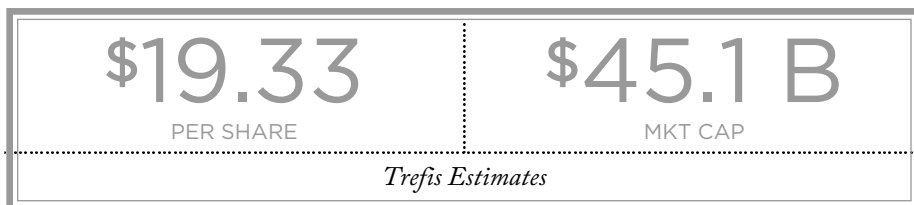




Facebook

ANALYSIS for FBOOK

JANUARY 24, 2011



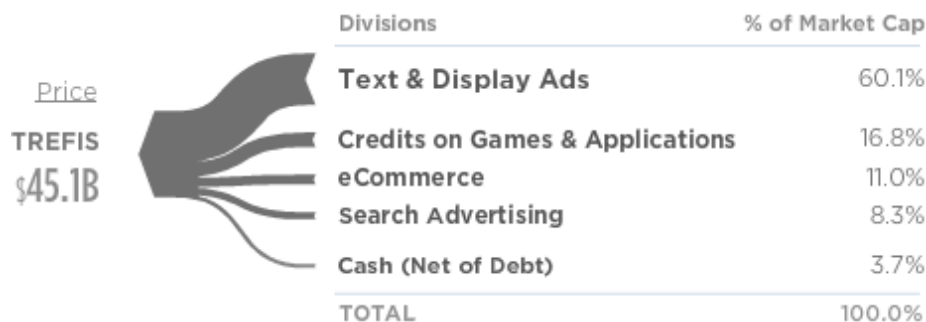
— CORPORATE SNAPSHOT —

Facebook is a popular social network that helps people connect with family and friends. The company makes money primarily through display advertising. In addition, Facebook facilitates the purchase of virtual goods in games and applications running on Facebook's platform through its Facebook Credits, a virtual currency. Facebook also generates a significant number of internet search queries and earns search ad revenues as a result.

— VALUATION HIGHLIGHTS —

1. Text & Display Ads constitute 60% of the Trefis price estimate for Facebook's stock
2. Credits on Games & Applications constitute 17% of the Trefis price estimate for Facebook's stock

Our estimate for Facebook's per share price is based on 2.34 billion shares outstanding. This figure is based on the 2.268 billion shares as reported by sharespost.com, an online marketplace for private investments, plus the shares issued as a result of the \$500 million investment by Goldman Sachs and Digital Sky announced in January 2011 as well as the \$1 billion invested by private clients of Goldman Sachs. The number of shares issued is determined based on a \$50 billion pre-money valuation and implies about 68 million new shares issued. For the purposes of our analysis, we have assumed that 100% of the new \$1.5 billion investment is based on new issuance rather than the purchase of existing shares. See further down below for details related to our estimate of Facebook's net cash balance.



Our share price estimate and the overall company value is derived by summing-up the values of individual divisions/businesses in a sum-of-the-parts analysis. The value of each division is calculated using a discounted cash

TEXT & DISPLAY ADS

Revenue per Page View (RPM) 6
 Facebook Unique Visitors 8
 Page Views per User 10

CREDITS ON GAMES & APPLICATIONS

Games & Applications Revenue per Registered User 12
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flow (DCF) methodology.

We forecast fundamental drivers like pricing, market share, and profit margins for different businesses in estimating the division's value within the DCF framework. The analysis below primarily focuses on those important forecasts that drive our share price and value estimate.

Our complete analysis, including sources of historical data, underlying equations and additional discussion are available on www.trefis.com.

— POTENTIAL UPSIDE & DOWNSIDE TO TREFIS PRICE —

Below we highlight key drivers of Facebook's value that present opportunities for upside or downside to the current Trefis price estimate for Facebook.

Facebook Text & Display Ads

- [Monthly Unique Visitors to Facebook](#): We estimate that Facebook's average monthly unique visitors has increased from around 19 million in 2006 to 340 million in 2009, and it could continue to increase to more than 2 billion by the end of the Trefis forecast period. The availability of Facebook in large markets like China, where it is currently blocked, and the improvement of privacy controls on Facebook will be important in achieving such growth. With about 4.2 billion internet users worldwide expected by the end of our forecast period, there is room for additional upside for Facebook. There could be an upside of more than 40% to the Trefis price estimate for Facebook's stock if the number of unique visitors were to increase to around 3 billion by the end of Trefis forecast period.
- [Page Views per User on Facebook](#): We expect Page Views per User to increase from around 415 per month in 2010 to about 470 per month by the end of Trefis forecast period. Facebook has taken a few initiatives of late to improve the engagement on its site. These initiatives are: 1) Encourage users to upload more photos, which creates a viral effect among user's friends, 2) Facebook's e-mail feature, which is expected to draw more user engagement and 3) Increasing number of applications on Facebook as applications become part of the user's news feed making it more likely that other users who view his feed will take actions on the same applications. There could be an upside of about 15% to our valuation for Facebook if page views per user increases to around 550 per month by the end of Trefis forecast period, instead of the 470 that we forecast. On the other hand, there could be a downside of about 10% to our valuation for Facebook if page views per user remain stagnant at 410 per month by the end of Trefis forecast period.

Search Advertising.

- [Facebook's Search Market Share](#): Facebook's search market share is expected to increase from 0.9% in 2008 to 1.9% in 2010, and we expect it to increase to around 5.6% by the end of Trefis forecast period. Facebook's partnership with Microsoft will enable Facebook to

use Microsoft Bing technology, thereby providing more relevant search results to the user. If Facebook can take some search market share away from Google, and if its market share were to increase to around 10% by the end of Trefis forecast period, there could be an upside of 10% to our valuation for Facebook.

