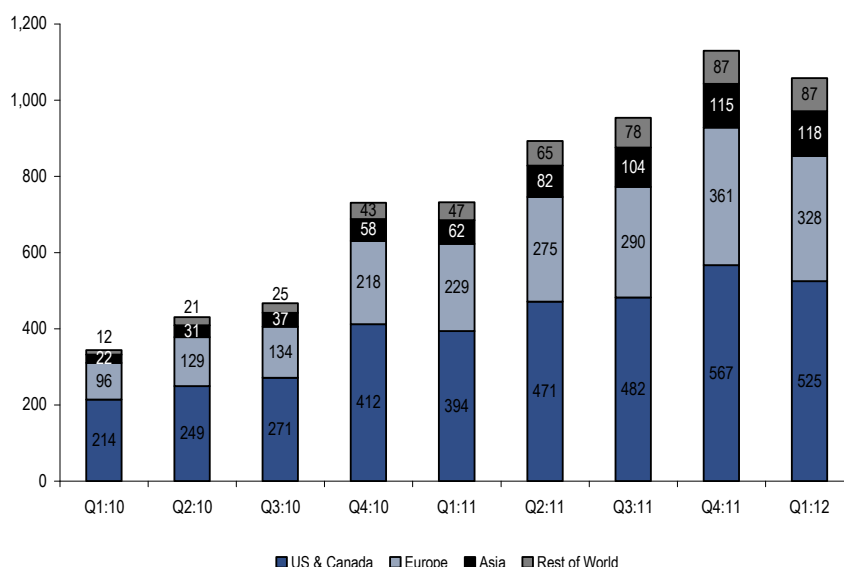
Figure 14. FB Global Monthly Active User Base



Source: Company Reports

In terms of actual Revenue generation, Facebook has already reached the point where 50% of its Revenue now comes from outside the U.S, with Europe currently accounting for 30% of FB’s total Revenue, Asia 11% and the Rest of World 8%. Again, this geographically diverse Revenue base is a distinct positive for FB going forward, as it will reduce growth challenges stemming from overexposure to any one region.

Figure 15. FB Geographical Revenue Breakout



Source: Citi Investment Research and Analysis

## 7) 100% Organic, Viral Growth

All of Facebook's growth to date – in terms of users and Revenue – has been organic. No material acquisitions. It's also been viral. Ever seen an advertisement for Facebook? The key investment so-what of this positive is that it creates for Facebook a more sustainable growth engine going forward. Just as it has for companies like Yelp, Pandora, Google, arguably Amazon (relatively limited M&A and relatively limited marketing spend). This creates a growth engine that is unlikely to be undermined by, say, M&A integration risks or marketing channel inflation. The viral growth – to almost 1B users worldwide – also says something very powerful about the universal appeal of Facebook. 1B users. Worldwide. All viral growth. That probably defines universal appeal more than any other commercial venture out there. Perhaps ever? Ok, back down to earth...

## 8) Significant Monetization Potential

The challenge for FB shares is that this has been – and will almost certainly continue to be – a decelerating unit growth story. Over the last year, the growth in FB's core unit metric (Monthly Average Users) has decelerated from 58% Y/Y to 32% Y/Y. And given the Large Numbers Law and the current base of almost 1B users, it's hard to see that growth doing anything other than continuing to decelerate, with the possible exception of a quick re-accel in the wake of all of the IPO publicity (good and bad).

Near term, as Unit Growth has decelerated and Monetization Growth has stalled (due to macroeconomic issues, the timing of Monetization initiatives, the impact of UI changes, the increasingly material impact of Mobile usage, etc...) there has emerged for Facebook a Fundamentals Air Pocket. And near term, we find it hard to see FB shares materially outperforming until the company exits the Air Pocket AND Lockup Supply issues are addressed AND/OR the stock's valuation becomes truly compelling. But we digress...



The upside advantage to FB shares is that the platform today is arguably materially undermonetized, which could establish a very strong and sustainable Revenue growth engine going forward. As two examples of FB platform under-monetization, below we compare Facebook with Google and Yahoo! in terms of 2011 Ad Revenue Per Unique Visitor, first on a global basis and then on a U.S. basis. The simple takeaway is that FB's current monetization is roughly 20%-30% below that of Yahoo! and only 1/6<sup>th</sup> to 1/7<sup>th</sup> that of Google. This does create an interesting potential bogey.

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**Figure 16. Global Ad Revenue Per Unique Visitor**

UVs (MMs)	2011 Avg UVs	2011 Ad Rev	Ad Rev / UV
Google	1,032	26,145	\$25.33
Yahoo!	682	3,410	\$5.00
Facebook	735	3,154	<b>\$4.29</b>

Source: Citi Investment Research and Analysis

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**Figure 17. U.S. Ad Revenue Per Unique Visitor**

UVs (MMs)	2011 Avg UVs	2011 Ad Rev	Ad Rev / UV
Google	187	11,765	\$62.87
Yahoo!	189	2,210	\$11.71
Facebook	166	1,494	<b>\$9.00</b>

Source: Citi Investment Research and Analysis

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There are plenty of caveats to the above analysis, however. We view it as improbable that Facebook in its current manifestation will be able to monetize its usage as well as Google. People go to Facebook to communicate, to entertain themselves, to share, and to get information. People go to Google almost solely to get information, with often times advertising providing very relevant information. The latter creates a much more target rich environment for advertisers than does the first, as our due diligence with a very broad range of advertisers and agencies has confirmed. (As one example, the CEO of one leading Online Travel company described the ROI difference between Google and Facebook as 50-1, with FB on the losing side of that equation.) Still, our analysis does suggest significant monetization potential.

As one specific additional example of monetization potential, our survey of Facebook users found a surprisingly high % (84% to be specific) of Facebook users had Liked a business on Facebook. In our minds, those are very powerful marketing signals that Facebook is picking up. It's somewhat akin to a user signing up for a company's email marketing or catalog program. While FB may not have monetized its usage well so far, this likely creates significant opportunity in the future. Especially as the company develops new add formats (Sponsored Stories) or begins to monetize the very significant part of its usage (Mobile) that has been completely un-monetized to date.

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Figure 18. Have You Ever "Friended" Or Liked A Business?



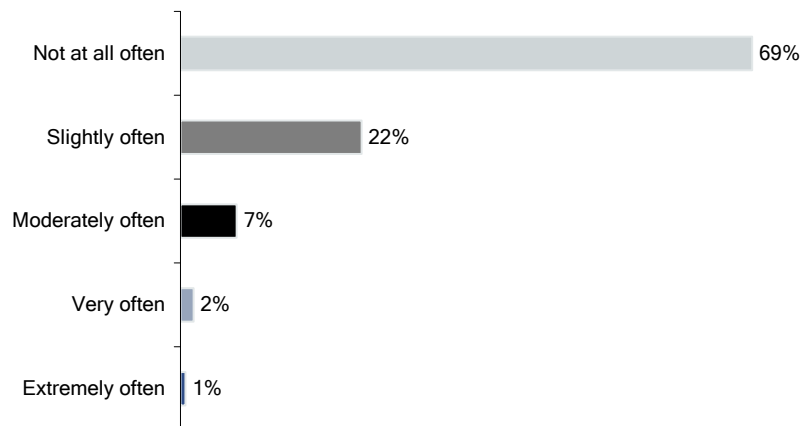
Source: Citi Investment Research and Analysis

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In a surprising finding, more than 30% of Facebook users surveyed indicated having purposefully clicked on a Display ad on Facebook. Given that unlike with Search queries, Facebook users aren't looking for a particular good or service, we think that this is an impressive rate that bodes well for future monetization potential.

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Figure 19. How Often Do You Purposefully Click on FB Ads?



Source: Citi Investment Research and Analysis

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## 9) The Potentially Very Large FB Platform Potential

One of the potentially most significant Investment Positives for Facebook has to do with its platform potential. With Facebook soon having a billion+ highly engaged users, it has before it the potential to layer in a broad range of Revenue-associated activities – e.g. an Advertising Network, Search, an eCommerce Marketplace, Media Distribution, etc... Which, if any, of these activities will stick with Facebook users is very hard to

know. But the key advantage for FB is that it will have the opportunity to try several or all of these initiatives over time.

One basic way we ask ourselves about this potential is with the question: "Are there more Zynga's out there for Facebook?" We don't just mean are there other social games networks that can build up large user and revenue bases on Facebook. We mean are there other businesses that can generate a large amount of commercial activity on Facebook, which FB can then "tax." Kind of like Apple's 30% revenue share or "tax" on the App Store ecosystem. We believe that this is precisely the opportunity FB management has in mind when it expresses its hope that all consumer activity – including business to consumer activity – will be social one day.

IF Facebook is successful in creating this type of platform – one where a substantial % of commerce activity does occur on the FB platform – then it will gain the opportunity for very significant, high-margin "tax" revenue.

# Key Investment Negatives

## 1) Second Class Shareholder Structure

Due to the creation of super-voting shares, Facebook's Founder Mark Zuckerberg has ensured that he will control 57% of the voting rights in Facebook for the foreseeable future. This in a way creates a second-class citizenship status for all investors who buy FB shares. We've seen this many times in traditional media (especially with family-controlled companies), and we've increasingly seen this in the Internet sector with Google, Zynga, LinkedIn. So this isn't a risk specific to Facebook. But it is still a risk.

There is a distinct positive here. Facebook is where it is today precisely because of Zuckerberg's plans and decisions. So the voting rights structure does ensure consistency in management style. But there is always the risk that the current highly effective management will make execution mistakes and/or miss key strategic trends. In fact, we consider it probable that it will, given the constantly evolving state of Consumer Internet. And the voting rights structure may well insulate FB management from the type of external pressures that could help constructively correct the company's course in the future.

## 2) Somewhat Limited Appeal to Advertisers Today

Facebook is on track to generate close to \$4B in Advertising Revenue in 2012. This means that Facebook will account for 4%-5% of global Internet Advertising, which would make it one of the top Internet Advertising companies in the world. By our reckoning (see below), Facebook actually was the 3<sup>rd</sup> largest generator of Internet Advertising Revenue globally in 2011. That is a very impressive accomplishment for what is still a very young company.

Figure 20. 2011 Global Ad Revenue (\$MMs)

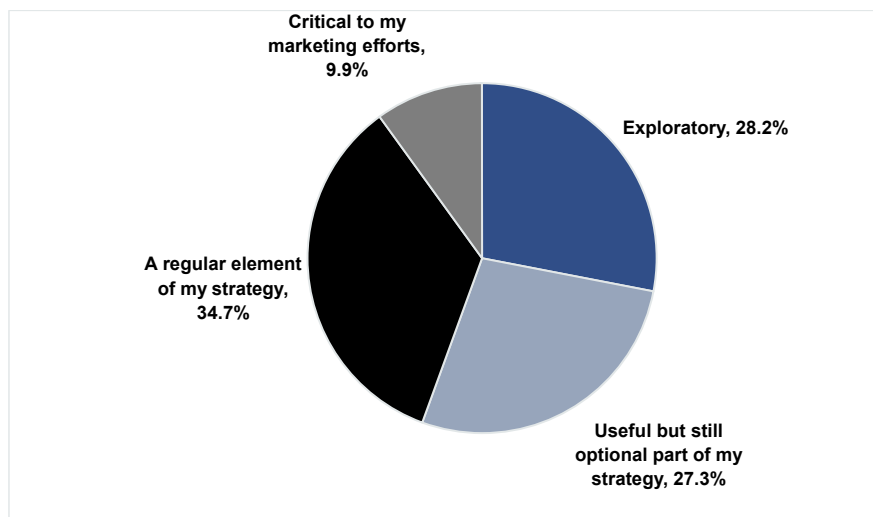
Company	2011 Ad Rev
Google	27,720
Yahoo!	4,013
<b>Facebook</b>	<b>3,154</b>
Microsoft	2,638
Baidu	2,302
AOL	1,314

Source: Citi Investment Research and Analysis; Company reports

That said, we do see signs that Facebook's appeal to Advertisers and Marketers is today still somewhat limited. To try and gauge Advertisers' satisfaction with Facebook, we conducted well over two dozen channel checks with Advertisers and Agencies, ranging from some of the world's largest brands/agencies to some of the largest direct buyers of Internet advertising to small marketers/Online agency firms. We also ran the previously mentioned Ad Age Panel Survey. Not surprisingly, we encountered a relatively broad set of Advertiser opinions regarding Facebook. But at the risk of oversimplification, we'll summarize the key themes we picked up from our Advertiser checks and the Panel Survey:

**A. Facebook is at the very least an "Experimental Buy" for Marketers who advertise Online** – Per ChannelAdvisor, which works with over 3,000 retailers on their Online marketing strategies, not many retailers are seeing good results from their Display Ad campaigns on FB, but almost all are "really eager" to experiment with the platform. Based on our survey of marketers, we found that 28% are still experimenting on Facebook, and 27% view FB as useful but optional. That's 55% of Marketers that don't view FB as critical or necessary. The balance use FB as a regular or critical part of their marketing mix.

Figure 21. How do you characterize the role of Facebook in your overall marketing mix?



Source: Ad Age Advisory Panel Citi Facebook Survey (n=444)

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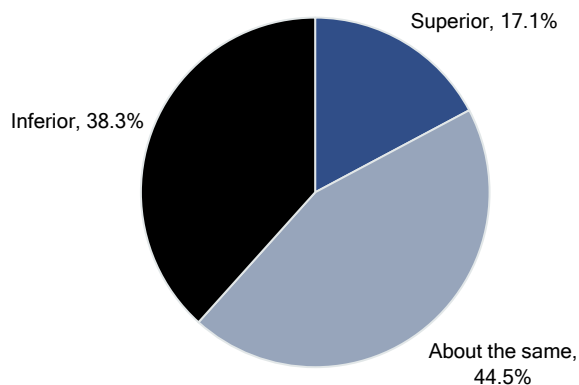
**B. A significant number of Brand Marketers expect their Advertising spend with Facebook to rise over time** – Our interviews with the CMOs of three of the largest brand advertisers in the world (one a very leading soft drink company, one a very major Consumer Personals company – think soap and toothpaste, and one a very large financial services firm) left us with the impression that while very large Brand advertisers may still be in the “test & learn” phase of their advertising relationship with FB, they consider it highly likely that Facebook will consume a larger % of their marketing spend over time.

**C. Somewhat surprisingly, many of today’s largest direct Online Advertisers are making deminimus marketing spend commitments to Facebook** – A listing of the top 10 direct advertisers worldwide would likely include top ecommerce names like Amazon, eBay, Priceline, and Expedia. Our conversations with these and similar companies indicated limited interest to date in advertising on Facebook. Yes, these are ecommerce companies more focused on Demand Fulfillment advertising (e.g. Search) than Demand Generation advertising, but each of these companies has run major offline and Online Brand campaigns, and the fact that these highly sophisticated Online Advertisers aren’t committed to the Facebook platform should give potential investors in FB pause.

One specific concern that came up in our discussion with these top ecommerce names was uncertainty/skepticism about the relative ROI of advertising on Facebook. Very interesting, 45% of the respondents to our Ad Age Citi Panel survey described Facebook’s ROI as about the same as that of other platforms like Google or Yahoo!. But a very significant 38% described it as “inferior.” We viewed this particular result as a bit of a red flag for FB.

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Figure 22. Overall, How Would You Compare The ROI On Facebook To Other Platforms Like Google Or Yahoo?



Source: Ad Age Advisory Panel Citi Facebook Survey (n=420)

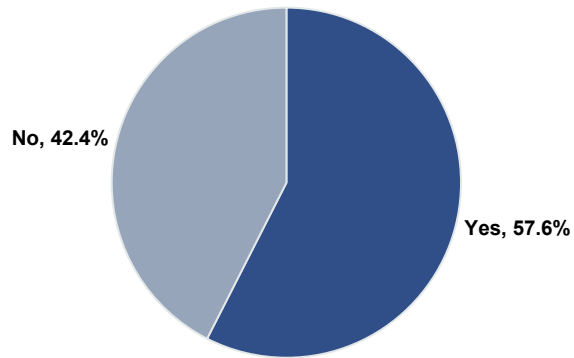
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**D. Several factors were consistently highlighted as reasons for Facebook’s limited appeal to Advertisers** – A relatively constant response we got from several of the largest Online Ad agencies we spoke with was that Facebook currently offers marketers only limited tracking tools and analytics and limited creative solutions in terms of ad campaigns. One very large ad agency described recent meetings with Facebook and LinkedIn as having a day-and-night difference, with FB more in order-taker mode and LinkedIn much more willing to collaborate on creative campaign solutions. Finally, we uncovered surprisingly mixed responses to the question of whether Facebook offers better ad targeting capabilities than other Online ad platforms. Facebook management has pitched to investors the platform’s superior targeting capabilities, but the advertisers we spoke to didn’t seem convinced.

Drilling into this point further with our Ad Age Panel survey, 58% of Marketers noted that they were happy with Facebook’s array of products and services. However, 42% said they were not. Facebook has been rolling out more ad products recently, and we believe it would be in the company’s best interest to beef up its national sales force and advertising teams. However, in the near term, we think that the lack of products and services could be a negative for the company.

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**Figure 23. Are You Satisfied With The Array Of Products & Services That Facebook Has To Offer?**



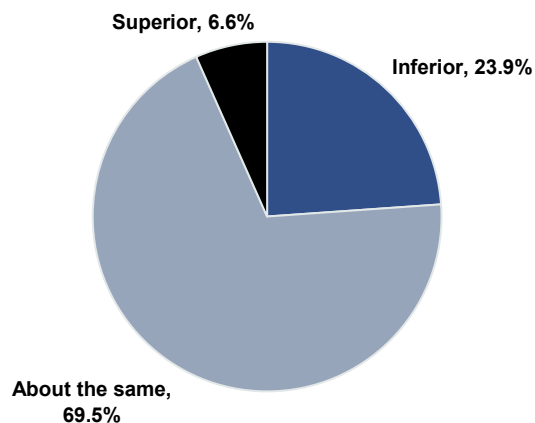
Source: Ad Age Advisory Panel Citi Facebook Survey (n=420)

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Also per our Ad Age survey, 93% of marketers indicated to us that Facebook's advertising customer support was about the same or worse than that of other ad platforms, and only 7% found FB's customer service to be better than others. There is clear room for improvement here, in our opinion.