For additional details, select a driver above or select a division from the interactive Trefis split for Facebook at the top of the page.

Besides the Trefis valuation for Facebook and the recent investment by Goldman Sachs and DST, there have been a variety of other valuation benchmarks for the company. For example, in December 2010, [BusinessInsider](#) quoted Wedbush Morgan analyst Lou Kerner estimating that Facebook could be valued at \$200 billion by 2015. In August 2010, [CNN](#) quoted reports from Next Up Research (from earlier in 2010) indicating a valuation of \$11-13 billion. Recent trading activity on secondary markets such as SharesPost and SecondMarket suggest a valuation of greater than \$50 billion for Facebook. See our [4 Key Businesses That Determine Facebook's Valuation](#) for a detailed comparison of the Trefis valuation for Facebook with other valuations.

— SOURCES OF VALUE —

We believe that the Text & Display Ads business is the primary source of value for Facebook for the following reason:

Facebook Social Ads are primarily self-serve ads that appear on the right hand column of most Facebook pages and can be highly targeted to appear to specific users. The Facebook ad system is primarily self-serve and provides real-time feedback on the size of the target audience and the suggested bid range to achieve impressions. The system is based on a live auction model, which means that the more advertisers are willing to spend per impression, the more frequently their ad will appear.

The Facebook self-serve ad system offers very powerful targeting capabilities: when advertisers create an ad, they have the option to limit who sees the ad by age, sex, location, keywords, education level, workplaces, political views and relationship status. Facebook Social Ads are limited in that they contain only a small static image and a few lines of text.

Facebook gives advertisers the opportunity to advertise on its website pages, and target users based on demographics such as age, gender, education and location. These advertisements show up on the Facebook site pages alongside profile and other user related data.

Facebook also allows large advertisers to form custom fan page profiles. Custom fan page is an effective form of advertising as it allows users to send stories related to an advertisers' custom fan page to their friends via news feed. This creates viral effect and is an effective marketing tool for advertisers.

— KEY TRENDS —

Better demographic targeting based on user information and activity will lead

to higher ad prices on Facebook

Facebook allows for targeted advertising based on user demographics. We expect this will lead to higher click-through ad pricing as focused targeting will prompt advertisers to bid for higher amounts to ensure display of their advertisements

Increasing number of ads per page

Facebook mostly displayed three ads per page from 2006 until the fall of 2010 when it increased this to four ads per page. We expect that Facebook will continue to increase the ads per page over time and that this will have a positive impact on average ad revenue per page

Growing Search activity on Facebook

The number of searches on Facebook has grown at a fast rate from around [900 million](#) in July 2009 to [1.6 billion](#) in Dec 2009, as per Comscore. This growth is faster than Google, although Facebook search growth comes off of a smaller base. Interestingly, the number of searches on Facebook has surpassed AOL. As of July 2009, the number of searches conducted on AOL was more than a billion. However, in December 2009, the number of searches conducted on Facebook surpassed 1.5 billion.

Growing Revenues from Games & Applications

People buy virtual goods on games like FarmVille and Mafia Wars using Facebook's virtual currency called Credits. During 2010, Facebook Credits became the exclusive payment method for most of the games created by Zynga, the No. 1 developer of Facebook applications. Over time, the company plans to turn Credits into a system for micropayments that could be open to any application on Facebook.

FACEBOOK'S CASH BALANCE

In March of 2009, [BusinessWeek reported](#) that Facebook had drawn down about \$60 million of a \$100 million credit line from TriplePoint Capital. In May of 2009, Facebook [raised \\$200 million from Digital Sky Technologies](#). [BusinessInsider indicated](#) in September of 2009 that Facebook became cash flow positive in Q2 of 2009, the same quarter as the investment from Digital Sky. Of the \$416 million in equity funding that Facebook received prior to Digital Sky's investment, we estimate that Facebook had about \$50 million in cash left during the period in which it became cash flow positive.

Based on this, Facebook's net cash by the end of Q2 2009 would have been about \$190 million (\$50 million cash on hand plus \$200 million Digital Sky investment, less \$60 million debt). We believe that Facebook has been reinvesting the bulk of the cash it generates back into the business and we have not tried to account for any additional increases in its cash balances since becoming cash flow positive. Furthermore, we have increased Facebook's cash balance by \$1.5 billion based on the investment by Goldman Sachs, Digital Sky and private clients of Goldman Sachs announced in January 2011. Consistent with our adjustment to Facebook's share count based on this investment, we have treated 100% of the investment proceeds as

cash to Facebook based on the issuance of new shares.



Text & Display Ads

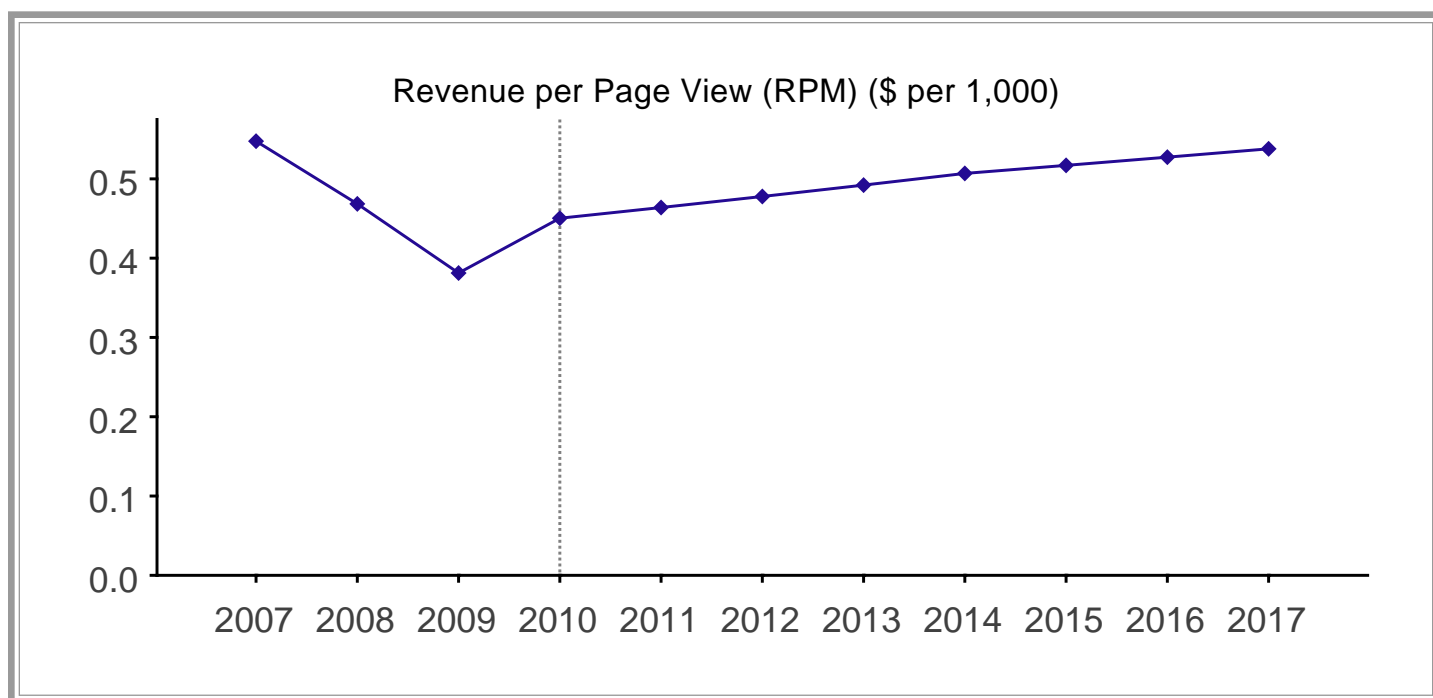
The Text & Display Ads division constitutes 60.1% of our \$19.33 price estimate for this stock, based on our sum of the parts analysis. The most important drivers for the Text & Display Ads business are:

- Revenue per Page View (RPM)
- Facebook Unique Visitors
- Page Views per User

— REVENUE PER PAGE VIEW (RPM) —

Revenue per Page View (RPM) represents the average text and display advertising revenue that Facebook earns for every page view of facebook.com, which is dependent on prevailing ad rates, the number of ads shown per page, the type of ads used and the nature of the ads.

Text and display advertising on Facebook is based primarily on two types of online ads generally used in the ad industry: CPM (impression-based) and CPC (click-based). CPM or Cost per impression represents the average of the amount bid by an advertiser for 1,000 impressions of an ad, while CPC or Cost per Click represents the amount bid by an advertiser when using click-based ads on Facebook. Facebook's $RPM = CPM \times \text{Number of CPM Ads per page} + CPC \times \text{Number of CPC Ads per page} \times \text{Click Through Rate}$. Click Through Rate or the CTR is also defined as the number of times a user clicks on an ad per impression.



Trefis estimates that Revenue per Page View (RPM) has declined from around \$0.58 per 1,000 page views in 2006 to around \$0.38 per 1,000 page views in 2009. Social networking sites are mostly used for communication rather than seeking information on products and services. This primarily explains why Facebook's RPM is low in comparison to search ads and ads on online commerce sites. We expect Revenue per Page View (RPM) to remain under pressure in the near-term as Facebook's worldwide adoption continues and its mix of users is increasingly comprised of people in emerging markets where online ad rates are typically lower than the US and Europe. This downward pressure on Facebook's ad rates will be partially offset by improving ad targeting on Facebook, a broader shift in advertising dollars online and a shift of online ad

dollars to Facebook as the company's presence widens. In the long-term, we expect Revenue per Page View (RPM) to improve as these positive trends become the dominant influence.

Forecast Rationale

We considered the following factors for our forecast:

Supporting factors

- I. **CLICK-THROUGH RATES COULD INCREASE DUE TO:** – Better demographic targeting. Facebook allows for targeted advertising based on user demographics. We expect this will lead to higher CTRs as focused targeting will prompt advertisers to bid for higher amounts to ensure display of their advertisements. Viral nature of advertisement feeds which allow user actions on an ad to be communicated to his friends leading to wider dissemination of the ad Facebook users can flag an advertisement they find useful or are interested in by simply clicking on a link below the ad that says "Become a Fan" or "Like" (for example User John likes "Create a Caricature or Toon of yourself on meez.com") . Since these feeds are visible to other members on the user's friend list, the flagged advert becomes as good as a recommendation by the user. Such recommended ads make it more likely that the advertisement is displayed for the user's friends and that those friends will in turn act on those ads or click on them. Ad recommendations and feeds are not prevalent on other sites. For Facebook, such user actions are considered click-throughs even though the user is not really clicking-through to the advertiser's site. By counting them as clicks, Facebook is improving its click-through rate on ads which could lead to improvements in Revenue per Page View (RPM)

Facebook Places help businesses reach out to more users

Facebook Places is a mobile application that allows users to track the physical location of their friends. The user can also check in to a location to update their own location. This service also helps businesses to promote and grow their business by letting their potential customers to check in at their location. By letting users check in, allows users' friends know about their business, and facilitates viral growth.

2. **DEMAND FOR FACEBOOK ADS COULD GROW FASTER THAN EXPECTED IF FACEBOOK IMPROVES THE MEASURABILITY OF AD EFFECTIVENESS ON FACEBOOK**

Nielsen Company and Facebook have formed a strategic alliance to help advertisers measure effectiveness of Facebook advertising

The first product of the collaboration, Nielsen BrandLift, is designed to provide marketers with effectiveness measurement for Facebook advertising. It will launch in the U.S. with select test partners and roll out to all Facebook advertisers in the coming months. Nielsen BrandLift measures aided awareness, ad recall, message association, brand favorability and purchase consideration via a set of short, specially designed one or two question surveys. It uses opt-in polls on Facebook's homepage to measure consumer attitudes and purchase intent from display advertising that has appeared on the site. The combination of ability to quickly and effectively poll a sample of Facebook more than 300 million Facebook users and Nielsen's expertise in data analysis will give marketers access to powerful data they can use to understand and improve current and future campaigns. Once this happens, it will help establish Facebook as a preferred medium for advertising, as BrandLift will provide an effective feedback to the existing campaigns.