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**Figure 24. How Does FB's Customer Support Compare To Other Digital Platforms You Do Business With?**



Source: Ad Age Advisory Panel Citi Facebook Survey (n=380)

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Our belief is that Facebook has been more focused around building a large and sticky community, and that it will devote the resources in the near-to-medium term to fill in these gaps with Advertisers and Marketers. We note that during Google's early years, most of the Ad buys on its network were self-service, with limited focus on agencies and large brands. Overtime, Google changed its stance and created teams to help marketers and devoted more resources to build campaign analytics tools. The one

obvious problem for Facebook here is that its core Advertiser base – large Brand advertisers – requires much more of a Madison Avenue orientation than Google’s initial core base – small retailers – ever did.

Below, we summarize some of the specific comments we received from our direct Online advertiser interviews. All in, we believe they support this Risk title: “Somewhat Limited Appeal...”

Figure 25. Select Results Of FB Advertiser Survey

Facebook Advertising Partner	View	Notes
CEO of major eCommerce platform	Mixed	Retailers are very interested in FB, but not seeing good results from Display campaigns on FB
CEO of leading online luxury goods retailer	Negative	Ran many tests and got good traffic, but not target customers. FB hasn't made investment to attract retailers
CEO of digital ad agency	Mixed	Ad experience currently limited, but FB recently built out their agency team which should help
Exec of large online auction/commerce site	Mixed	"Our spend on Facebook remains largely experimental."
Exec of large online community site	Negative	Spent less on FB ads in 2011 vs. 2010. FB not eager to send users off of FB
Exec of consumer/business printing site	Mixed	Purchaser of FB display ads; Still early stage in figuring out how to optimize FB ad spend
Veteran Online advertising executive	Negative	"We aren't even close to figuring out how to market in the Social space"
Exec at online ad platform	Positive	"There is definitely more interest on the part of marketers to run campaigns on Facebook."
CEO of large ad agency firm	Negative	"Facebook seems to have an enormous sense of entitlement as an advertising platform."
Exec of large ad agency firm	Positive	Lot of interest in FB by marketers. Ecosystem of Online ad agencies is already built, which will benefit FB.
CEO of online ad agency	Mixed	FB is arrogant, but it does allow for effective targeting on a demographic basis.
CEO of large Online ad agency group	Negative	"There is a lot of dissatisfaction among agencies and advertisers towards Facebook"
CMO of online ad agency	Positive	Clients have moved beyond experimenting with FB and are seeing good results
CMO of large global beverage company	Positive	Earned media on FB is invaluable, FB appears committed to making improvements for its ad partners
CMO of global bank	Mixed	Still early to tell; FB has been helpful with some campaigns, but ROI is hard to measure
CMO of leading CPG company	Mixed	Expects to increase spend with FB over time, tho still in "test & learn" phase
CEO of Online travel company	Negative	Have experienced a 50-1 difference in advertising ROI between Google and FB
CMO of Online automotive retailer	Mixed	"Campaigns on Facebook haven't been that successful to date, but there is significant potential."
Exec at leading hot beverage company	Positive	Views the FB relationship as "strategic;" One campaign lead to a 40% increase in product sales

Source: Citi Investment Research and Analysis

As a counterpoint to our research, we would point to several third party research reports that have come out recently. Two in particular struck us as insightful. First, there was “The Power Of Like” report published by comScore (tho sponsored by Facebook). It concluded that concentrated Social Media campaigns can significantly amplify the reach of earned media exposure. And it provided the very interesting datapoint that currently over 15% of all U.S. Display ads are socially-enabled vs. 8% as recently as November 2011. Second, there was a study published by TBG Digital that asserted that Mobile Sponsored Stories on Facebook are getting over 13X the click-thru rates and 11X the eCPM as Desktop ads on Facebook. Those are surprisingly positive results, although novelty may be a factor here.

### 3) Unclear Mobile Monetization

A substantial % of Facebook’s usage is now via Mobile devices. Interesting, Facebook doesn’t have a specific way to track what % of its actual usage is via Mobile devices, but we believe it could be one-third. On the whole, we continue to view the dramatic growth in Mobile usage as a distinct positive for Consumer Internet companies. Mobile has served to expand the TAM (Total Addressable Market) for a series of Internet companies, such as Amazon, eBay, OpenTable, Yelp, Google, etc... But in specific cases, we also continue to believe that Mobile has created monetization challenges.



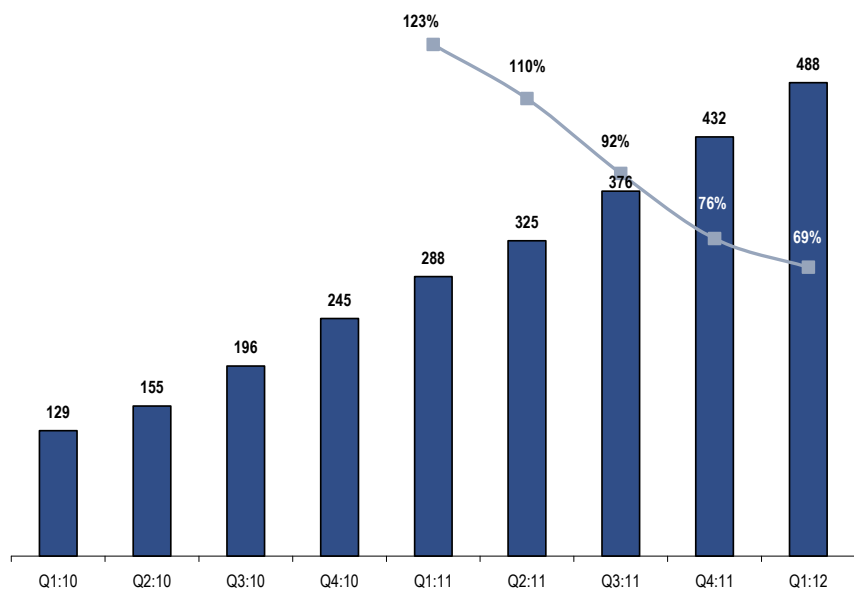
For Internet commerce and transactions companies, it's hard to see the Mobile Internet as anything other than generating incremental demand. But for Internet advertising companies, the situation is less clear. For Demand Fulfillment/Direct Marketing advertising – especially when location-targeting is useful -- Mobile Internet is largely a positive. But for Demand Engagement/Brand Awareness advertising, Mobile Internet creates a series of challenges. One obvious reality is that the smaller screen sizes of Mobile Devices reduce the potential impact of Display/Video ads.

There are at least two live case examples among Internet companies that highlight the monetization challenges for Internet Advertising companies. First, Google is currently generating only half the RPS (Revenue Per Search) on Mobile Phones as it generates on Desktops. To be specific, we believe that Google's RPS on Mobile Phones is 50% its RPS on Desktops, while its RPS on Tablets is more like 70%-80%. Second, Pandora is effectively monetizing its Mobile usage (with Display ads, Video ads, and Audio ads) at one-third the level of its Desktop usage.

Into this fray comes Facebook, which now has a substantial % of its usage coming via Mobile devices. Per the company, in Q1:12, Facebook had over 488MM Mobile users (51% of its total 901MM users are now using FB on their Mobile devices). And this level has been growing 70%+ Y/Y each of the last three quarters, as we detail below. In addition, FB has over 80MM users who are exclusively Mobile-based.

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Figure 26. Mobile Monthly Active Users (MMs)



Source: Citi Investment Research and Analysis; Company Data

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The specific challenge for Facebook is that it is only just now starting to try to monetize this Mobile usage. Its current plan is to introduce Sponsored Stories into Mobile Users news feeds. But it is very unclear how this will play out, how users will react to changes to what has been an Ad-free Mobile experience to date, and whether these Ads will be effective on Mobile Devices.

#### 4) Broad Competitive Risk

Facebook competes in the broad Online advertising sector with companies like Google, Yahoo!, Twitter, Pinterest, Yelp, Microsoft, AOL, etc... On the Payments side, Facebook clearly competes with online payment firms like Paypal on the Facebook Platform. Prior to rolling out FB Payments and requiring developers to adopt FB Payments, Paypal was one of the leading payment providers on FB.

Given that the market is changing rapidly, and now more users are using FB's mobile product, the company bought Instagram for \$1B in April, as FB saw Instagram's rapid adoption become a potential threat to its core picture product offering.

As one barometer of competitive risk, we'd highlight that Facebook's indirect and direct Internet competitors (Amazon and Google) are currently spending 5X to 7X as much on R&D as is Facebook. For example, in 2012, we estimate that Facebook will spend around \$800MM in R&D, which is significantly smaller than Amazon or Google, which we estimate will spend around \$4B and \$6B, respectively. For context, however, we would note that in 2012, Facebook's R&D spend as a % of Revenue will be around 17%, which is in-lineish with Google and Microsoft, and higher than Amazon.

**Figure 27. Large Cap Technology Companies R&D Spend Analysis**

(\$ in MM)	2011A	2012E
<b>Microsoft Revenue</b>	<b>72,052</b>	<b>76,737</b>
R&D Spend	9,362	10,129
R&D as % of Rev	13%	13%
<b>Amazon Revenue</b>	<b>48,077</b>	<b>63,073</b>
R&D Spend	2,909	4,124
R&D as % of Rev	6%	7%
<b>Google Net Revenue</b>	<b>29,094</b>	<b>35,014</b>
R&D Spend	5,162	5,949
R&D as % of Rev	18%	17%
<b>LinkedIn Revenue</b>	<b>522</b>	<b>904</b>
R&D Spend	132	237
R&D as % of Rev	25%	26%
<b>Facebook Revenue</b>	<b>3,709</b>	<b>4,784</b>
R&D Spend	388	800
R&D as % of Rev	10%	17%

Source: Citi Investment Research and Analysis; R&D includes stock based compensation expense

#### 5) ZNGA Revenue Concentration Risk

Zynga is Facebook's largest revenue contributor. In 2011, Zynga directly accounted for 12% of Facebook's revenue in the form of Payments processing fees. In addition, FB generated approximately 7% of revenue from advertising on pages created by Zynga's apps on Facebook. In Q1:12, Zynga accounted for 11% of Facebook's revenue in the form of Payments processing fees. In addition, FB generated approximately 4% of its revenue from Advertising on pages created by Zynga's apps on Facebook. That's 19% and 16% of FB total revenue from Zynga in 2011 and Q1:12.

**Figure 28. Zynga Revenue Contribution By Segment**

	2011A	Q1:12A
FB Total Revenue (\$MMs)	\$3,709	\$1,058
Zynga Contribution (\$MMs)	\$705	\$159
% of Total FB Rev	19%	15%
<b>FB Payments Revenue (\$MMs)</b>	<b>\$556</b>	<b>\$187</b>
Zynga Contribution (\$MMs)	\$461	\$116
% of FB Payments Rev	83%	62%
<b>FB Advertising Revenue (\$MMs)</b>	<b>\$3,153</b>	<b>\$871</b>
Zynga Contribution (\$MMs)	\$243	\$42
% of FB Advertising Rev	8%	5%

Source: Citi Investment Research and Analysis

However, we note that this relationship is somewhat symbiotic as Zynga is dependent on Facebook for revenue, and over the past 2 years has generated approximately 93% of its total Bookings & Revenue on the Facebook platform.

We would also note that Zynga continues to tie itself closer to Facebook than ever before. Zynga's online games platform, Zynga.com, requires users to sign in using Facebook Connect, and the preferred payment on Zynga.com is Facebook's payment system (which means Zynga still pays Facebook ~30%). Finally, Zynga is tying its games into Facebook's mobile platform as well. While this is still early, Zynga continues to deepen its relationship with Facebook.

In the table below, we highlight the revenue contribution from Zynga based on digital goods purchased by Facebook users who played Zynga games on Facebook using Facebook's Payments. We expect Zynga's contribution to come down from 83% of FB's total payments in 2011 to about 53% in 2014. Directionally, we think that lower dependency is better, and while we like the direction of this trend, we still would note that we expect more than half of FB's payment revenue to continue to come from Zynga for the foreseeable future.

**Figure 29. Facebook Revenue Dependency On Zynga**

(\$ in MMs)	2010A	2011A	2012E	2013E	2014E
FB Total Revenue	\$1,972	\$3,709	\$4,784	\$6,389	\$8,236
Y/Y Change	154%	88%	29%	34%	29%
FB Payments Revenue	106	556	892	1,222	1,581
Y/Y Change	--	425%	60%	37%	29%
FB Revenue From Zynga Bookings	--	461	589	713	839
Y/Y Change	--	--	28%	21%	18%
Zynga Contribution to FB Total Rev	--	12%	12%	11%	10%
Zynga Contribution to FB Payments Rev	--	83%	66%	58%	53%

Source: Citi Investment Research and Analysis

## 6) No Presence in China

As is the case with other U.S./Global Internet companies, China has been a dead-end market for Facebook. Well, that's not quite true -- Amazon has developed a reasonably significant presence in China, Yahoo! has a significant investment stake in one of that

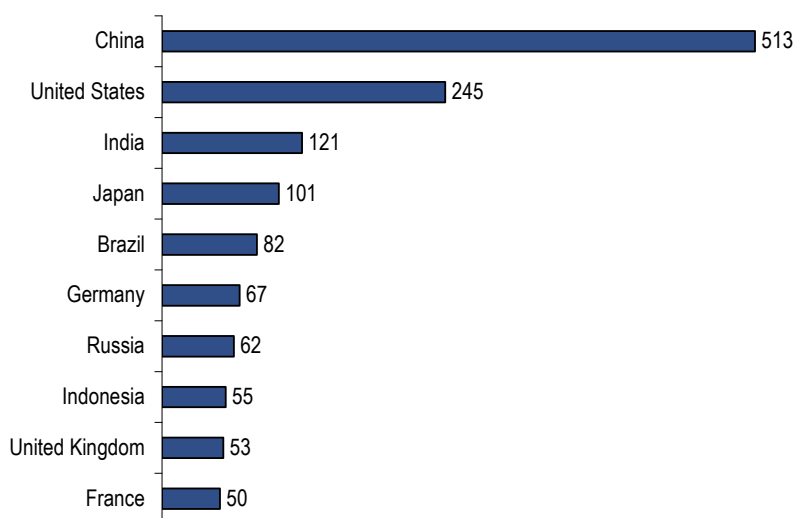
market's largest ecommerce platforms (Alibaba), Expedia owns the #2 Online Travel Agency in China, and Priceline is developing a presence in the market. But along with Google, Facebook has been largely shut out of China. Partly this is due to local competition. But mostly this is due to official and unofficial policies by the Chinese government to leave control of key media assets in local hands.

Given that China has become the largest country in terms of Internet users, this poses a significant challenge to Facebook's global User and Revenue potential. Frankly, we see no real solution here for Facebook (or for Google for that matter), barring regime change in China. From a modeling perspective, we've accounted for this by assuming that FB's 0% penetration of China Internet Users remains 0% forever. Broadly, this means that FB's penetration of the Asia Pacific region will remain limited – e.g. we estimate that while 70% of the North American population will be on Facebook by 2015 and 46% of the European population, we assume that only 11% of the Asia Pac population will be on Facebook by 2015.

This lack of opportunity in what is the world's largest Internet market (at least in terms of users) constitutes an FB Investment Risk.

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**Figure 30. Most Populous Internet Usership Bases (MMs)**



Source: Internet World Stats

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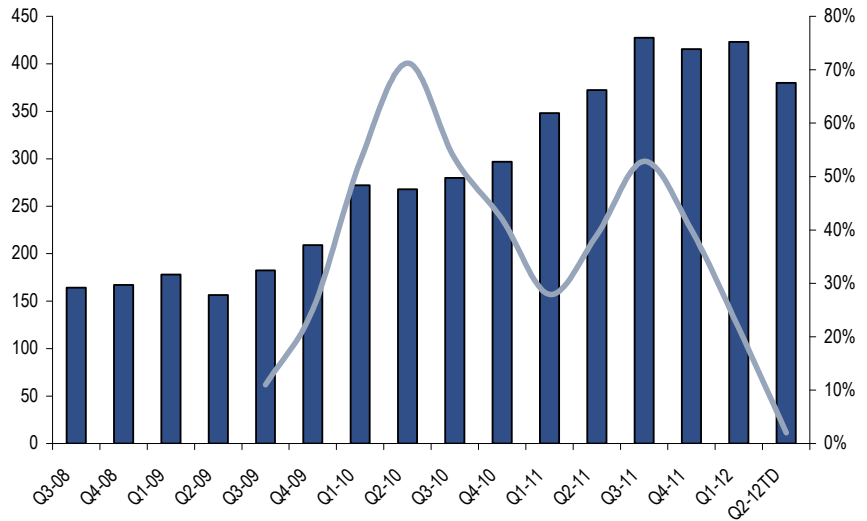
## 7) Potential User Fatigue

One of the biggest potential risks for Facebook would be user fatigue or reduced engagement. Anecdotally, it's hard not to find an example of someone who has dropped their Facebook usage or reduced their usage of the service, citing time constraints, reduced interest, etc... As a user/usage driven platform, fatigue trends could be a very significant investment negative.

The evidence so far, however, points in the opposite direction. Our DJI Tracking – showing DAU/MAU penetration – shows clear evidence of rising – not falling – levels of engagement. For example, the DAU/MAU ratio has increased from 47% in early 2010 to 58% in Q1:12. (See Investment Positive #4.) Third-party data from comScore also

shows rising engagement on Facebook. Per the exhibit below, average monthly minutes per Facebook user in its most mature market (the U.S.) has been rising Y/Y since Q3:09, growing 20%+ in the March 2012 Quarter, although only single-digit Y/Y growth in recent months...