Mitigating factors

3. **ALTHOUGH INTERNET AD SPENDING IS INCREASING, AD INVENTORY IS INCREASING FASTER WHICH LEADS TO DECLINES IN CPMS** – Facebook and other social networks are gaining advertising share within a growing internet ad market. As per Nielsen reports, online advertising spend on the top social network and blogging sites increased 119%,

from approximately \$49 million in August 2008 to approximately \$108 million in August 2009. The share of estimated ad spend on the top social network and blogging sites has grown from a seven percent share of total online ad spend in August 2008 to a 15 percent share in August 2009. Facebook has seen significant growth as an important Web site for advertising with a 14.7% share of display ad views in the U.S. in August 2009, up from 1.8% in January 2009. CPMs do not tell a full story regarding the health of the online advertising economy. The pace of growth in the supply of Internet advertising inventory is simply faster than the growth in ad dollars spent. CPMs would substantially decrease even though overall revenue would still increase. Hence CPM is a relevant metric, but not an overall indicator of market health.

4. FACEBOOK AD INVENTORY GROWING DUE MORE PAGE VIEWS AND MORE ADS PER PAGE. AD INVENTORY GROWTH WILL PUT DOWNWARD PRESSURE ON CPMS

According to an August study from the IAB and Bain Capital, the average CPMs on ad networks ranged from 60 cents to \$1.10. If Facebook increases the number of advertisements displayed on its pages to 5 from existing 3 from 2010, the ad inventory suddenly increases by 60%. Facebook is already witnessing a phenomenal growth in its page views and unique visitors which makes it less of a reason for them to uphold rate card prices when a client demands a discount, driving CPMs down for the forecast period.

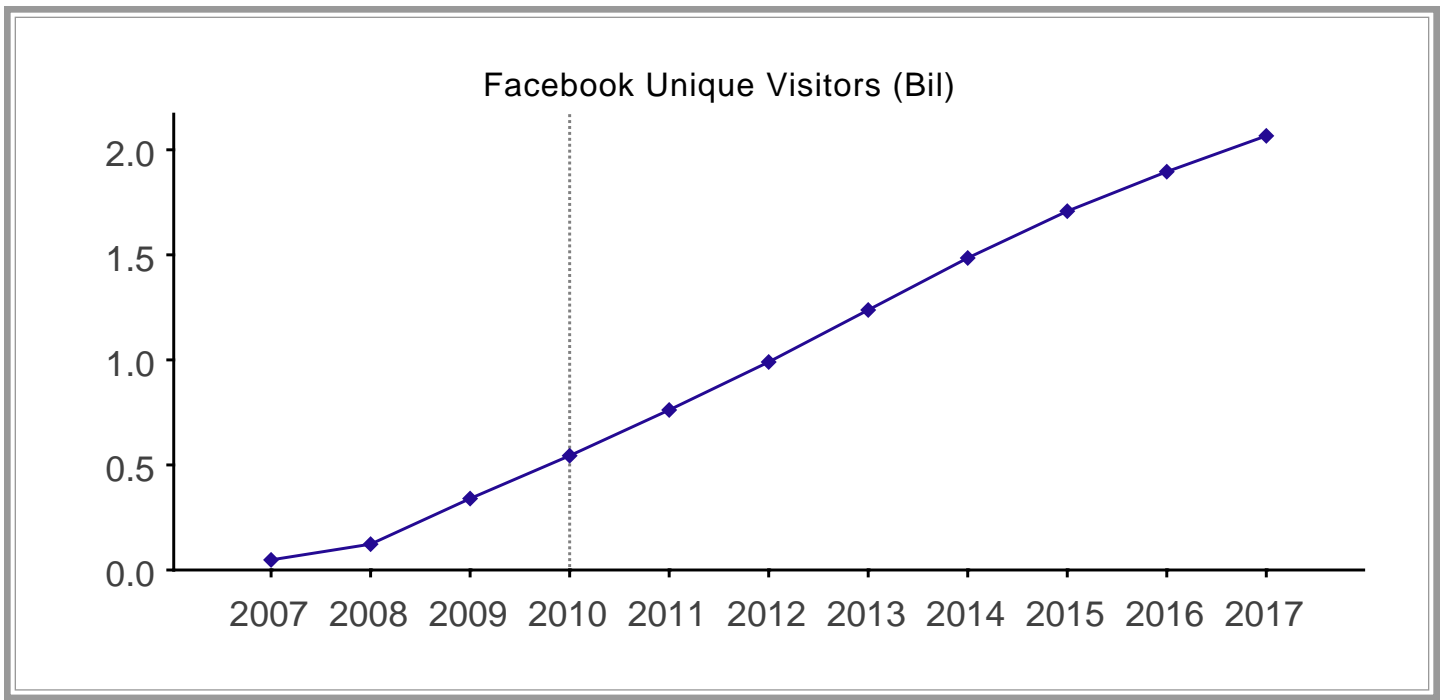
5. FUTURE GROWTH LIKELY TO BE DRIVEN FROM LOW MONETIZING INTERNATIONAL MARKETS

70% of existing Facebook users are from outside United States. . The rapid Facebook growth in countries such as Indonesia (annual growth of 2,000%) and Argentina (annual growth of 1,000%) indicates that the mix of international users is likely to increase. Facebook has started to take hold in the Asia-Pacific region and is quickly growing in popularity in Eastern Europe and BRIC region. . Although international regions are experiencing phenomenal growth, the low monetization opportunities due to lower rates can further depress the Revenue per Page View (RPM) for the forecast period.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

— FACEBOOK UNIQUE VISITORS —

Facebook Unique Visitors represents the average number of people who have accessed the Facebook website in a month. This includes registered users as well as non-registered ones, who have limited access to the site.



The average Facebook Unique Visitors have increased from 19 million in 2006 to 340 million in 2009 as Facebook established itself as the preferred Social Networking site. We believe that Facebook will continue to see an increase in the number of unique visitors, though at a slower than historical rate, as the installed base of unique visitors is much larger than what it was when Facebook first started out expanding in 2006. Trefis estimates the future growth to be driven by international users, especially in Asian and South American countries.

Forecast Rationale

We considered the following factors for our forecast:

Supporting factors:

1. FACEBOOK "LIKE" BUTTON WAS ANNOUNCED IN APRIL 2010 WHICH ALLOWS USERS TO "LIKE" ANY PIECE OF CONTENT ON AN OUTSIDE SITE WITH ONE CLICK. THESE LIKES WILL THEN BE TRANSPORTED BACK TO FACEBOOK AND INTEGRATED INTO USERS' PROFILES. THIS INTEGRATION COULD HELP FACEBOOK GAIN MORE VISITORS TO ITS PLATFORM. – An average user clicks the Like button on [9 pieces of content each month](#), as of March 2010. Glue has over 400,000 registered users and receives over 1.5 million new ratings every month.
2. FACEBOOK CONNECT, LAUNCHED IN MAY 2008, ALLOWS USERS TO LOG INTO THIRD PARTY SITES USING FACEBOOK PROFILES AND POST INFORMATION FROM AND TO THEIR FACEBOOK ACCOUNTS. WE EXPECT FACEBOOK CONNECT TO DRIVE GROWTH IN THE FORECAST PERIOD, AS THIS FEATURE WILL HELP DIVERT TRAFFIC FROM THIRD PARTY WEBSITES
3. SINCE 2006, FACEBOOK HAS SEEN OVER 100% GROWTH IN UNIQUE VISITORS. THIS BECOMES UNSUSTAINABLE AS THE NUMBER OF VISITORS ON FACEBOOK RISES, AND HENCE THE GROWTH IS LIKELY TO SLOW DOWN DUE TO BASE EFFECT

Mitigating factors:

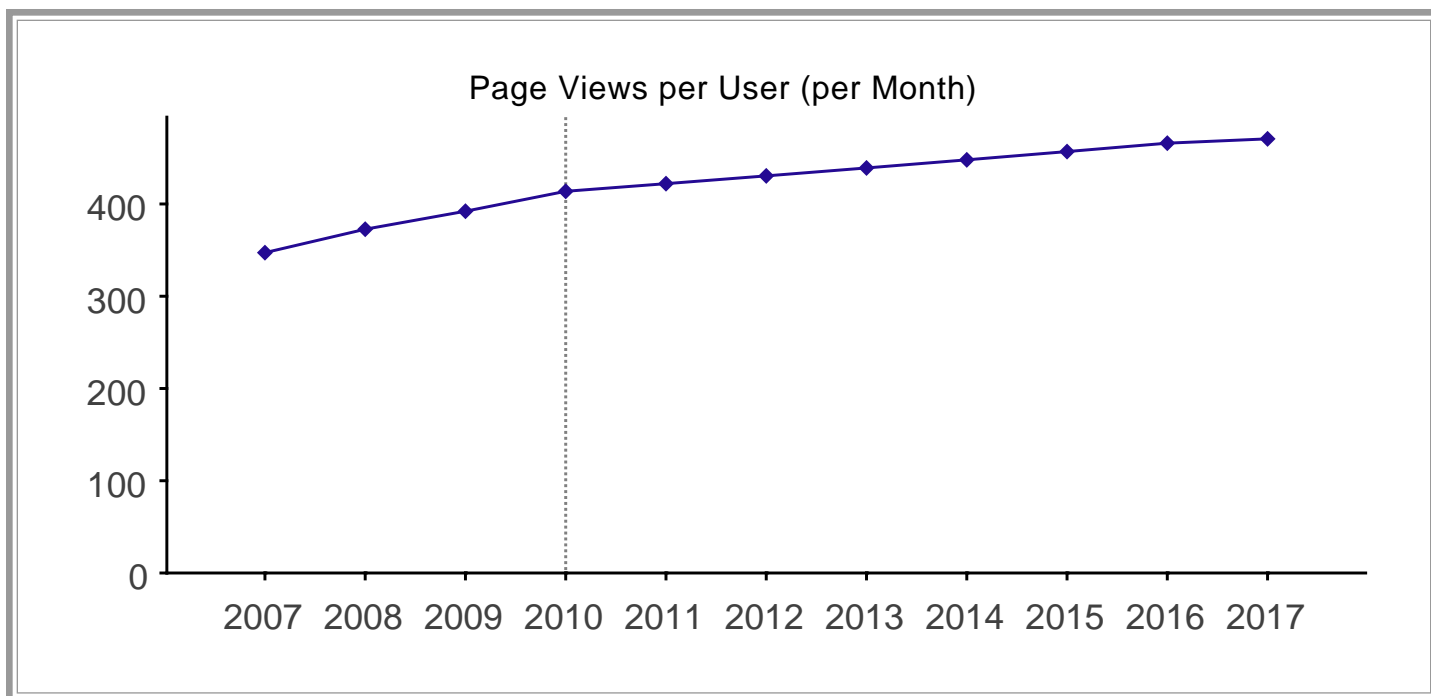
4. FACEBOOK BAN IN SOME COUNTRIES – Facebook has faced issues in the past with some countries banning it completely. It includes [China](#) and Pakistan. However, [the banned order in Pakistan was later revoked](#). If Facebook is able to resolve this issues, then its Facebook Unique Visitors can get a boost.
5. PRIVACY ISSUES – Facebook has been involved in a few privacy issues in the past and it presents a major risk to the company. These issues relate to making some of the user's information public by default. Facebook resolving these

issues will be important.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

— PAGE VIEWS PER USER —

Page Views per User represents the average number of pages viewed by a Facebook user in a month. This includes page views by registered users as well as non-registered ones, who have limited access to the site.