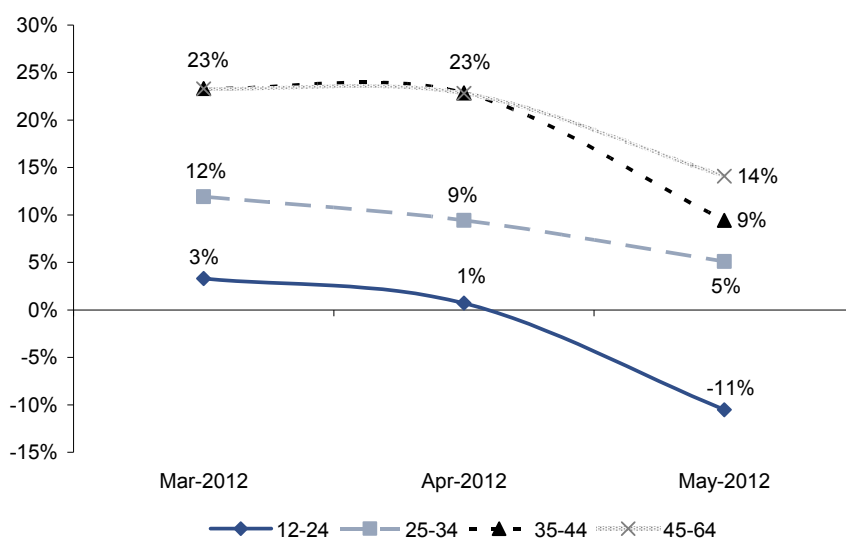
**Figure 31. U.S. Average Minutes Spent Per User & Y/Y Growth**



Source: Citi Investment Research and Analysis

One additional layer to this risk is what appears to be the possibility of softening engagement among Facebook's youngest users. Per comScore data and as detailed below, the 12-24 year-old cohort of Facebook U.S. users actually had an 11% Y/Y decline in Facebook average Usage Minutes in May. Much of this is surely due to the switch to SmartPhone usage, which is not captured in the comScore data. But still... Outside of the SmartPhone Switch, could anything else be driving that Y/Y decline in engagement? We don't yet have teenage children. That starts next year. But is it possible that a certain age we lose our "cool" appeal to our kids? That at a certain age our children no longer want to share every thought and idea with us? That our kids might actually not engage fully with Facebook precisely because we their parents do?... Impossible! Right? Right?!...

Figure 32. Y/Y Growth In Average Minutes Per User, By Age Cohort



Source: Citi Investment Research and Analysis

The point here is simply to highlight this risk, not to assert that it is already concrete.

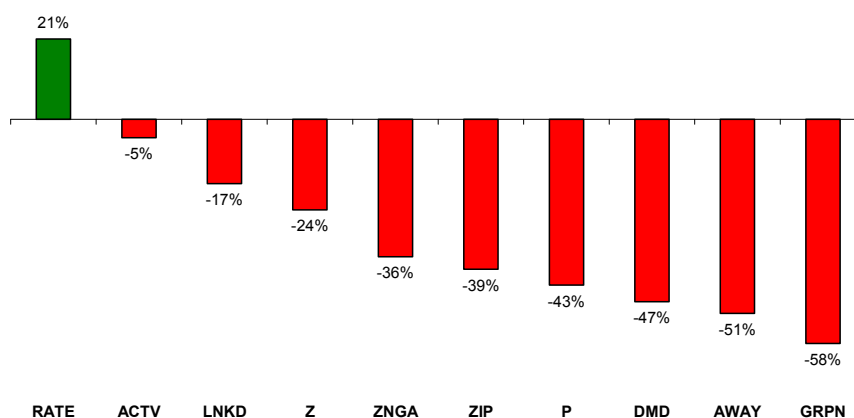
## 8) Lockup Expiration/Stock Supply Risk

Of the 11 Internet IPOs in 2011 and 2012, all but two have broken issue – i.e. traded below their IPO price -- despite what were often significant IPO Day pops. (The two exceptions have been LinkedIn and Zillow.) Relatively robust valuations were one factor. But another factor was the supply pressure that came with lockup expirations for each of these stocks.

Arguably, FB shares have already been impacted by supply pressures. The initial deal size of approximately 337MM shares (\$10.5B at the \$31 initial range filing) already constituted significant supply. But at the raised and expanded offering -- 421MM shares or \$16B at the \$38 IPO price), the offering constituted very significant supply.

To provide a sense of the Lockup Expiration/Stock Supply Risk we have recently seen with Internet IPOs, below we detail the 180 day price change of each of these stocks vs. their 1<sup>st</sup> day closing price. A quick conclusion is that of the ten 2011 Consumer Internet IPOs to reach the 180 day lockup, only Bankrate (RATE) was trading above its 1<sup>st</sup> day closing price. The public market stock-picking takeaway from this track record might well be that none of these stocks should be bought until at least 180 days post their IPO. That's too simple, but it does at least imply a useful warning about the risks involved in buying "hot" IPOs.

Figure 33. Recent IPO Performance From Day 1 Close To 180 Day Lockup



Source: Citi Investment Research and Analysis

To provide the full details on the Lockup Expirations, below we highlight the key details from Facebook's prospectus:

- **On August 15<sup>th</sup>**, 90 days after the IPO, 268MM shares held by stockholders other than Zuckerberg will become available for sale;
- **On October 14<sup>th</sup>**, approximately 247MM shares underlying net-settled Pre-2011 RSUs and stock options will become available for sale;
- **On November 13<sup>th</sup>**, approximately 1.24B shares will become available for sale;
- **On December 13<sup>th</sup>**, 124MM shares held by the selling stockholders other than Mr. Zuckerberg; and options to purchase 49MM shares of Class B common stock held by former employees and the Class B common stock underlying such options will be eligible for sale;
- **On May 17<sup>th</sup>, 2013** 47MM shares held by Mail.ru Group Limited and DST Global Limited will become available for sale.

Figure 34. Facebook Lockup Expiration Float Analysis

(in MM\$)	FD Shares Outstanding	Additional Shares	Float	Float %
Initial Public Offering – May 18, 2012	2,631	633	633	24%
<b>Lockup Expiration</b>				
August 15, 2012	2,500	268	901	36%
October 14, 2012	2,550	247	1,148	45%
November 13, 2012	2,550	1,241	2,389	94%
December 13, 2012	2,550	124	2,513	99%
May 17, 2013	2,600	47	2,560	98%

Source: Citi Investment Research and Analysis

That's a LOT of supply. The simple so-what of the above details is that there is a very significant amount of supply of FB shares that will become available for sale over the next year, and it's very likely that this will create pressure on FB's share price, just as these Lockup Expirations have been negative catalysts for almost every other recent Internet IPO.

Figure 35. FB 5% Shareholders & Directors Table

5% Shareholders	Class B Shares Beneficially Owned Prior to Offering			Sold	Class B Shares Beneficially Owned After Offering		
	Shares	% Ownership	Voting Power		Shares	% Ownership	Voting Power
Mark Zuckerberg	533,802	28%	28%	30,200	503,602	32%	30%
Shares Subject To Voting Proxy	541,994	30%	31%	95,796	430,293	29%	28%
<b>Total</b>	<b>1,075,796</b>	<b>57%</b>	<b>57%</b>	<b>125,996</b>	<b>974,011</b>	<b>60%</b>	<b>58%</b>
Accel Partners	201,378	11%	11%	49,031	7,929	0%	2%
DST Global Limited	94,568	5%	6%	45,663	80,601	5%	5%
Dustin Moskovitz	133,699	8%	8%	0	133,699	9%	9%
<b>Executive Officers &amp; Directors</b>							
Sheryl Sandberg	1,900	0%	0%	0	1,900	0%	0%
David Ebersman	2,400	0%	0%	0	2,400	0%	0%
Mike Schroepfer	2,298	0%	0%	0	2,298	0%	0%
Theodore W. Ullyot	2,025	0%	0%	0	2,025	0%	0%
<b>Principal Stockholders</b>	<b>1,505,441</b>	<b>81%</b>	<b>82%</b>	<b>220,690</b>	<b>1,196,240</b>	<b>74%</b>	<b>74%</b>
<b>Total (All Stockholders)</b>	<b>1,858,569</b>	<b>100%</b>	<b>100%</b>	<b>242,029</b>	<b>1,616,541</b>	<b>100%</b>	<b>100%</b>

Source: Citi Investment Research and Analysis



## Our FB Valuation Framework

Our \$35 Target Price is based on a combination of P/E (40X our 2014 EPS of \$0.85), EV/EBITDA (15X our 2014 EBITDA of \$5.0B), and DCF. These are Premium Multiples, but we view the company's growth rate (30% EPS CAGR thru 2015) and Option Potential as supporting them.

Based on our EV/EBITDA analysis, we arrive at a \$34 per share valuation. Our price target is derived by applying a 15x multiple to our 2014 Adjusted EBITDA estimate of \$5.00B (\$1.79 per share), adjusting for \$13.3B in year-end 2014 cash (\$5.77 per share), to reach a rounded target valuation of approximately \$34. Our target multiple is largely driven from historical and future growth assumptions, but we usually also consider relative sector multiples, and intangibles like management's execution track record.

Using a P/E Analysis, if we apply 40x to our PF 2014 EPS of \$0.85, we get a valuation of \$34 per share. For context, FB currently trades at approximately 64x 2012 PF EPS. For context, we note that comparable platform Internet companies like Google (13x 2012 PF P/E), Linked In (211x), Netflix (76x), and Amazon (92x) have similar growth profiles to FB, yet on average, trade at a significant premium to FB.

Finally, using a DCF valuation methodology, we arrive at a \$35 Target Price. Our 8 year DCF uses a terminal growth rate of 5% and a WACC of 11%. The NPV of Free Cash Flow is approximately \$75B. Adjusting for current (post IPO) cash of \$11B, we arrive at a Market Cap of \$86B. With 2.5B shares outstanding, this equates to \$35 per share.

Taking the average of these three methodologies, we arrive at our Target Price of \$35.

We believe the closest comps to Facebook include Google, Amazon and Linked-In. Google's 13x 2012 PF P/E multiple underscores the relative attractiveness of GOOG's valuation to FB. Linked-In trades a much high premium, but the company has a solid track record of 100%+ growth. And finally, AMZN trades more in-line with FB, but has proven itself as a platform for commerce, but we believe multiples at AMZN have compressed as the company's gone into a heavy investment mode.

Figure 36. FB Comps Table

	Price	Mkt Cap (\$MM)	Non-GAAP P/E			EV/EBITDA			P/S			'12-'14	
			2012	2013	2014	2012	2013	2014	2012	2013	2014	Revenue CAGR	EBITDA CAGR
GOOG	\$560.70	\$185,031	13x	11x	10x	7.3x	6.3x	5.4x	5.4x	4.6x	4.0x	15%	16%
GRPN	\$9.89	\$6,567	69x	11x	8x	14.9x	5.7x	4.0x	2.9x	2.3x	1.8x	26%	94%
LNKD	\$103.05	\$11,469	177x	95x	67x	65.4x	38.2x	25.9x	13.3x	9.5x	7.6x	33%	59%
AMZN	\$220.01	\$101,205	92x	48x	29x	25.1x	17.8x	12.7x	1.6x	1.2x	1.0x	28%	41%
PCLN	\$651.65	\$33,625	20x	15x	12x	15.2x	11.1x	8.3x	6.2x	4.9x	4.0x	24%	35%
ZNGA	\$6.07	\$5,251	22x	16x	12x	10.9x	7.5x	5.9x	3.6x	3.0x	2.6x	18%	36%
YELP	\$21.95	\$1,493	--	191x	56x	--	88.4x	32.3x	12.2x	8.5x	6.0x	42%	--
Z	\$33.00	\$1,066	137x	39x	22x	47.2x	22.2x	13.6x	10.0x	6.8x	4.9x	44%	86%
TRIP	\$44.07	\$5,884	32x	27x	23x	18.9x	15.6x	13.8x	7.9x	6.6x	5.8x	16%	17%
AWAY	\$20.50	\$1,804	43x	31x	25x	20.3x	15.5x	12.3x	6.5x	5.3x	4.5x	20%	28%
<b>FB</b>	<b>\$32.06</b>	<b>\$87,844</b>	<b>64x</b>	<b>50x</b>	<b>38x</b>	<b>28.9x</b>	<b>20.2x</b>	<b>14.7x</b>	<b>18.4x</b>	<b>13.7x</b>	<b>10.7x</b>	<b>31%</b>	<b>40%</b>
Mean		\$43,213	76x	53x	27x	26.6x	24.6x	13.5x	6.9x	5.1x	4.0x	29%	52%
Median		\$9,018	69x	28x	17x	15.2x	14.4x	10.5x	5.8x	4.8x	4.0x	27%	41%
Min		\$1,066	13x	11x	8x	7.3x	5.7x	4.0x	1.6x	1.2x	1.0x	15%	16%
Max		\$185,031	177x	191x	67x	65.4x	88.4x	32.3x	13.3x	9.5x	7.6x	44%	94%

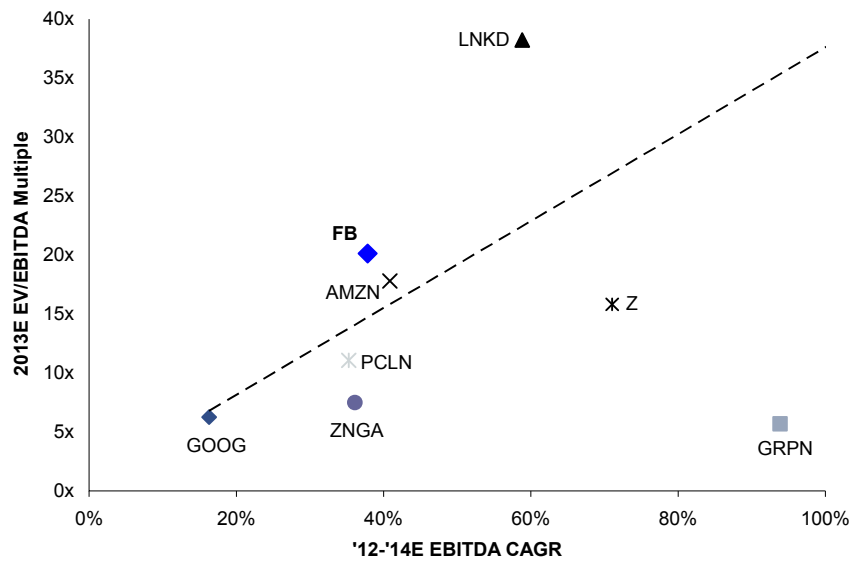
Source: Citi Investment Research and Analysis; Prices as of 6/25/12

(AMZN.O; US\$225.61; 1); (GOOG.O; US\$564.68; 1); (GRPN.O; US\$10.25; 1H); (AWAY.O; US\$20.48; 1); (LNKD.N; US\$106.42; 1); (PCLN.O; US\$656.36; 1); (ZNGA.O; US\$5.77; 1H); (YELP.N; US\$22.04; 2H); (Z.O; US\$33.22; 1H)

In the chart below, we look at FB's key comps, and how they trade relative to each other on a 2013 EV/EBITDA basis. The quick so-what here is that Facebook's valuation doesn't seem unreasonably high, nor does it seem ridiculously low. It does trade at a premium to other 'Net companies. LinkedIn trades well above the pack given its strong growth and proven track-record for showing accelerating business and fundamental trends. Google trades at a much lower valuation given overhangs on the stock like entering the hardware biz, regulatory concerns, etc.

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Figure 37. Comparable 2013 EV/EBITDA Multiples



Source: Citi Investment Research and Analysis; As of 6/18/12

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## How Facebook Makes Money

Facebook is free to users and generates revenue through Advertising on its Website and from facilitating payments on its platforms for games and virtual goods. Facebook faces a significant Revenue opportunity in monetizing its Mobile properties, including its popular Mobile apps for Apple's iOS and Google's Android platforms. Currently, Facebook is monetizing its users at roughly \$4 per year through advertisements and payments. In the March quarter, Advertising accounted for 82% of total Revenue, although the Payments segment is growing at a robust 99% Y/Y rate.

### Advertising

■ **Advertising Revenue** – Facebook's Advertising Revenues are generated by displaying ad products on its Web and Mobile properties. These products are sold either directly through Facebook or through an advertising agency and are available on a per-impression or a per-click basis. The company has recently begun selling "Sponsored Story" impressions, which populate in users' News Feeds. Facebook has also recently begun to monetize its Mobile sites.

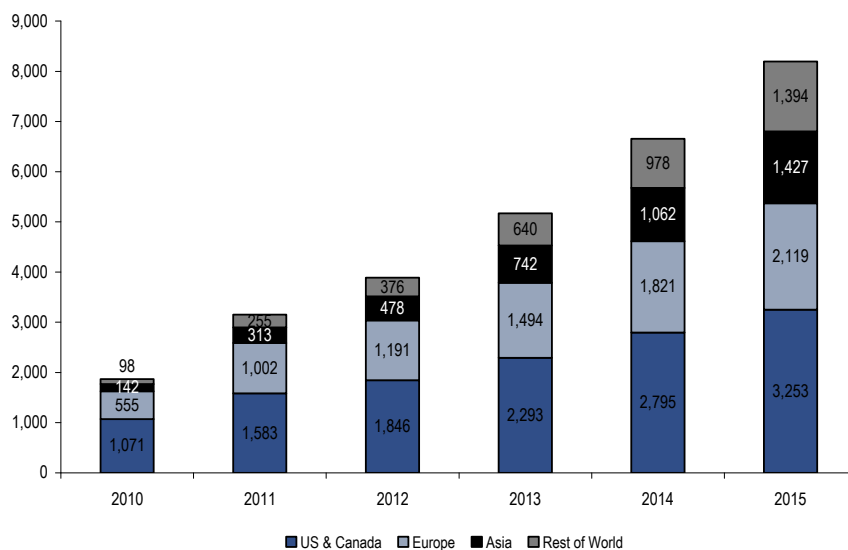
Our specific FB ad estimates are detailed below, including our overall FB Advertising Revenue projections, our Geographic Revenue Breakdown, and our Detailed Regional Advertising Revenue Breakdown.

**Figure 38. Advertising Revenue Breakdown**

In MM\$	2010	2011	2012E	2013E	2014E
<b>Total Revenue</b>	<b>1,972</b>	<b>3,709</b>	<b>4,784</b>	<b>6,389</b>	<b>8,236</b>
<b>Advertising Revenue</b>	<b>\$1,866</b>	<b>\$3,153</b>	<b>\$3,892</b>	<b>\$5,167</b>	<b>\$6,655</b>
YY Change	--	69%	23%	33%	29%
% of Total Revenue	95%	85%	81%	81%	81%

Source: Citi Investment Research and Analysis

**Figure 39. FB Advertising Geographic Revenue Breakdown**



Source: Citi Investment Research and Analysis

Figure 40. FB Advertising Geographic Revenue Breakdown

	2010	2011	2012E	2013E	2014E	2015E
<b>Global Ad Revenue</b>	<b>\$1,866</b>	<b>\$3,153</b>	<b>\$3,892</b>	<b>\$5,167</b>	<b>\$6,655</b>	<b>\$8,192</b>
YY Change	--	69%	23%	33%	29%	23%
<b>U.S. &amp; Canada Ad Revenue</b>	<b>\$1,071</b>	<b>\$1,583</b>	<b>\$1,846</b>	<b>\$2,293</b>	<b>\$2,795</b>	<b>\$3,253</b>
YY Change	--	48%	17%	24%	22%	16%
<b>Monthly Active Users</b>	141	172	196	211	224	231
YY Change	26%	22%	14%	8%	6%	3%
<b>Monthly ARPU</b>	\$0.63	\$0.77	\$0.79	\$0.90	\$1.04	\$1.18
YY Change	--	22%	2%	15%	15%	13%
<b>Europe Ad Revenue</b>	<b>\$555</b>	<b>\$1,002</b>	<b>\$1,191</b>	<b>\$1,494</b>	<b>\$1,821</b>	<b>\$2,119</b>
YY Change	--	81%	19%	25%	22%	16%
<b>Monthly Active Users</b>	160	216	250	273	289	298
YY Change	37%	35%	16%	9%	6%	3%
<b>Monthly ARPU</b>	\$0.29	\$0.39	\$0.40	\$0.46	\$0.52	\$0.59
YY Change	--	34%	3%	15%	15%	13%
<b>Asia Ad Revenue</b>	<b>\$142</b>	<b>\$313</b>	<b>\$478</b>	<b>\$742</b>	<b>\$1,062</b>	<b>\$1,427</b>
YY Change	--	120%	53%	55%	43%	34%
<b>Monthly Active Users</b>	107	185	257	319	370	414
YY Change	73%	72%	39%	24%	16%	12%
<b>Monthly ARPU</b>	\$0.11	\$0.14	\$0.16	\$0.19	\$0.24	\$0.29
YY Change	--	28%	10%	25%	23%	20%
<b>Rest Of World Ad Revenue</b>	<b>\$98</b>	<b>\$255</b>	<b>\$376</b>	<b>\$640</b>	<b>\$978</b>	<b>\$1,394</b>
YY Change	--	160%	47%	70%	53%	43%
<b>Monthly Active Users</b>	110	194	268	338	397	453
YY Change	59%	76%	38%	26%	18%	14%
<b>Monthly ARPU</b>	\$0.07	\$0.11	\$0.12	\$0.16	\$0.21	\$0.26
YY Change	--	48%	7%	35%	30%	25%

Source: Citi Investment Research and Analysis

## Payments & Other

- **Payments & Other Revenue** – The company also earns money from allowing developers to accept payments through its infrastructure. FB keeps 30% of each transaction completed on its payments platform. To date, the vast majority of these Revenues have been generated through online games, with Zynga representing the bulk of these transactions.

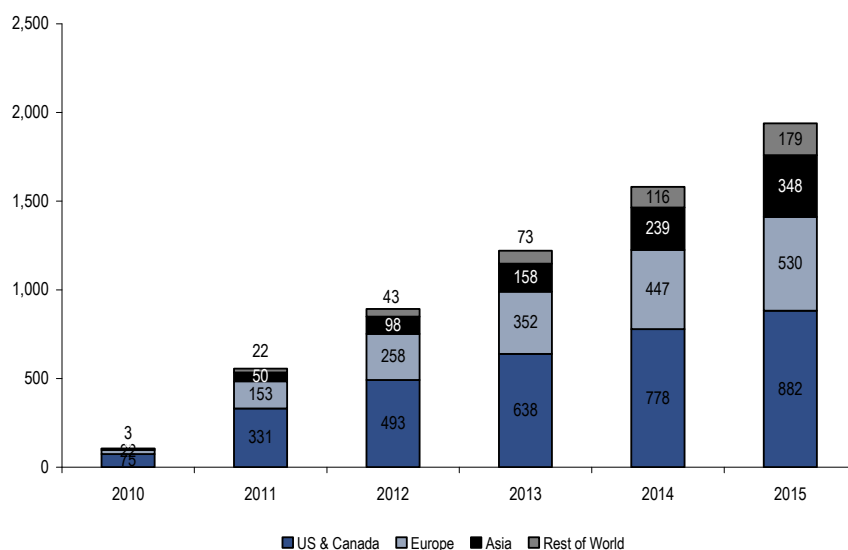
Our specific FB Payments estimates are detailed below, including our overall FB Payments Revenue projections, our Geographic Revenue Breakdown, and our Detailed Regional Payments Revenue Breakdown.

Figure 41. Payments & Other Revenue Breakdown

In MM\$	2010	2011	2012E	2013E	2014E
<b>Total Revenue</b>	<b>1,972</b>	<b>3,709</b>	<b>4,784</b>	<b>6,389</b>	<b>8,236</b>
<b>Payments &amp; Other Revenue</b>	<b>\$106</b>	<b>\$556</b>	<b>\$892</b>	<b>\$1,222</b>	<b>\$1,581</b>
YY Change	--	425%	60%	37%	29%
% of Total Revenue	5%	15%	19%	19%	19%

Source: Citi Investment Research and Analysis

Figure 42. FB Payments & Other Geographic Revenue Breakdown



Source: Citi Investment Research and Analysis

Figure 43. FB Payments & Other Geographic Revenue Breakdown

	2010	2011	2012E	2013E	2014E	2015E
<b>Global Payments Revenue</b>	<b>\$106</b>	<b>\$556</b>	<b>\$892</b>	<b>\$1,222</b>	<b>\$1,581</b>	<b>\$1,939</b>
YY Change	--	425%	60%	37%	29%	23%
<b>US &amp; Canada Payments Rev</b>	<b>\$75</b>	<b>\$331</b>	<b>\$493</b>	<b>\$638</b>	<b>\$778</b>	<b>\$882</b>
YY Change	--	341%	49%	30%	22%	13%
<b>Monthly Active Users</b>	<b>141</b>	<b>172</b>	<b>196</b>	<b>211</b>	<b>224</b>	<b>231</b>
YY Change	26%	22%	14%	8%	6%	3%
<b>Monthly ARPU</b>	<b>\$0.04</b>	<b>\$0.16</b>	<b>\$0.21</b>	<b>\$0.25</b>	<b>\$0.29</b>	<b>\$0.32</b>
YY Change	--	263%	31%	20%	15%	10%
<b>Europe Payments Rev</b>	<b>\$22</b>	<b>\$153</b>	<b>\$258</b>	<b>\$352</b>	<b>\$447</b>	<b>\$530</b>
YY Change	--	595%	69%	36%	27%	18%
<b>Monthly Active Users</b>	<b>160</b>	<b>216</b>	<b>250</b>	<b>273</b>	<b>289</b>	<b>298</b>
YY Change	37%	35%	16%	9%	6%	3%
<b>Monthly ARPU</b>	<b>\$0.01</b>	<b>\$0.06</b>	<b>\$0.09</b>	<b>\$0.11</b>	<b>\$0.13</b>	<b>\$0.15</b>
YY Change	--	415%	45%	25%	20%	15%
<b>Asia Payments Rev</b>	<b>\$6</b>	<b>\$50</b>	<b>\$98</b>	<b>\$158</b>	<b>\$239</b>	<b>\$348</b>
YY Change	--	733%	97%	61%	51%	46%
<b>Monthly Active Users</b>	<b>107</b>	<b>185</b>	<b>257</b>	<b>319</b>	<b>370</b>	<b>414</b>
YY Change	73%	72%	39%	24%	16%	12%
<b>Monthly ARPU</b>	<b>\$0.00</b>	<b>\$0.02</b>	<b>\$0.03</b>	<b>\$0.04</b>	<b>\$0.05</b>	<b>\$0.07</b>
YY Change	--	383%	41%	30%	30%	30%
<b>Rest of World Payments Rev</b>	<b>\$3</b>	<b>\$22</b>	<b>\$43</b>	<b>\$73</b>	<b>\$116</b>	<b>\$179</b>
YY Change	--	633%	96%	70%	59%	54%
<b>Monthly Active Users</b>	<b>110</b>	<b>194</b>	<b>268</b>	<b>338</b>	<b>397</b>	<b>453</b>
YY Change	59%	76%	38%	26%	18%	14%
<b>Monthly ARPU</b>	<b>\$0.00</b>	<b>\$0.01</b>	<b>\$0.01</b>	<b>\$0.02</b>	<b>\$0.02</b>	<b>\$0.03</b>
YY Change	--	316%	42%	35%	35%	35%

Source: Citi Investment Research and Analysis

## Facebook's Key Advertising Products

Facebook has a number of unique ad products, many of which are social by design. We think the more “social” Facebook can make these ads, the more that users will find them engaging. Based on the company's own research, ads that are social in context (e.g. recommended by a friend) can generate 50% higher ad recall. Furthermore, FB claims that the targeting ability on the Facebook platform allows marketers to reach desired audiences with 95% accuracy vs. 72% for the Online industry as a whole. For narrow targeting, marketers can reach their target audiences with 90% accuracy vs. 30% for the industry.

While these datapoints speak well to the potential of what marketers can do, we think Facebook may have to introduce more ad products to help advertisers market effectively to the large number of users on Facebook. Below, we describe some of Facebook's current key existing ad offerings.

### 1. Facebook Brand Pages

In February 2012, FB launched Brand Pages where marketers can create a free page on Facebook (brand page) that looks like an individual's profile, but is geared more towards a specific product, company or brand. Facebook also provides a vanity URL at [www.facebook.com/username](http://www.facebook.com/username) so that marketers can promote the site to constituents.

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Figure 44. Facebook Brand Page



Source: Citi Investment Research and Analysis; facebook.com

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### 2. Like Ad

Facebook offers the “Like Ad” where Facebook gets paid when a user clicks the “like” button. Facebook will show the number of friends that have liked the same ad. Furthermore, by “liking” an ad, Facebook links the user to that Brand Page.

Figure 45. Facebook “Like Ad”



Source: Citi Investment Research and Analysis; facebook.com

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### 3. Poll Ad

Marketers can use these ads to engage users by asking a question to get a pulse for what consumers are thinking about the brand, or to simply get consumers to engage in a brand. Each time a user answers a poll, Facebook gets paid.

Figure 46. FB Poll Ad



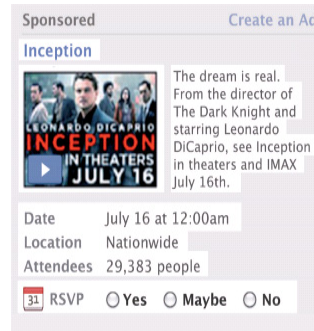
Source: Citi Investment Research and Analysis; facebook.com

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### 4. Event Ad

Marketers can target their fans by inviting them to join an event, or inform them about events taking place. Each time a user indicates a “yes”, Facebook gets paid.

Figure 47. FB Event Ad

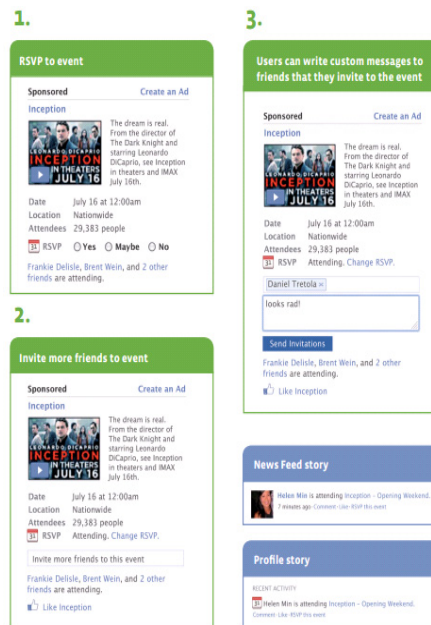


Source: Citi Investment Research and Analysis; facebook.com

### 5. Premium Event Ad

These are Event Ads with greater social features that make the ads more engaging. These ads indicate which friends of the user have indicated that they are going, allows users to invite more friends to that event directly from the ad unit, and lastly, allows users to write a custom message to the person they are inviting.

Figure 48. FB Premium Event Ad



Source: Citi Investment Research and Analysis; facebook.com

### 6. Free Sample Ads

These ads allow marketers to promote free samples of a product. Users have to pick a sample, enter their address, and they will receive a free sample of a product. Similar to CPA ads, FB gets paid when someone clicks yes to the free sample and enters their address. This type of ad unit could also be a helpful when a marketer wants to get feedback on a new product.



## 7. Video Ads

Facebook also offers video ad units. When a user clicks on the video, the ad pops up in the form of a trailer. Users can then “like” the video or share those videos with their friends. Each time a user plays the video, Facebook generates revenue.

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Figure 49. FB Video Ads



Source: Citi Investment Research and Analysis; facebook.com

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## 8. Sponsored Stories

This is one of FB's newer ad formats, which is similar to Twitter's Sponsored Tweet product. Basically, if a user likes a brand or product, the marketer can take that “like” or comment on the brand and re-distribute it to that person's friends. This way, people might be more inclined to engage with the ad.

In the exhibit below, we showcase a Mobile Sponsored Story Ad. We have spent a lot of time pondering this ad. It was actually the first Facebook Sponsored Story Ad we got on our Smartphone. It's actually a positive example in our book. It's from a friend. And the ad screens well against our travel interests, our demographic, and our location. This is just one example, however. The second Sponsored Story ad we got was for a Ski-Cam, which is not really our thing. When others hit the slopes, we typically hit the gyms... But one out of two ain't bad. Tho it ain't great either. And it seems to take us back to that old adage about advertising – half of all ad spend is wasted...it's just hard to tell which half...



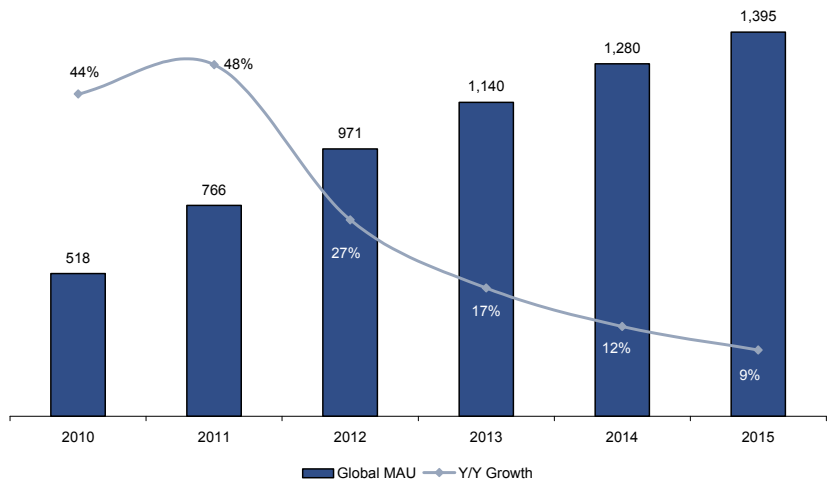
## Key Model Inputs and Drivers

In this section, we describe the key revenue drivers for our FB model, as well as the key cost drivers and metrics.

- **MAU** - A Monthly Active User is a registered Facebook user who has logged in and visited Facebook, or took an action to share content or activity with his or her Facebook friends or connections via a third-party Website that is integrated with Facebook, in the last 30 days. As of March 31, 2012, FB had 901 million MAUs, an increase of 33% from March 31, 2011.

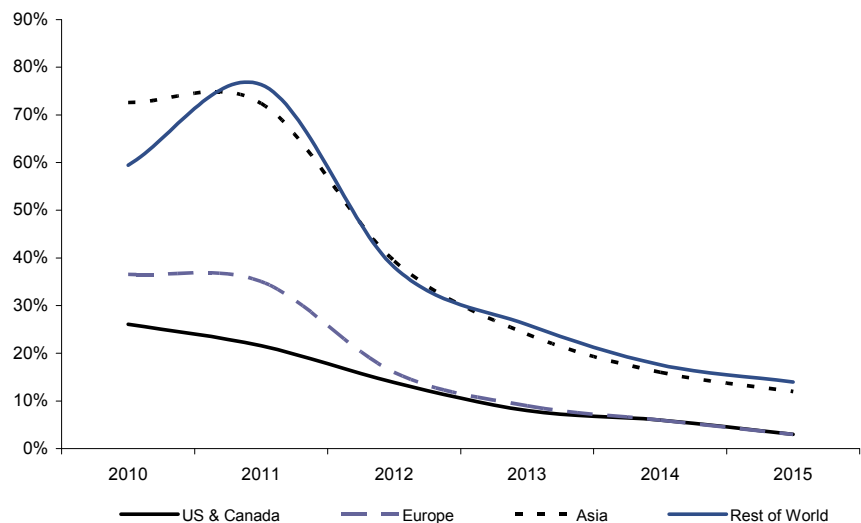
Below we detail our global and regional FB MAU projections.

Figure 52. FB Worldwide MAU Growth Projections (in millions)



Source: Citi Investment Research and Analysis

Figure 53. FB Regional MAU Growth Projections

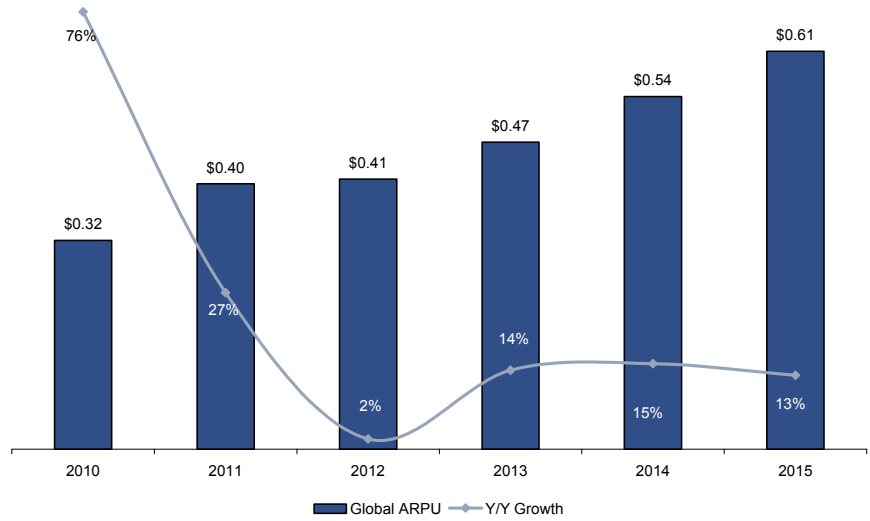


Source: Citi Investment Research and Analysis

■ **ARPU** - Average Revenue Per User (ARPU) is FB's total revenue in a given geography during a given period, divided by the average of the number of MAUs in the geography at the beginning and end of the period.