We estimate that Page Views per User increased from around 350 per month in 2006 to around 390 per month in 2009. We believe that Facebook will continue to see an increase in the number of page views.

Forecast Rationale

I. FACEBOOK APPLICATIONS HELP INCREASE PAGE VIEWS PER USER

As per statistics provided by Facebook in September 2009, there are more than 350,000 active applications on Facebook with 250+ applications having more than one million monthly active users. Trefis expects user engagement to continue to increase as new applications are developed. User actions on third party applications become part of the user's news feed making it more likely that other users who view his feed will take actions on the same applications.

Facebook's e-mail feature will further drive engagement

Facebook unveiled an email service in which users will have addresses with the facebook.com suffix. This email service is expected to be different from a standalone email service like gmail. This service is expected to be tightly integrated with the existing Facebook features, which could draw more user engagement. For e.g., it will automatically sort communication into groups, giving priority to messages from a person one has already identified as a friend on the site.

More number of photos will drive Page Views per User

Facebook encourages users to have more photos attached to one's profile. This create viral effect as by viewing user's photos, his/her friends help drive up the engagement and hence Page Views per User.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Revenue (Bil \$)	0.11	0.26	0.61	1.22	1.79	2.44	3.21	4.05	4.84	5.59	6.28
Direct Expense (Mil \$)	1.02	2.64	16.8	36.9	60.4	84.7	125	170	210	236	263
Indirect Expense (Bil \$)	0.13	0.22	0.49	0.85	1.18	1.53	1.92	2.35	2.75	3.15	3.91
Gross Profit (Bil \$)	0.11	0.26	0.59	1.18	1.73	2.36	3.08	3.88	4.63	5.35	6.01
Free Cash Flow (Bil \$)	N/A	N/A	N/A	N/A	0.54	0.83	1.16	1.52	1.88	2.20	2.11

In addition, you can see the detailed P&L for the Text & Display Ads business in the Appendix ([link](#))

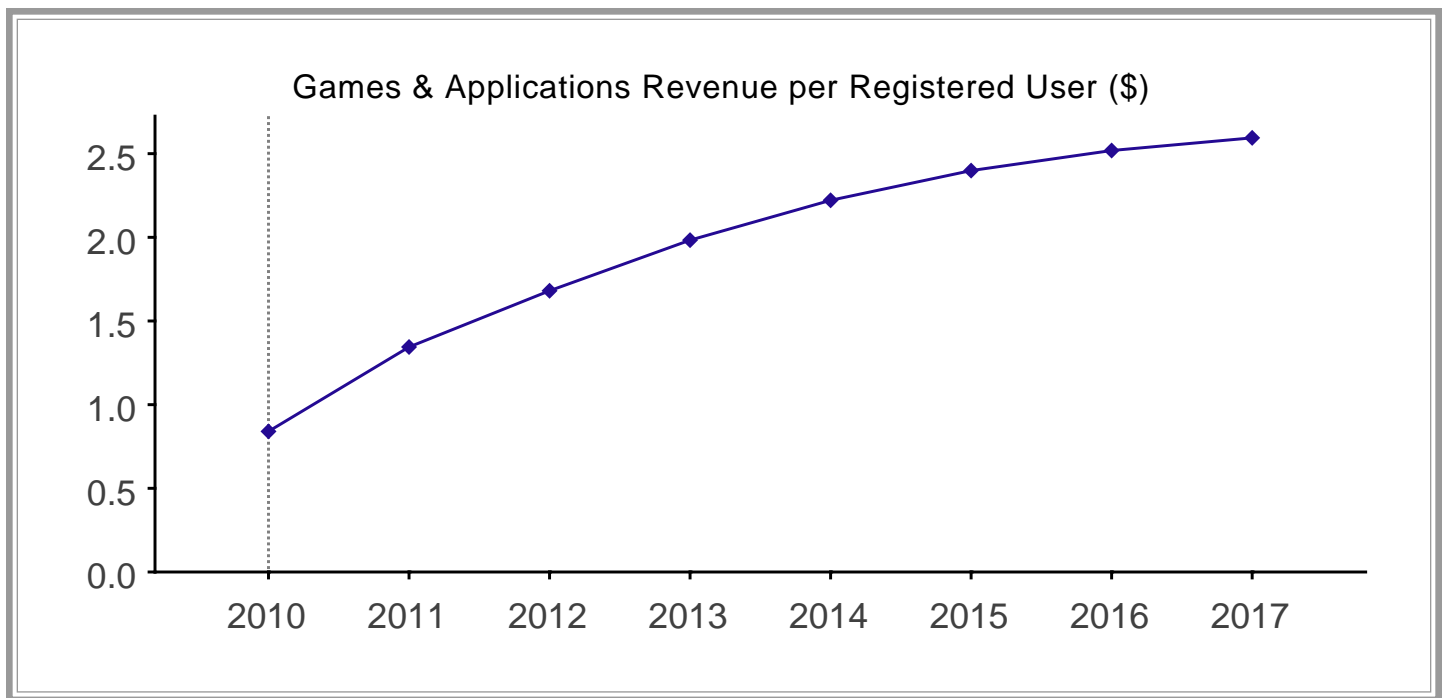
Credits on Games & Applications

The most important drivers for the Credits on Games & Applications business are:

- Games & Applications Revenue per Registered User
- Registered Users

— GAMES & APPLICATIONS REVENUE PER REGISTERED USER —

Facebook began testing its virtual currency, called Credits, more than a year ago with some popular games on Facebook. Games & Applications Revenue per Registered User represents the average amount spent by a registered Facebook user when buying virtual goods for games and applications.