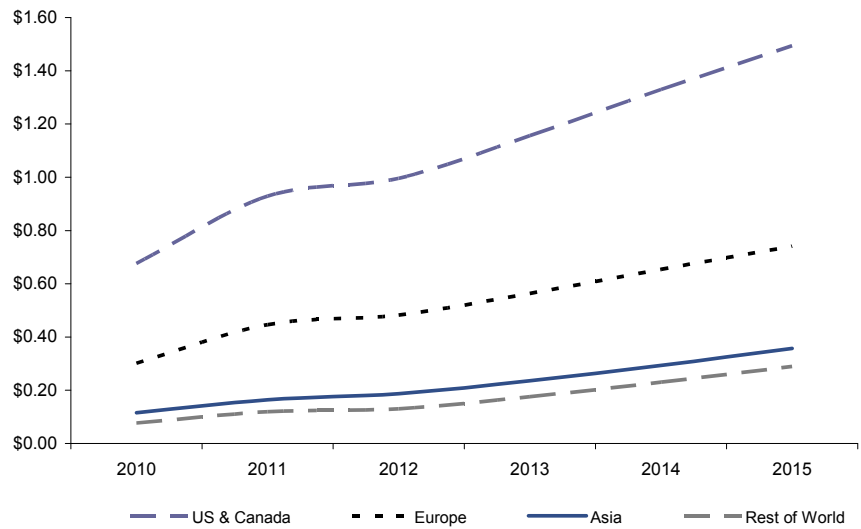
Below we detail our global and regional FB MAU projections.

**Figure 54. FB Worldwide ARPU Growth Projections**



Source: Citi Investment Research and Analysis

**Figure 55. FB Regional ARPU Growth Projections**



Source: Citi Investment Research and Analysis

## Cost Inputs

**Cost of Revenue** – This expense reflects the costs of running Facebook’s Website and Mobile applications, as well as the associated salaries, including stock-based compensation, benefits and allocated overhead. Going forward, we anticipate FB’s Cost of Revenue to remain relatively stable as a % of Revenue, although long-term FB should be able to generate some leverage against this expense.

**Figure 56. Gross Margin Analysis**

In MMs	2010	2011	2012E	2013E	2014E	2015E
Advertising Revenue	1,866	3,153	3,892	5,167	6,655	8,192
Payments & Other Revenue	106	556	892	1,222	1,581	1,939
<b>Total Revenue</b>	<b>1,972</b>	<b>3,709</b>	<b>4,784</b>	<b>6,389</b>	<b>8,236</b>	<b>10,131</b>
Cost Of Revenue	492	851	1,242	1,661	2,141	2,634
Gross Profit	1,480	2,858	3,542	4,728	6,095	7,497
<b>Gross Margin</b>	<b>75%</b>	<b>77%</b>	<b>74%</b>	<b>74%</b>	<b>74%</b>	<b>74%</b>

Source: Citi Investment Research and Analysis

## Operating Costs

- **Marketing & Sales** – Sales costs are a proxy for selling expenses, primarily for the sales, marketing, and business development roles. This expense includes compensation, benefits, commissions, overhead, and stock-based compensation expense. Post a material expense expansion in 2012, we would expect Marketing & Sales to remain roughly consistent as a % of FB revenue.

**Figure 57. Marketing & Sales Expense Analysis**

In MMs	2010	2011	2012E	2013E	2014E	2015E
<b>Total Revenue</b>	<b>1,972</b>	<b>3,709</b>	<b>4,784</b>	<b>6,389</b>	<b>8,236</b>	<b>10,131</b>
Marketing & Sales	182	384	687	895	1,071	1,216
As a % of Revenue	9%	10%	14%	14%	13%	12%

Source: Citi Investment Research and Analysis

- **Research & Development** – These costs pertain to personnel and related expenses for product development and technology staff, including site development, network systems, telecommunications infrastructure, programming, and new product design. Again, post a material expense expansion in 2012, we would expect Research & Development to remain roughly consistent as a % of FB revenue.

**Figure 58. Research & Development Expense Analysis**

In MMs	2010	2011	2012E	2013E	2014E	2015E
<b>Total Revenue</b>	<b>1,972</b>	<b>3,709</b>	<b>4,784</b>	<b>6,389</b>	<b>8,236</b>	<b>10,131</b>
Research & Development	135	274	489	639	824	912
As a % of Revenue	7%	7%	10%	10%	10%	9%

Source: Citi Investment Research and Analysis

- **G&A** – General and administrative expenses represent compensation and benefits for executive, finance, and administrative personnel as well as professional fees, stock-based comp, and other general corporate expenses. We are projecting G&A to stay relatively constant as a % of Revenue for the next few years, but long-term this should be an area of leverage in the FB model.

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**Figure 59. G&A Expense Analysis**

In MMs	2010	2011	2012E	2013E	2014E	2015E
<b>Total Revenue</b>	<b>1,972</b>	<b>3,709</b>	<b>4,784</b>	<b>6,389</b>	<b>8,236</b>	<b>10,131</b>
G&A	112	228	326	447	494	608
As a % of Revenue	6%	6%	7%	7%	6%	6%

Source: Citi Investment Research and Analysis

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## Management Team

Figure 60. FB Management Team

Name	Title	Years at FB	Background
Mark Zuckerberg	Chief Executive Officer & Chairman	8	Founder, Attended Harvard University
Sheryl Sandberg	Chief Operating Officer	4	VP Global Sales & Ops, Google; US Treasury Dept.; McKinsey & Co.
David Ebersman	Chief Financial Officer	3	Former CFO Genentech; Research Analyst, Oppenheimer
David Fischer	Vice President, Marketing & Partnerships	2	VP Global Sales & Ops, Google; US Treasury Dept
Mike Schroepfer	Vice President, Engineering	4	VP Engineering, Mozilla; Board Of Directors, Ancestry.com
Theodore Ullyot	Vice President, General Counsel	4	General Counsel, ESL Investments; Associate General Counsel, AOL Time Warner

Source: Company website; Citi Investment Research and Analysis

**Mark Zuckerberg** is founder and has served as CEO and as a member of board of directors since July 2004. Mr. Zuckerberg has served as Chairman of board of directors since January 2012. Mr. Zuckerberg attended Harvard University where he studied computer science. We believe that Mr. Zuckerberg should serve as a member of board of directors due to the perspective and experience he brings as founder, Chairman, and CEO, and as largest and controlling stockholder.

**Sheryl Sandberg** has served as Chief Operating Officer since March 2008. From November 2001 to March 2008, Ms. Sandberg served in various positions at Google, Inc., most recently as Vice President, Global Online Sales & Operations. Ms. Sandberg also is a former Chief of Staff of the U.S. Treasury Department and previously served as a consultant with McKinsey & Company, a management consulting company, and as an economist with The World Bank. In addition to serving as Chief Operating Officer, Ms. Sandberg has been a member of the board of directors of the Walt Disney Company since December 2009. Ms. Sandberg holds an A.B. in economics from Harvard University and an M.B.A. from Harvard Business School.

**David Ebersman** has served as Chief Financial Officer since September 2009. Prior to joining, Mr. Ebersman served in various positions at Genentech, Inc., a biotechnology company, including as its Chief Financial Officer from March 2005 and as an Executive Vice President from January 2006 until April 2009, following Genentech's acquisition by F. Hoffmann-La Roche Ltd. in March 2009. Prior to joining Genentech, Mr. Ebersman was a research analyst at Oppenheimer & Company, Inc., an investment company. In addition to serving as Chief Financial Officer, Mr. Ebersman has been a member of the board of directors of Ironwood Pharmaceuticals, Inc. since July 2009. Mr. Ebersman holds an A.B. in economics and international relations from Brown University.

**David Fischer** joined in April 2010 and serves as Vice President, Marketing and Business Partnerships. From July 2002 to March 2010, Mr. Fischer served in various positions at Google, including most recently as its Vice President, Global Online Sales & Operations. Prior to joining Google, Mr. Fischer served as Deputy Chief of Staff of the U.S. Treasury Department and was an associate editor at the U.S. News World Report, L.P., a news magazine company. Mr. Fischer holds a B.A. in government from Cornell University and an M.B.A. from the Stanford University Graduate School of Business.

**Mike Schroepfer** has served as Vice President of Engineering since September 2008. From December 2005 to August 2008, Mr. Schroepfer served as Vice President of Engineering at Mozilla Corporation, an Internet company. Prior to Mozilla, Mr. Schroepfer served in various positions at Sun Microsystems, Inc., an information technology company, including as Chief Technology Officer of its data center automation division. He also co-founded CenterRun, Inc., a developer of application provisioning software, which was acquired by Sun Microsystems. In addition to serving as Vice President of Engineering, Mr. Schroepfer has been a member of the board of directors of Ancestry.com Inc. since January 2011. Mr. Schroepfer holds a B.S. and an M.S. in computer science from Stanford University.

**Theodore Ulyot** has served as Vice President, General Counsel, and Secretary since October 2008. From May 2008 to October 2008, Mr. Ulyot was a partner at Kirkland & Ellis LLP, a law firm. From October 2005 to April 2008, Mr. Ulyot served as Executive Vice President and General Counsel of ESL Investments, Inc., a private investment firm. Prior to joining ESL Investments, Mr. Ulyot served in the federal executive branch under President George W. Bush, including as Chief of Staff at the U.S. Justice Department and as a Deputy Assistant to the President. Earlier in his career, Mr. Ulyot was an associate general counsel at AOL Time Warner, Inc. and served as a law clerk for U.S. Supreme Court Justice Antonin Scalia and for Judge Michael Luttig of the U.S. Court of Appeals for the Fourth Circuit. Mr. Ulyot holds an A.B. in History from Harvard University and a J.D. from the University Of Chicago.



## FB Model

In this section, we include our detailed historical and projected financial model for FB. This includes our historical and projected income statement, revenue drivers, key FB metrics, as well as our Summary Balance Sheet and Cash Flow statement.

Figure 61. FB Income Statement

	2010				2011				2012E				2009	2010	2011	2012E	2013E	2014E	2015E
	3/10A	6/10A	9/10A	12/10A	3/11A	6/11A	9/11A	12/11A	3/12A	6/12E	9/12E	12/12E							
<b>Total Revenue</b>	\$345	\$432	\$467	\$731	\$731	\$895	\$954	\$1,131	\$1,058	\$1,118	\$1,173	\$1,435	\$777	\$1,972	\$3,709	\$4,784	\$6,389	\$8,236	\$10,131
<b>Cost Of Revenue</b>	100	111	131	150	167	207	233	244	273	291	305	373	223	492	851	1,242	1,661	2,141	2,634
<b>Gross Profit</b>	245	321	336	581	564	688	721	887	785	827	868	1,062	554	1,480	2,858	3,542	4,728	6,095	7,497
<b>Operating Expenses</b>	83	102	120	144	176	281	307	339	404	1,478	538	638	292	449	1,103	3,058	2,781	3,420	4,004
Marketing & Sales	36	44	44	58	68	92	108	116	143	179	164	201	115	182	384	687	895	1,071	1,216
Research & Development	23	30	39	43	53	64	75	82	93	123	129	144	87	135	274	489	639	824	912
G&A	20	24	31	37	48	61	54	65	65	78	82	100	90	112	228	326	447	494	608
Stock Based Compensation	4	4	6	6	7	64	70	76	103	133	163	193	0	20	217	592	800	1,031	1,268
Other	0	0	0	0	0	0	0	0	0	965	0	0	0	0	0	965	0	0	0
<b>GAAP Operating Income</b>	162	219	216	437	388	407	414	548	381	-651	330	424	262	1,031	1,755	484	1,947	2,675	3,493
<b>Non-GAAP Operating Income</b>	166	223	222	443	395	471	484	624	484	447	493	617	262	1,051	1,972	2,041	2,747	3,706	4,762
Depreciation & Amortization					51				110	120	130	140	78	139	323	500	900	1,300	1,700
<b>EBITDA</b>	166	223	222	443	446	471	484	624	594	567	623	757	340	1,190	2,295	2,541	3,647	5,006	6,462
<b>Other Income/(Expense)</b>	(6)	(6)	(6)	(6)	(4)	(14)	(29)	(13)	1	10	15	17	(8)	(24)	(60)	43	80	90	100
<b>GAAP Pre-Tax Income</b>	156	213	210	431	384	393	385	535	382	-641	345	441	254	1,007	1,695	527	2,027	2,765	3,593
<b>GAAP Taxes</b>	61	84	79	180	151	153	158	233	177	-295	159	203	25	404	695	244	811	1,106	1,437
<b>Net Income</b>	95	129	131	251	233	240	227	302	205	-346	186	238	229	603	1,000	283	1,216	1,659	2,156
<b>Non-GAAP Pre-Tax Income</b>	160	217	216	437	391	457	455	611	485	457	508	634	254	1,027	1,912	2,084	2,827	3,796	4,862
<b>Non-GAAP Taxes</b>	61	82	82	166	149	174	173	232	194	183	203	254	25	391	727	834	1,103	1,405	1,702
<b>Non-GAAP Net Income</b>	99	135	134	271	\$242	\$283	\$282	\$379	\$291	\$274	\$305	\$380	\$229	\$636	\$1,185	\$1,250	\$1,725	\$2,392	\$3,160
<b>GAAP EPS</b>	\$0.04	\$0.06	\$0.06	\$0.11	\$0.10	\$0.10	\$0.10	\$0.13	\$0.09	(\$0.14)	\$0.07	\$0.09	\$0.10	\$0.26	\$0.43	\$0.11	\$0.45	\$0.59	\$0.74
<b>Non-GAAP EPS</b>	\$0.04	\$0.06	\$0.06	\$0.12	\$0.10	\$0.12	\$0.12	\$0.16	\$0.12	\$0.11	\$0.12	\$0.15	\$0.10	\$0.27	\$0.51	\$0.50	\$0.64	\$0.85	\$1.09
<b>Period Ending Shares</b>	2,332	2,332	2,332	2,332	2,332	2,332	2,332	2,332	2,361	2,500	2,550	2,600	2,332	2,332	2,332	2,600	2,700	2,800	2,900
<b>Diluted Shares</b>	2,332	2,332	2,332	2,332	2,332	2,332	2,332	2,332	2,361	2,500	2,550	2,600	2,332	2,332	2,332	2,503	2,700	2,800	2,900
<b>Growth Rate</b>																			
Revenue (Y/Y)	--	--	--	--	112%	107%	104%	55%	45%	25%	23%	27%	--	154%	88%	29%	34%	29%	23%
Revenue (Q/Q)	--	25%	8%	57%	0%	22%	7%	19%	-6%	6%	5%	22%	--	--	--	--	--	--	--
Opex (Y/Y)	--	--	--	--	112%	175%	156%	135%	130%	426%	75%	88%	--	54%	146%	177%	-9%	23%	17%
Non-GAAP Operating Income (Y/Y)	--	--	--	--	138%	111%	118%	41%	23%	-5%	2%	-1%	--	301%	88%	3%	35%	35%	28%
EBITDA (Y/Y)	--	--	--	--	--	--	--	--	--	--	--	--	--	250%	93%	11%	44%	37%	29%
GAAP EPS (Y/Y)	--	--	--	--	145%	86%	73%	20%	-13%	-234%	-25%	-29%	--	163%	66%	-74%	298%	32%	25%
Non-GAAP EPS (Y/Y)	--	--	--	--	144%	111%	111%	40%	19%	-10%	-1%	-10%	--	178%	86%	-2%	28%	34%	28%
<b>Margin Analysis</b>																			
Gross Margin	71%	74%	72%	79%	77%	77%	76%	78%	74%	74%	74%	74%	71%	75%	77%	74%	74%	74%	74%
GAAP Operating Margin	47%	51%	46%	60%	53%	45%	43%	48%	36%	-58%	28%	30%	34%	52%	47%	10%	30%	32%	34%
Non-GAAP Operating Margin	48%	52%	48%	61%	54%	53%	51%	55%	46%	40%	42%	43%	34%	53%	53%	43%	43%	45%	47%
EBITDA Margin	--	--	--	--	--	--	--	--	56%	51%	53%	53%	44%	60%	62%	53%	57%	61%	64%
<b>Expenses as Pct. of Revenue</b>																			
Marketing & Sales	10%	10%	9%	8%	9%	10%	11%	10%	14%	16%	14%	14%	15%	9%	10%	14%	14%	13%	12%
Research & Development	7%	7%	8%	6%	7%	7%	8%	7%	9%	11%	11%	10%	11%	7%	7%	10%	10%	10%	9%
G&A	6%	6%	7%	5%	7%	7%	6%	6%	6%	7%	7%	7%	12%	6%	6%	7%	7%	6%	6%
Share-Based Compensation	1%	1%	1%	1%	1%	7%	7%	7%	10%	12%	14%	13%	0%	1%	6%	12%	13%	13%	13%
GAAP Tax Rate	39%	39%	38%	42%	39%	39%	41%	44%	46%	46%	46%	46%	10%	40%	41%	46%	40%	40%	40%
Non-GAAP Tax Rate	38%	38%	38%	38%	38%	38%	38%	38%	40%	40%	40%	40%	10%	38%	38%	40%	39%	37%	35%