We expect Games & Applications Revenue per Registered User to be around \$0.84 for 2010. We expect the average spend per user to increase in the future.

Forecast Rationale

We considered the following factors for our forecast:

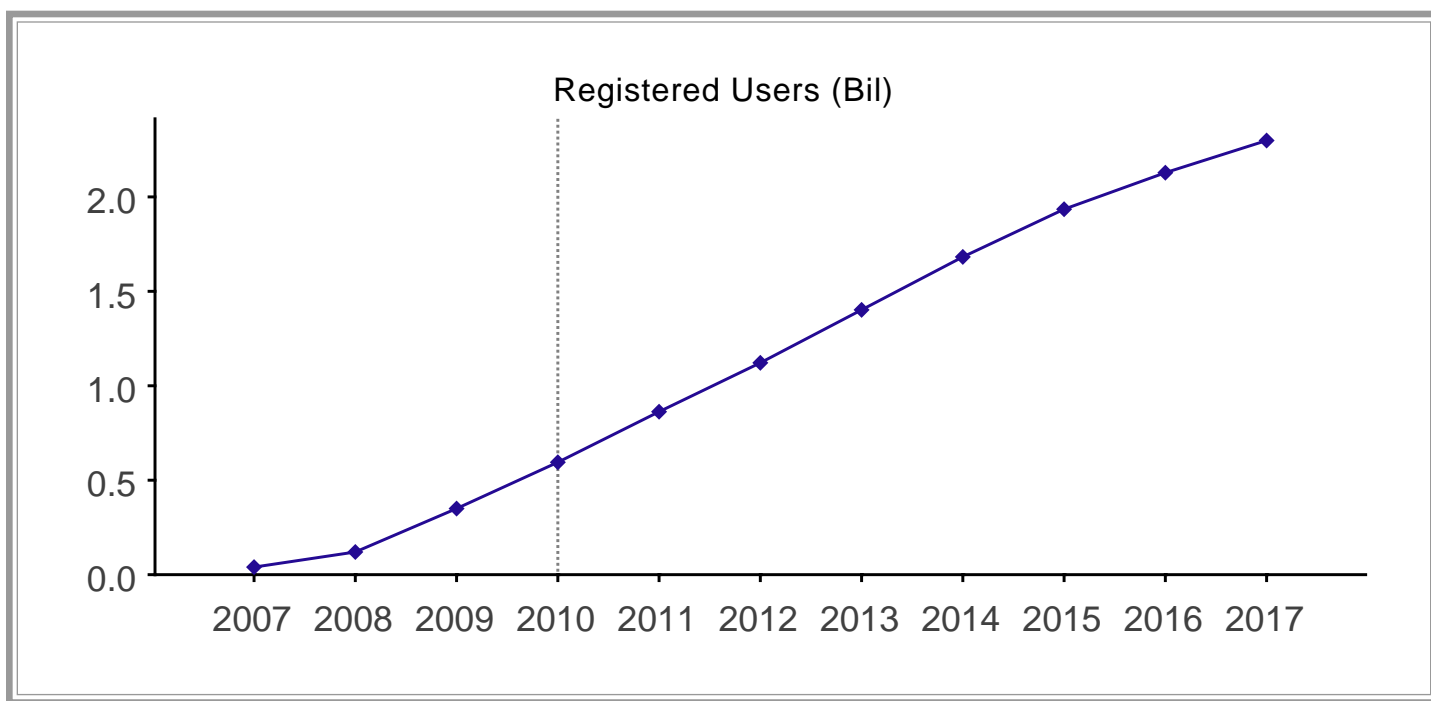
1. **FACEBOOK CREDITS WILL ENABLE MORE SPENDING PER USER** – Facebook Credits is Facebook's virtual currency, through which the Facebook users could easily transact for virtual goods. It provides a much more seamless mode of payment than either the credit card or through the Paypal payment gateway. Users will have a single currency they can spend on any game, sparing them the trouble of entering the credit card or PayPal credentials multiple times. Currently users can buy Credits with 15 currencies.
2. **VARIETY OF GAMES AND APPLICATIONS WILL ATTRACT MORE USERS TO PLAY GAMES** – As the number of games and applications increase on Facebook platform, more users will be attracted to play games and use applications. Zynga, the No. 1 developer of Facebook applications, is estimated to have \$500 million in revenue in 2010, according to the Inside Network. Zynga has made popular games like Farmville and Mafia, and Facebook will continue to benefit from increases in such popular games.

- FACEBOOK POPULARIZING CREDITS – Facebook has started to sell Credit at Target stores across the US. This way Facebook is opening up its horizon to sell Credits and increase its popularity. This initiative will also help more spending per user.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

— REGISTERED USERS —

Registered Users represents the number of people who have created an account on Facebook using a valid email address. Typically, a registered user has a profile containing user information, photographs and videos.



Registered Users have increased significantly post September 26, 2006, when Facebook allowed any user above the age of 13 years to set up an account. Registered Users have increased from 11 million in 2006 to 350 million in 2009. We believe that Facebook will continue to see an increase in the number of registered users, though at a slower than historical rate, as the installed base of users is much larger than what it was when Facebook first started out expanding in 2006. Within the US, females constitute 54% of total Facebook users as of September 2009. The 18-34 age group comprises around 46% of Facebook users and the larger 18-49 age group comprises about 66% of the Facebook user base in the US. Trefis expects the user growth to continue in the future, predominantly driven off of the 18-34 age group, as Facebook establishes itself as the preferred medium in the social networking spectrum, with competitors like MySpace catering to teenagers and LinkedIn for mostly business networking. Trefis expects the number of Registered Users to increase, though at a slower than historical rate.