Source: Citi Investment Research and Analysis

Figure 62. FB Key Metrics

	2010				2011				2012E				2009	2010	2011	2012E	2013E	2014E	2015E
	3/10A	6/10A	9/10A	12/10A	3/11A	6/11A	9/11A	12/11A	3/12A	6/12E	9/12E	12/12E							
<b>GLOBAL</b>																			
<b>Advertising Revenue</b>	339	423	450	654	\$638	\$774	\$799	\$942	\$871	\$922	\$945	\$1,154	--	\$1,866	\$3,153	\$3,892	\$5,167	\$6,655	\$8,192
Y/Y Change	--	--	--	--	88%	83%	78%	44%	37%	19%	18%	22%	--	--	69%	23%	33%	29%	23%
Q/Q Change	--	25%	6%	45%	-2%	21%	3%	18%	-8%	6%	2%	22%	--	--	--	--	--	--	--
% of Total Revenue	98%	98%	96%	89%	87%	86%	84%	83%	82%	82%	81%	80%	--	95%	85%	81%	81%	81%	81%
<b>Monthly Active Users</b>	432	482	550	608	681	738	800	845	901	949	995	1,038	360	518	766	971	1,140	1,280	1,395
Y/Y Change	--	--	--	--	58%	53%	45%	39%	32%	29%	24%	23%	--	44%	48%	27%	17%	12%	9%
Q/Q Change	--	12%	14%	11%	12%	8%	8%	6%	7%	5%	5%	4%	--	--	--	--	--	--	--
<b>Monthly Average Revenue Per User</b>	\$0.26	\$0.29	\$0.27	\$0.36	\$0.31	\$0.35	\$0.33	\$0.37	\$0.32	\$0.32	\$0.32	\$0.37	--	\$0.30	\$0.34	\$0.33	\$0.38	\$0.43	\$0.49
Y/Y Change	--	--	--	--	19%	20%	22%	4%	3%	-7%	-5%	0%	--	--	14%	-3%	13%	15%	13%
Q/Q Change	--	12%	-7%	31%	-13%	12%	-5%	12%	-13%	1%	-2%	17%	--	--	--	--	--	--	--
<b>Payments &amp; Other Revenue Breakdown</b>																			
	2010				2011				2012E				2009	2010	2011	2012E	2013E	2014E	2015E
	3/10A	6/10A	9/10A	12/10A	3/11A	6/11A	9/11A	12/11A	3/12A	6/12E	9/12E	12/12E							
<b>GLOBAL</b>																			
<b>Payments &amp; Other Revenue</b>	5	7	17	77	\$94	\$119	\$155	\$188	\$187	\$196	\$228	\$281	--	\$106	\$556	\$892	\$1,222	\$1,581	\$1,939
Y/Y Change	--	--	--	--	1780%	1600%	812%	144%	99%	65%	47%	50%	--	--	425%	60%	37%	29%	23%
Q/Q Change	--	40%	143%	353%	22%	27%	30%	21%	-1%	5%	16%	23%	--	--	--	--	--	--	--
% of Total Revenue	1%	2%	4%	11%	13%	13%	16%	17%	18%	18%	19%	20%	--	5%	15%	19%	19%	19%	19%
<b>Monthly Active Users</b>	432	482	550	608	681	738	800	845	901	949	995	1,038	360	518	766	971	1,140	1,280	1,395
Y/Y Change	--	--	--	--	58%	53%	45%	39%	32%	29%	24%	23%	--	44%	48%	27%	17%	12%	9%
Q/Q Change	--	12%	14%	11%	12%	8%	8%	6%	7%	5%	5%	4%	--	--	--	--	--	--	--
<b>Monthly Average Revenue Per User</b>	\$0.00	\$0.00	\$0.01	\$0.04	\$0.05	\$0.05	\$0.06	\$0.07	\$0.07	\$0.07	\$0.08	\$0.09	--	\$0.07	\$0.24	\$0.31	\$0.36	\$0.41	\$0.46
Y/Y Change	--	--	--	--	1093%	1010%	527%	76%	50%	28%	18%	22%	--	--	255%	27%	17%	15%	12%
Q/Q Change	--	25%	113%	310%	9%	17%	20%	15%	-7%	-1%	11%	18%	--	--	--	--	--	--	--

Source: Citi Investment Research and Analysis

Figure 63. FB Balance Sheet

(\$ MM)	2010			2011			2012E			2009	2010	2011	2012E	2013E	2014E	2015E		
	3/10A	6/10A	9/10A	12/10A	3/11A	6/11A	9/11A	12/11A	3/12A								6/12E	9/12E
<b>Total Assets</b>							6,331	7,184	14,802	15,371	16,294	0	2,990	6,331	16,294	19,654	24,061	29,550
<b>Current Assets</b>							4,604	5,019	12,297	12,536	13,117		2,246	4,604	13,117	15,310	18,741	23,453
Cash and Cash Equivalents							1,512	1,282	8,497	8,679	8,985		1,785	1,512	8,985	10,673	13,524	17,640
Marketable Securities							2,396	2,628	2,628	2,628	2,628		0	2,396	2,628	2,628	2,628	2,628
Accounts Receivable							547	482	509	534	654		373	547	654	873	1,125	1,384
Prepaid Expenses & Other Current Assets							149	627	663	695	850		88	149	850	1,136	1,464	1,801
<b>Long-Term Assets</b>							1,727	2,165	2,505	2,834	3,177		744	1,727	3,177	4,344	5,320	6,097
Property & Equipment, Net							1,475	1,855	2,188	2,511	2,824		574	1,475	2,824	3,936	4,848	5,560
Goodwill & Intangible Assets							162	189	189	189	189		96	162	189	189	189	189
Other Assets							90	121	128	134	164		74	90	164	219	283	348
<b>Total Liabilities</b>							1,432	1,587	4,551	4,934	5,619		828	1,432	5,619	7,788	10,597	14,045
<b>Current Liabilities</b>							899	1,039	1,098	1,152	1,409		389	899	1,409	1,882	2,426	2,984
Accounts Payable							63	129	136	143	175		29	63	175	234	301	371
Platform Partners Payable							171	178	188	197	241		75	171	241	322	416	511
Accrued Expenses & Other Current Liabilities							296	337	356	374	457		137	296	457	610	787	968
Deferred Revenue & Deposits							90	93	98	103	126		42	90	126	168	217	267
Current Portion Of Capital Lease Obligations							279	302	319	335	410		106	279	410	547	705	867
<b>Long-Term Liabilities</b>							533	548	3,453	3,782	4,210		439	533	4,210	5,906	8,171	11,060
Capital Lease Obligations							398	404	404	404	404		117	398	404	404	404	404
Long-Term Debt							0	0	0	0	0		250	0	0	0	0	0
Other Non-Current Liabilities							135	144	3,049	3,378	3,806		72	135	3,806	5,502	7,767	10,656
<b>Stockholders' Equity</b>							4,899	5,597	10,251	10,437	10,675		2,162	4,899	10,675	11,866	13,464	15,505

Source: Citi Investment Research and Analysis

Figure 64. FB Statement Of Cash Flows

(\$ MM)	2010				2011				2012E				2009	2010	2011	2012E	2013E	2014E	2015E
	3/10A	6/10A	9/10A	12/10A	3/11A	6/11A	9/11A	12/11A	3/12A	6/12E	9/12E	12/12E							
<b>Net Income (Loss)</b>								205	(346)	186	238		229	603	1,000	283	1,216	1,659	2,156
Depreciation & Amortization								110	120	130	140		78	139	323	500	900	1,300	1,700
Loss On Write-Off Of Assets								1	0	0	0			3	4	1	0	0	0
Share Based Compensation								103	133	163	193			20	217	592	800	1,031	1,268
Tax Benefit From Share Based Awards								54	0	0	0			115	433	54	0	0	0
Excess Tax Benefit From Share Based Awards								(54)	0	0	0			(115)	(433)	(54)	0	0	0
Cash Tax Shield								0	0	159	203			0	0	361	811	1,106	1,437
Other								0	965	0	0			8	(2)	965	0	0	0
<b>plus Change in Working Capital</b>								22	(4)	(3)	(15)		0	(70)	5	0	(30)	(34)	(34)
Less Increase in Accounts Receivable								65	(27)	(25)	(119)			(209)	(174)	(107)	(219)	(252)	(259)
Less Increase in Prepaid Expenses								(28)	(36)	(33)	(155)			(38)	(31)	(251)	(285)	(328)	(337)
Less Increase in Other Assets								(32)	0	1	2			17	(32)	(29)	2	3	4
Plus Increase in Accounts Payable								(3)	7	7	32			12	6	43	59	68	69
Plus Increase in Platform Partners Payable								7	10	9	44			75	96	70	81	93	96
Plus Increase in Accrued Expenses								2	19	17	83			20	38	122	153	176	181
Plus Increase in Deferred Revenue								3	5	5	23			37	49	36	42	49	50
Plus Increase in Other Liabilities								8	17	16	75			16	53	116	137	158	162
<b>Net Cashflow from Operations</b>								441	868	635	759		307	703	1,547	2,703	3,698	5,062	6,528
Purchases of Property and Equipment								(453)	(453)	(453)	(453)			(293)	(606)	(1,812)	(2,012)	(2,212)	(2,412)
Purchases of Marketable Securities								(876)	0	0	0			0	(3,025)	(876)	0	0	0
Maturities of Marketable Securities								567	0	0	0			0	516	567	0	0	0
Sales of Marketable Securities								69	0	0	0			0	113	69	0	0	0
Investments in Non-Marketable Securities								(1)	0	0	0			0	(3)	(1)	0	0	0
Acquisitions of Businesses								(25)	0	0	0			(22)	(24)	(25)	0	0	0
Change in Restricted Cash & Deposits								(1)	0	0	0			(9)	6	(1)	0	0	0
<b>Net Cashflow from Investing</b>								(720)	(453)	(453)	(453)		(324)	(3,023)	(2,079)	(2,012)	(2,212)	(2,412)	(2,412)
Proceeds from Issuance of Pref Stock								0	0	0	0			0	0	0	0	0	0
Proceeds from Issuance of Common Stock								0	6,800	0	0			500	998	6,800	0	0	0
Proceeds from Exercise of Common Options								5	0	0	0			6	28	5	0	0	0
Proceeds from Long-Term Debt								0	0	0	0			250	(250)	0	0	0	0
Proceeds from Sale & Lease-Back Transactions								62	0	0	0			0	170	62	0	0	0
Payments on Capital Lease Obligations								(71)	0	0	0			(90)	(181)	(71)	0	0	0
Excess Tax Benefit from Share-Based Awards								54	0	0	0			115	433	54	0	0	0
<b>Net Cashflow from Financing</b>								50	6,800	0	0		781	1,198	6,850	0	0	0	0
Effect of Exchange Rates on Cash								(1)	0	0	0			(3)	3	(1)	0	0	0
<b>Net Change in Cash &amp; Equivalents</b>								(230)	7,215	182	306		307	1,157	(275)	7,473	1,686	2,850	4,116
<b>Cash and Cash Equivalents (BOP)</b>								1,512	1,282	8,497	8,679		633	633	1,790	1,515	8,988	10,673	13,524
<b>Cash and Cash Equivalents (EOP)</b>								1,282	8,497	8,679	8,985		633	1,790	1,515	8,988	10,673	13,524	17,640

Source: Citi Investment Research and Analysis

## Appendix – Ad Age Survey Results

Citi, in conjunction with Advertising Age, recently conducted a survey focused on Marketers' perception of Facebook. We wanted to test how important Facebook is to Advertisers, whether Marketers are seeing good ROI on the Facebook platform, how the tools, ad products, and service measure up, and whether Marketers expect to continue using Facebook as an advertising platform. 33% had annual marketing budgets of under \$500K, and 31% had total annual marketing budgets from \$500K to \$100MM.

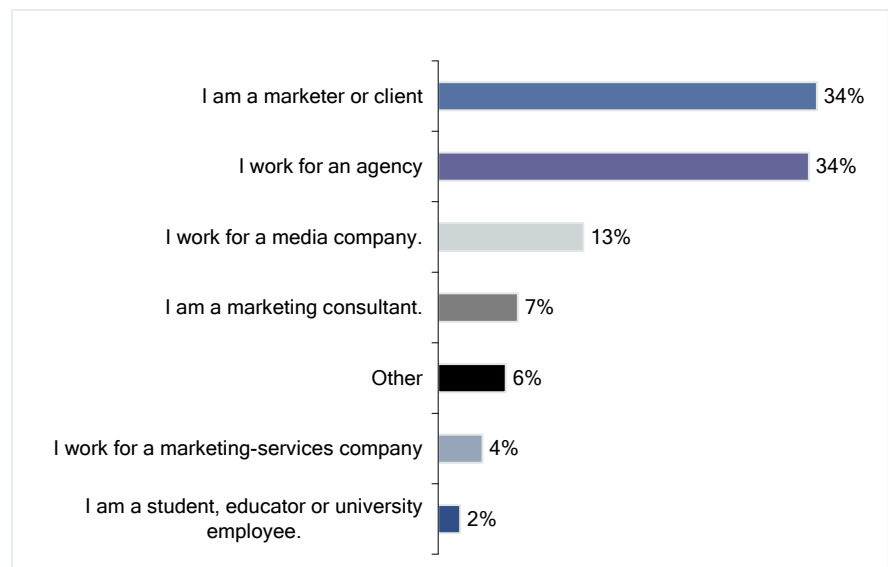
### About The Survey

The survey was conducted by the Ad Age Advisory Panel from June 11, 2012 to June 25, 2012. We had 807 marketing professional respond. 68% of panelists were direct marketers or came from an agency. Below we show some of the key takeaways from the survey results.

#### Takeaway 1: The majority of respondents were marketers or worked for an agency

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Figure 65. Which best describes the nature of your relationship to the advertising world?



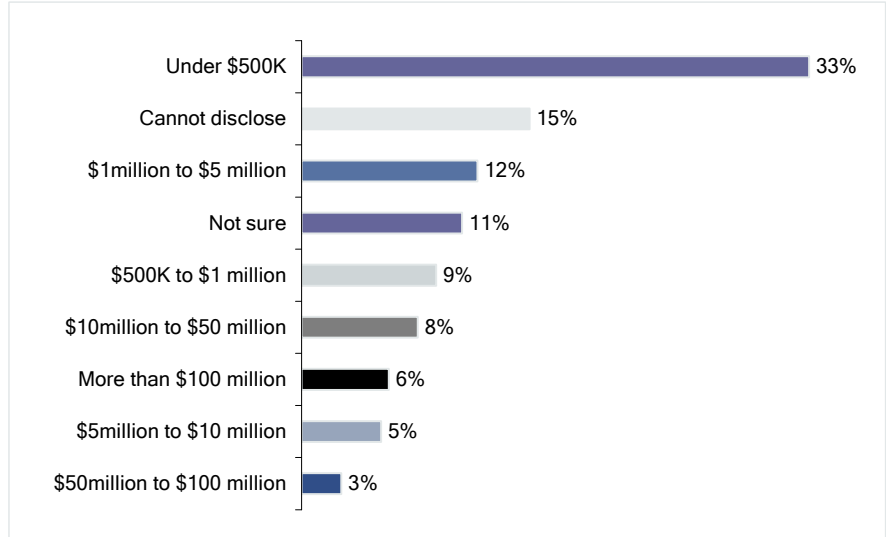
Source: Ad Age Advisory Panel Citi Facebook Survey; n=807

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**Takeaway 2: The majority of respondents are working with limited budgets**

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**Figure 66. What is the approximate size of your annual marketing budget?**



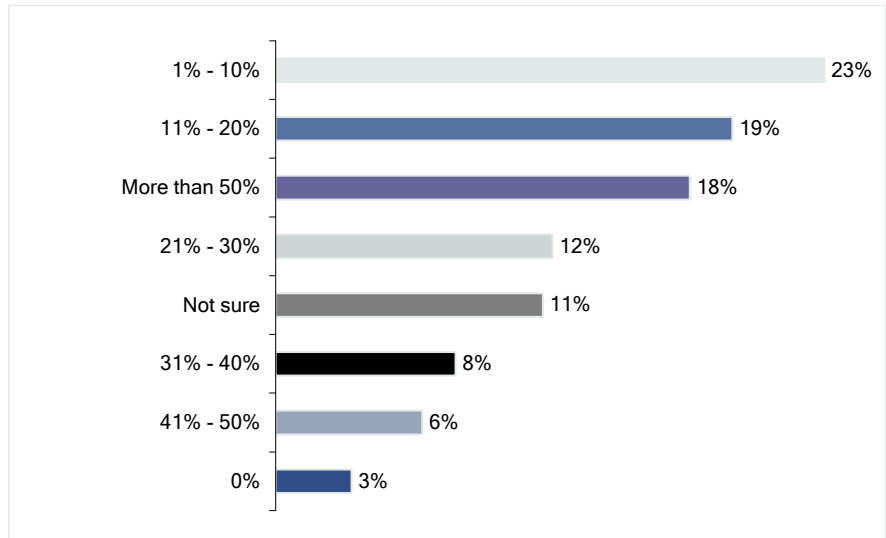
Source: Ad Age Advisory Panel Citi Facebook Survey; n=617

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**Takeaway 3: Planners are spending less than 20% or more than 50% of their budgets online**

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**Figure 67. What percentage of your marketing budget is spent on digital channels?**



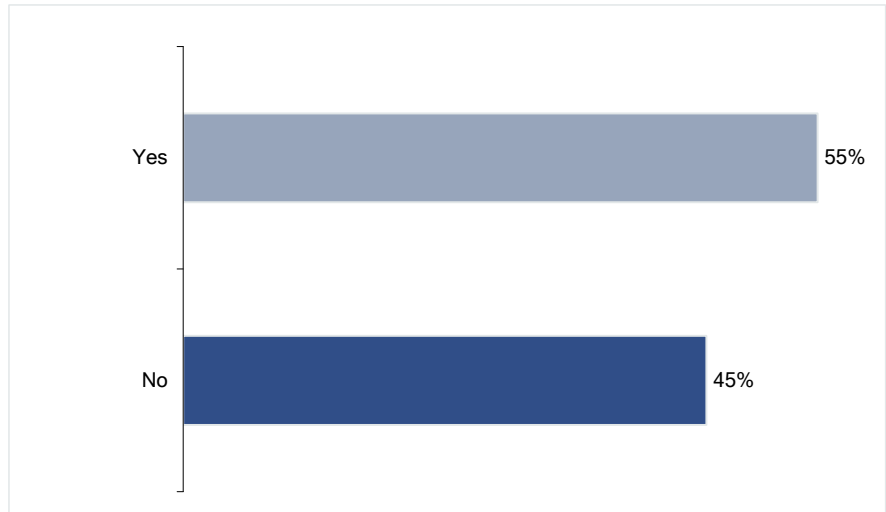
Source: Ad Age Advisory Panel Citi Facebook Survey; n=617

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**Takeaway 4: Roughly half of respondents purchase ads on Facebook**

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Figure 68. Does your social-media budget include buying ads on Facebook?



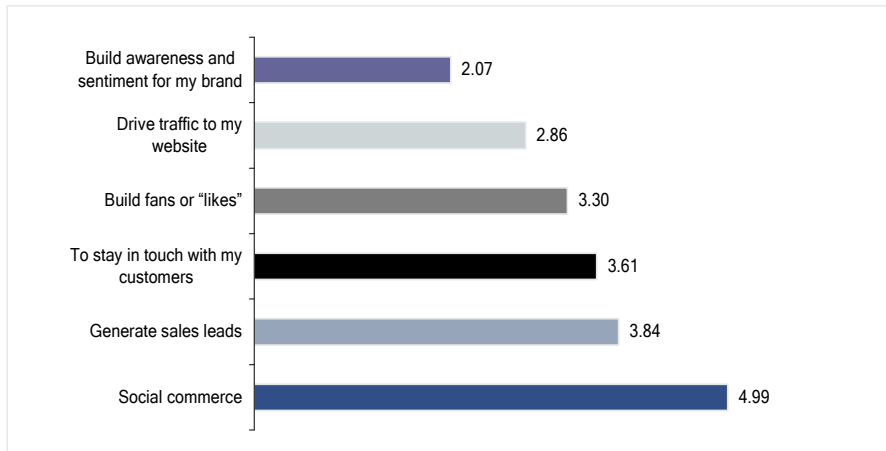
Source: Ad Age Advisory Panel Citi Facebook Survey; n=405

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**Takeaway 5: Building brand awareness, not driving purchases is the primary goal of respondents' FB marketing**

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Figure 69. What is your primary goal in Facebook advertising? Rank 1-6



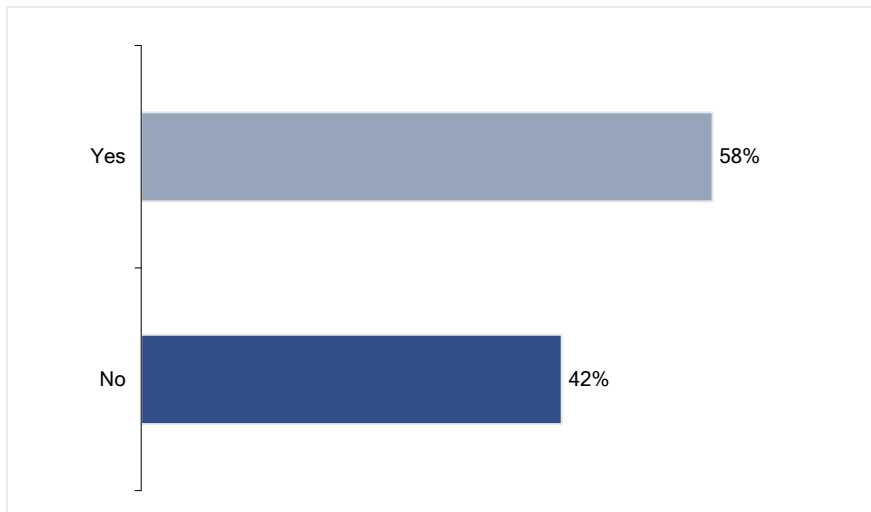
Source: Ad Age Advisory Panel Citi Facebook Survey; n=449

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**Takeaway 6: The majority of respondents are pleased with Facebook's offerings**

Figure 70. Are you satisfied with the array of products and services Facebook offers?

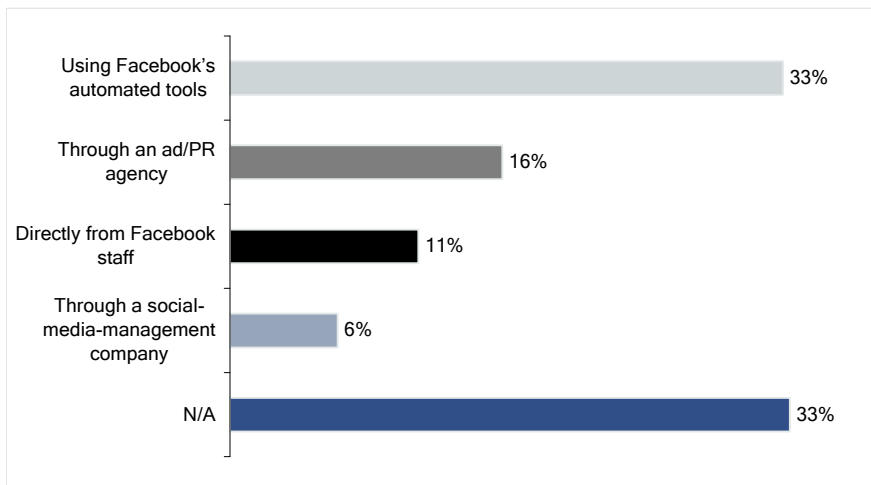


Source: Ad Age Advisory Panel Citi Facebook Survey; n=420

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**Takeaway 7: Half of FB ad purchases utilize the site's automated tools**

Figure 71. How do you typically purchase Facebook ads?

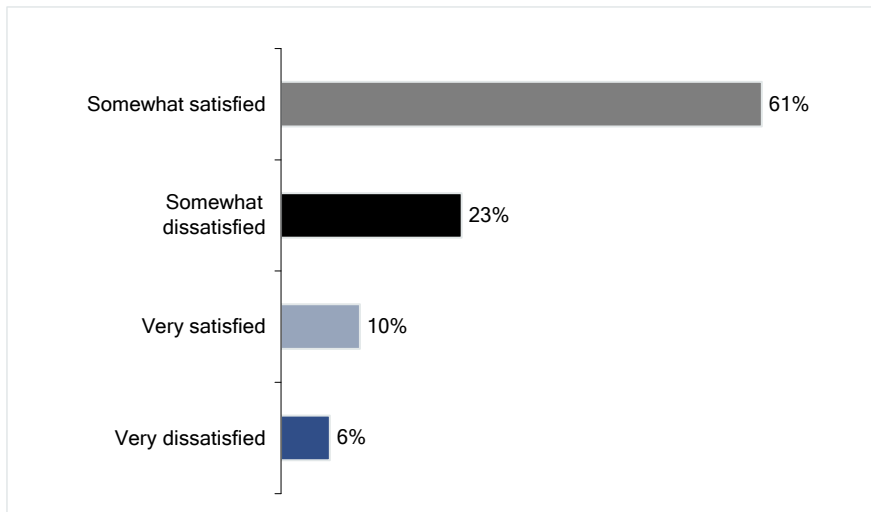


Source: Ad Age Advisory Panel Citi Facebook Survey; n=420

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**Takeaway 8: The vast majority of respondents were only "somewhat satisfied" with the data and analytical tools that Facebook provides**

Figure 72. How satisfied are you with the data and analytics that Facebook provides?

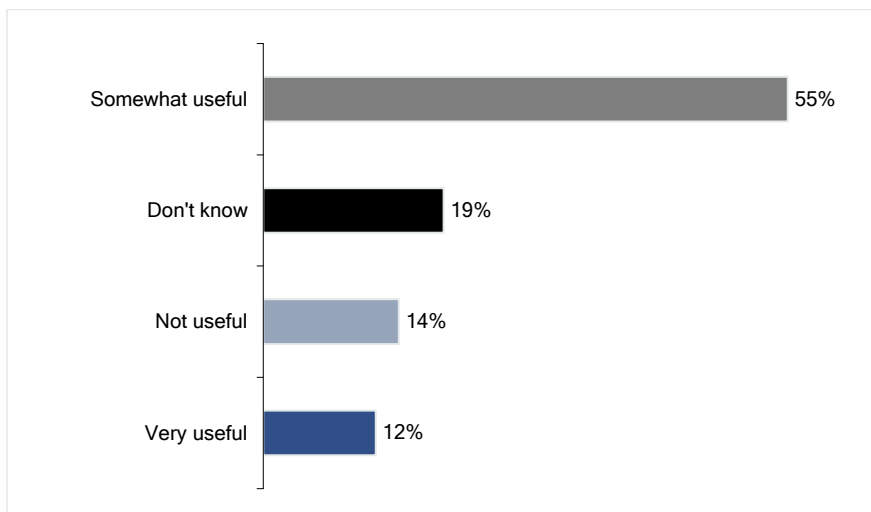


Source: Ad Age Advisory Panel Citi Facebook Survey; n=420

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**Takeaway 9: Respondents view Facebook as only "somewhat useful" when it comes to driving purchase intent**

Figure 73. How useful is Facebook overall in driving purchase intent?

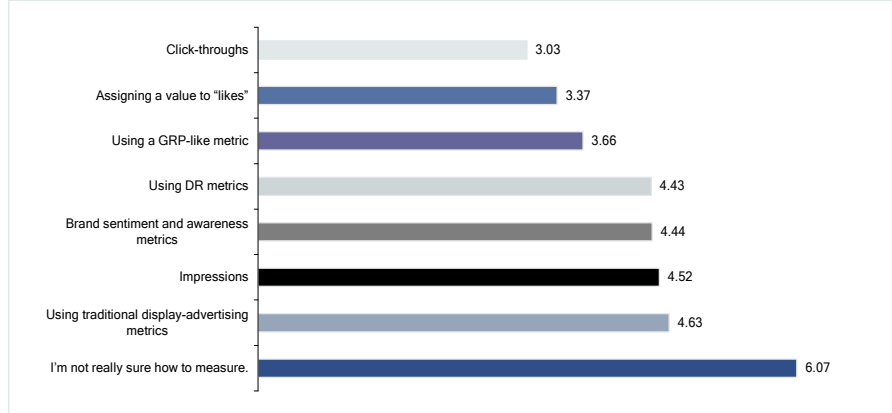


Source: Ad Age Advisory Panel Citi Facebook Survey; n=380

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**Takeaway 10: Click-throughs and "likes" (actionable items) were selected as the best ways to measure the efficacy of Facebook ads**

**Figure 74. Please rank the efficacy of metrics to gauge success of Facebook ads. Rank 1-8**

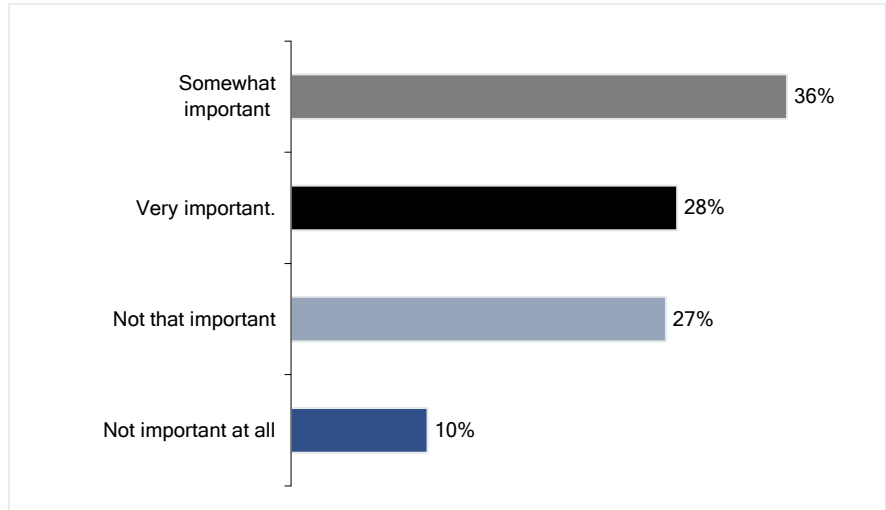


Source: Ad Age Advisory Panel Citi Facebook Survey; n=380

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**Takeaway 11: Almost 2/3 of respondents find it either somewhat or very important to advertise on Facebook's mobile app**

**Figure 75. How important is it to market on Facebook's mobile app?**



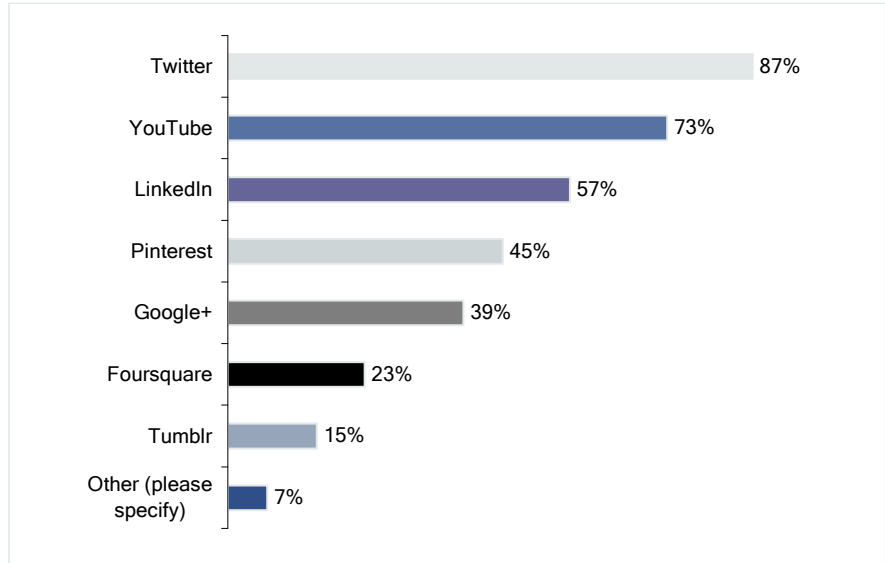
Source: Ad Age Advisory Panel Citi Facebook Survey; n=368

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**Takeaway 12: Twitter and YouTube are popular alternatives for social marketing**

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**Figure 76. What other social platforms are you using in your social marketing strategy?**



Source: Ad Age Advisory Panel Citi Facebook Survey; n=368

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## Appendix – Full Facebook Survey Results

We devised and conducted a survey in conjunction with SurveyMonkey in order to get a better understanding of Facebook usership.

### About The Survey

For this survey, we worked closely with SurveyMonkey to help devise appropriate, non-leading questions to real estate professionals. SurveyMonkey is a leading online survey company that allows users to creatively develop online surveys and distribute them to responders. The company also allows users to look at the data in real-time, and provides analytics on the survey results.

We targeted broadly targeted U.S. users in various demographics to attain a representative sample audience. We had 1,247 people click through to the survey, and we were able to use a sample of 1,181 (n=1,181) who indicated Facebook usership. The survey began on January 30<sup>th</sup> and was concluded on February 1<sup>st</sup>.

### Survey Results In Detail

We note that not every one of the 1,247 respondents answered each question. We've indicated the number of respondents per question in each exhibit.

#### Takeaway 1: Facebook has become nearly ubiquitous in the U.S.

According to our results, nearly all respondents surveyed have a Facebook account.

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Figure 77. Do You Have A Personal Facebook Account?



Source: Citi Investment Research and Analysis; n=1,247

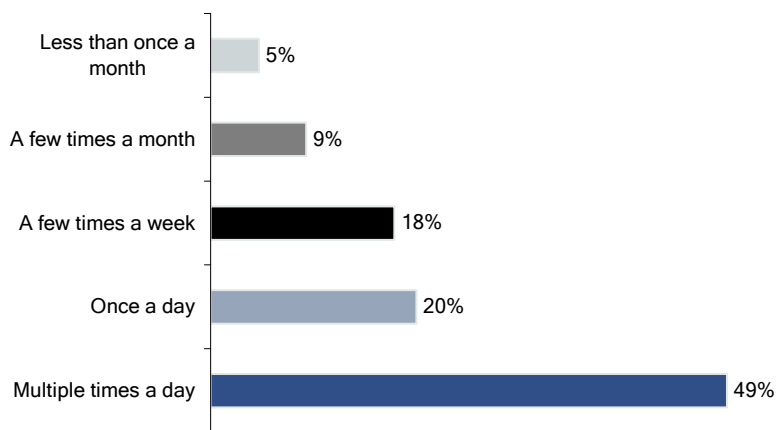
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**Takeaway 2: Facebook usage is very "sticky"**

70% of respondents indicated that they log into Facebook at least once a day, with nearly 50% using the site multiple times per day.

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**Figure 78. How Often Do You Log Onto Facebook?**



Source: Citi Investment Research and Analysis; n=1,159

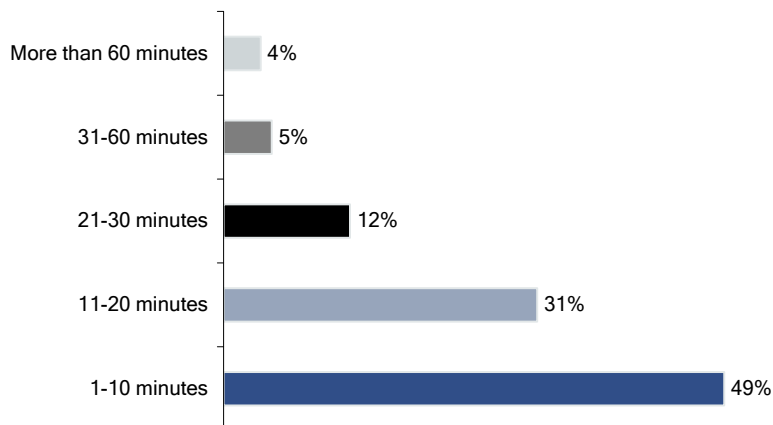
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**Takeaway 3: Usage sessions are frequent but short.**

The vast majority of users (80%) use Facebook for 20 minutes or less in a spell, with nearly half spending less than 10 minutes per session.

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**Figure 79. How Much Time Do You Spend Per Session?**



Source: Citi Investment Research and Analysis; n=1,159

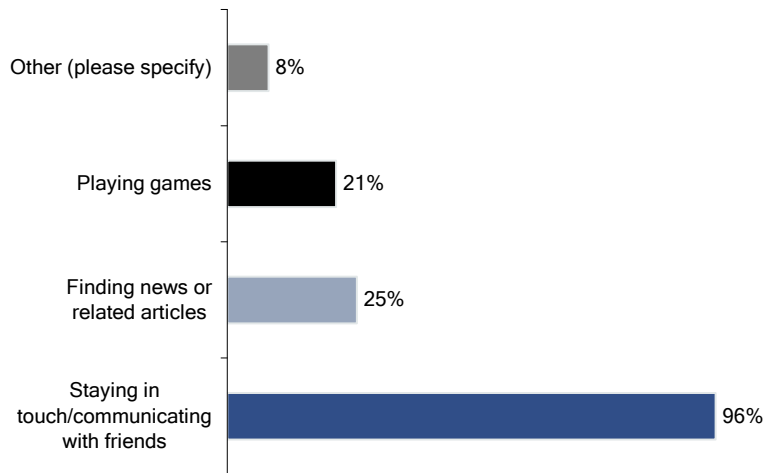
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**Takeaway 4: Facebook's core usage is still communication based.**

Despite the plethora of features added over the years, core Facebook usage is still driven by one-to-one and one-to-many communication. Facebook is about sharing.

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**Figure 80. Which Activities Do You Perform On Facebook?**



Source: Citi Investment Research and Analysis; n=1,159

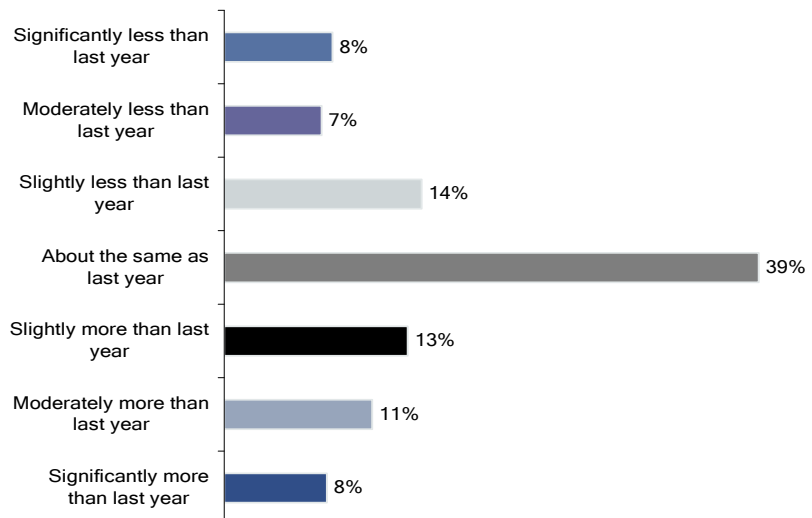
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**Takeaway 5: Self-reported usage of Facebook isn't changing**

40% of users claimed their amount of usage hasn't changed, with roughly equal amounts of users claiming more and less usage than last year.

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**Figure 81. Do You Use Facebook More Or Less Than You Did Last Year?**



Source: Citi Investment Research and Analysis; n=1,159

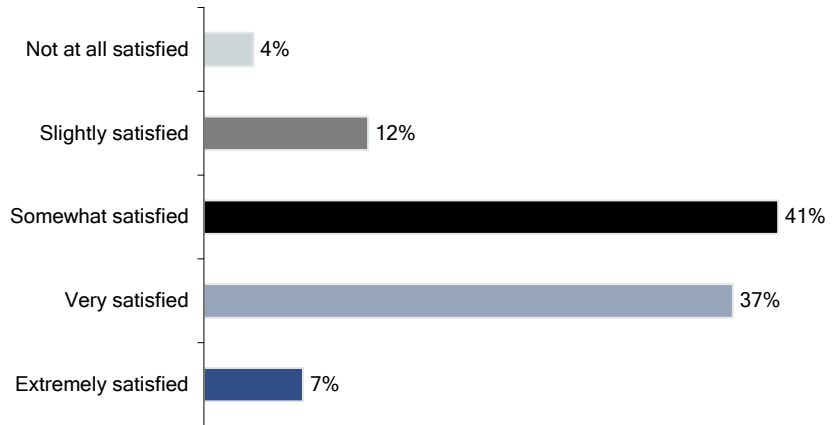
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**Takeaway 6: Overall, users are satisfied with Facebook's experience.**

The vast majority of respondents (nearly 80%) are either somewhat or very satisfied with their Facebook experiences. This is despite the debut of several controversial product releases and security issues.

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**Figure 82. Overall, How Satisfied Are You With Your Facebook Experience?**



Source: Citi Investment Research and Analysis; n=1,159

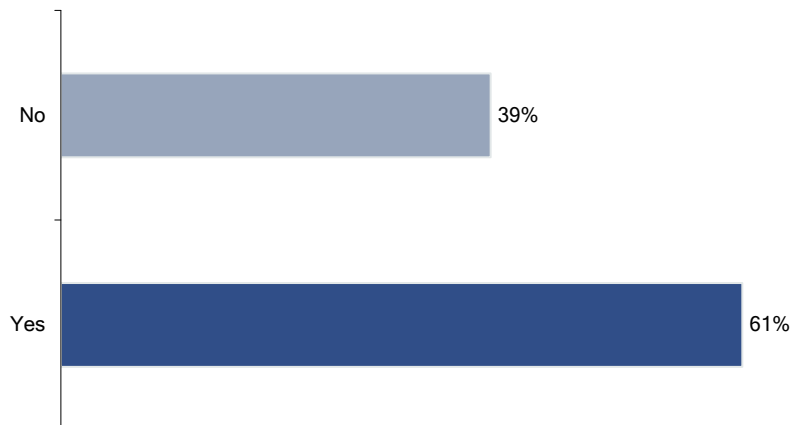
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**Takeaway 7: The majority of users are trying Facebook on mobile devices.**

60% of respondents indicated that they have used Facebook on a mobile device (smartphone or tablet) within the past 90 days. For perspective, Nielsen estimates U.S. smartphone penetration at roughly 50%. This is a strong indicator that Facebook's future is as a mobile first company.

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**Figure 83. In The Past 90 Days, Have You Used Facebook On A Mobile Device?**



Source: Citi Investment Research and Analysis; n=1,159

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**Takeaway 8: Gaming is a popular Facebook activity.**

Nearly half of survey takers have played a game on Facebook (e.g. FarmVille, Sims Social, Mafia Wars). While only 20% of these users have actually spent money on virtual goods, this is a promising indicator for Payments Revenue generation.

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**Figure 84. Have You Ever Played Games On Facebook?**



Source: Citi Investment Research and Analysis; n=1,154

---

**Takeaway 9: Users are willing to engage with brands on Facebook.**

In one of the more staggering findings, more than 80% of respondents indicated that they have "liked" a business or brand on Facebook. This action allows the brand or business to communicate (advertise) directly to these users. Another promising indicator for brand engagement.

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**Figure 85. Have You Ever "Liked" A Business Or Brand Page On Facebook?**



Source: Citi Investment Research and Analysis; n=1,154

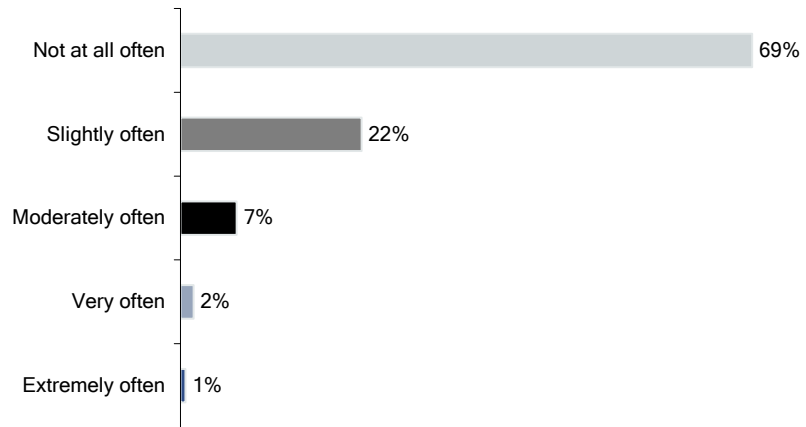
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**Takeaway 10: The majority of Facebook users never click on ads.**

Only 30% of users admit to clicking Facebook ads with any regularity. This is likely a lower rate than search-related ads, due to the lack of intent signals that power those impressions.

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**Figure 86. How Often Do You Purposefully Click On Facebook Ads?**



Source: Citi Investment Research and Analysis; n=1,154

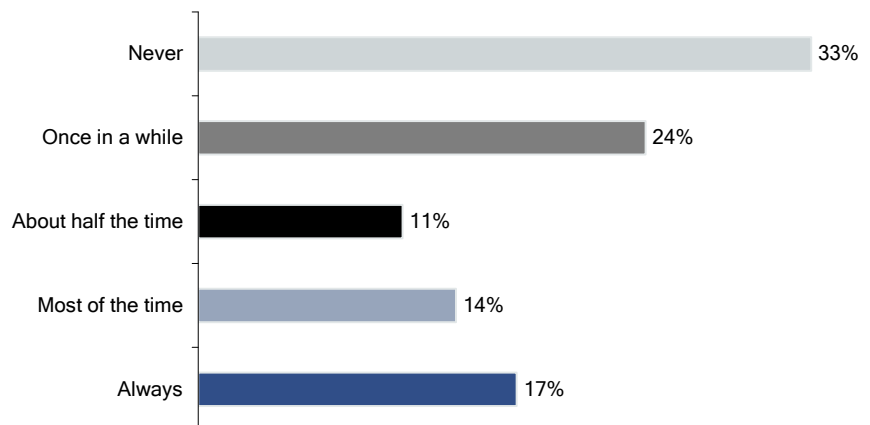
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**Takeaway 11: Facebook Connect still catching on as a signup tool.**

Facebook Connect allows Facebook users to utilize their account information to sign up for a new website or app with one click. Apart from its simplicity, this tool finds friends who are using the new service and enables instant sharing of activities through Facebook. While this is a promising feature for Facebook, our survey results indicate that widespread usage has yet to catch on, likely due to privacy concerns.

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**Figure 87. How Often Do You Use Your FB Login To Sign Up For A New Site Or App?**



Source: Citi Investment Research and Analysis; n=1,151

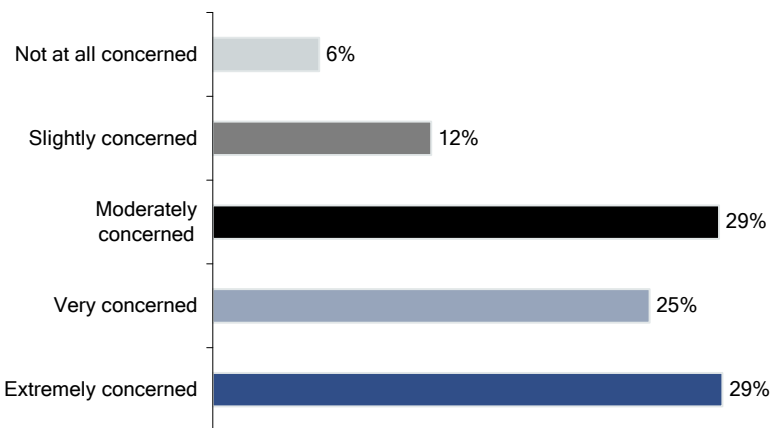
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**Takeaway 12: Facebook users are concerned about privacy.**

Privacy is likely the issue of most concern to Facebook users. Due to product missteps like Beacon, users have expressed worries about how much of their data is being shared, with whom, and how it is utilized. This was reflected in our survey findings, as a material 82% of users expressed moderate to extreme concern about their privacy on Facebook.

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**Figure 88. How Concerned Are You About Privacy On Facebook?**



Source: Citi Investment Research and Analysis; n=1,151

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## Facebook Inc

### Company description

Facebook, founded in 2004, is a Website that allows users to stay connected to their friends, families, and interests. Initially developed as a way for college students to share information and communicate with one another, Facebook has grown rapidly since opening itself to the general populace in 2006, eventually becoming the most-visited Website in the world. To provide a sense of Facebook's scale, for the March Quarter, Facebook reported 901MM worldwide Monthly Active Users, representing roughly 1/3 of the world's population. In North America, 50% of the entire population uses Facebook at least once during the month and 37% use Facebook on a daily basis. The company has ~3,200 full-time employees.

Facebook is free to users and generates Revenue through Advertising on its website and from facilitating payments on its platforms for games and virtual goods. Facebook faces a significant Revenue opportunity in monetizing its mobile properties, including its popular mobile apps for Apple's iOS and Google's Android platforms. In Q1, Advertising Revenue of \$872MM represented 82% of total Revenue, with Payments & Other comprising the remaining 18%. Total '11 Revenue was \$3.71B, EBITDA was \$2.97B, and FCF was \$943MM.

### Investment strategy

We rate shares of Facebook a Neutral. Key Investment Positives Include: 1. Substantial Market Opportunities – incl. a Global Internet Ad market that should reach \$130B by 2015; 2. An Almost Unassailable Position As THE Social Networking Leader – 900MM+ MAUs & 525MM+ DAUs; 3. Significant Network Effects advantages – probably greater than any 'Net company; 4. Major Monetization Potential – currently generating less than \$5 in annual Revenue per MAU; 5. Platform/Option Potential – with a massive, highly engaged user base, FB has the potential to layer in more Revenue streams over time...Ad Network, Transactions/Subscriptions revenue share, Digital Media sales, etc...

### Valuation

Our \$35 Target Price is based on a combination of P/E (40X our 2014 EPS of \$0.85), EV/EBITDA (15X our 2014 EBITDA of \$5.0B), and DCF. These are Premium Multiples, but we view the company's growth rate (30% EPS CAGR thru 2015) and Option Potential as supporting them.

Based on our EV/EBITDA analysis, we arrive at a \$34 per share valuation. Our price target is derived by applying a 15x multiple to our 2014 Adjusted EBITDA estimate of \$5.00B (\$1.79 per share), adjusting for \$13.3B in year-end 2014 cash (\$5.77 per share), to reach a rounded target valuation of approximately \$34. Our target multiple is largely driven from historical and future growth assumptions, but we usually also consider relative sector multiples, and intangibles like management's execution track record.

Using a P/E Analysis, if we apply 40x to our PF 2014 EPS of \$0.85, we get a valuation of \$34 per share. For context, FB currently trades at approximately 62x 2012 PF EPS. For context, we note that comparable platform Internet companies like Google (13x 2012 PF P/E), Linked In (179x), Netflix (74x), and Amazon (92x) have similar growth profiles to FB, yet on average, trade at a significant premium to FB.

Finally, using a DCF valuation methodology, we arrive at a \$35 Target Price. Our 8 year DCF uses a terminal growth rate of 5% and a WACC of 11%. The NPV of Free Cash Flow is approximately \$75B. Adjusting for current (post IPO) cash of \$11B, we arrive at a Market Cap of \$86B. This equates to approximately \$35 per share.

Taking the average of these three methodologies, we arrive at our Target Price of \$35.

## Risks

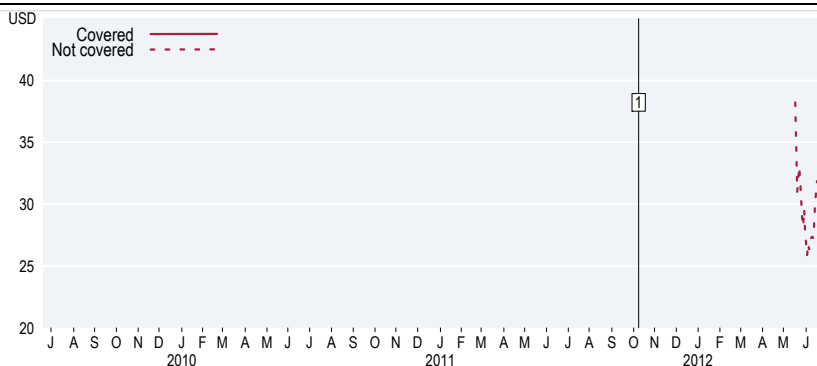
Key Risks include: 1. Dual-Class Stock Structure – with questions about management’s views towards public shareholders; 2. Limited Appeal To Advertisers Today – based on our proprietary survey work; 3. Unclear Mobile Monetization – 30%+ of total usage today may not generate meaningful Revenue for a long time; 4. Zero Presence In Largest ‘Net Market – China; 5. Lockup Expiration/Stock Supply Risk – which has materially impacted every other ‘Net IPO; and 6. Intense competition in Online Advertising and Platforms from Google, Yahoo!, Amazon, Ebay, Linked-In, Microsoft, Apple, AOL, and others.

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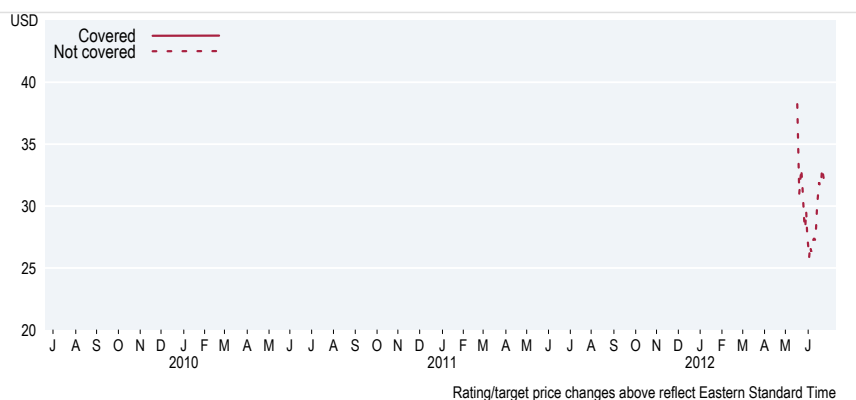
Facebook Inc (FB)  
Ratings and Target Price History  
Fundamental Research



\* Indicates change

Rating/target price changes above reflect Eastern Standard Time

**Facebook Inc (FB)**  
**Ratings and Target Price History**  
**Best Ideas Research**  
**Relative Call (3 Month)**



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