Forecast Rationale

We considered the following factors for our forecast:

Supporting Factors:

- FACEBOOK CONNECT, A FEATURE THAT ALLOWS USERS TO LOG INTO THIRD PARTY SITES USING FACEBOOK PROFILES AND POST INFORMATION FROM AND TO THEIR FACEBOOK ACCOUNTS. WE EXPECT FACEBOOK CONNECT TO

CONTRIBUTE TO GROWTH IN THE FORECAST PERIOD, AS THIS HELPS TO INCREASE USER ENGAGEMENT FROM THIRD PARTY WEBSITES

2.

SINCE 2006, FACEBOOK HAS SEEN OVER 100% GROWTH IN REGISTERED USERS. THIS BECOMES UNSUSTAINABLE AS THE NUMBER OF USERS REGISTERED ON FACEBOOK RISES, AND HENCE THE GROWTH IS LIKELY TO SLOW DOWN DUE TO BASE EFFECT – As of March 2010, [there were 400 million active users](#), out of 50% of active users log onto Facebook every day.

Mitigating factors:

3. FACEBOOK BAN IN SOME COUNTRIES – Facebook has faced issues in the past with some countries banning it completely. It includes [China](#) and Pakistan. However, [the banned order in Pakistan was later revoked](#). If Facebook is able to resolve this issues, then its Registered Users can get a boost.
4. PRIVACY ISSUES – Facebook has been involved in a few privacy issues in the past and it presents a major risk to the company. These issues relate to making some of the user's information public by default. Facebook resolving these issues will be important.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

	2010	2011	2012	2013	2014	2015	2016	2017
Total Revenue (Bil \$)	0.50	1.16	1.88	2.78	3.74	4.64	5.36	5.96
Direct Expense (Bil \$)	0.35	0.82	1.34	1.98	2.66	3.31	3.82	4.25
Indirect Expense (Bil \$)	0.11	0.23	0.35	0.50	0.65	0.79	0.91	1.11
Gross Profit (Bil \$)	0.15	0.34	0.55	0.80	1.07	1.33	1.54	1.71
Free Cash Flow (Mil \$)	N/A	105	192	301	422	540	633	600

In addition, you can see the detailed P&L for the Credits on Games & Applications business in the Appendix ([link](#))

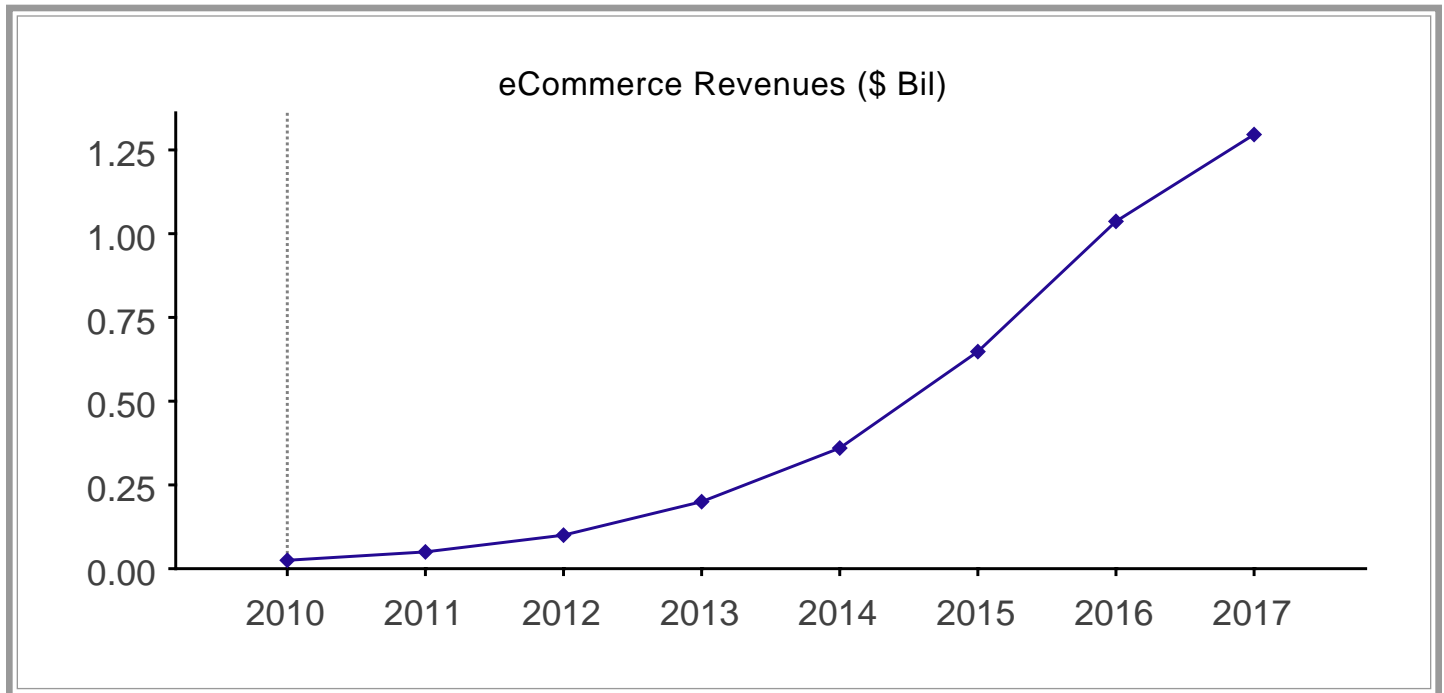
eCommerce

The most important drivers for the eCommerce business are:

- eCommerce Revenues

— ECOMMERCE REVENUES —

Retailers like eBay and Amazon have partnered with Facebook to leverage Facebook's growing base of users. Through Facebook, user can see reviews of the products and see how many people 'liked' a particular product. eCommerce Revenues represents the revenues net of any revenue share with third-parties.



Facebook's eCommerce Revenues are highly speculative as of now and we believe that Facebook earned little revenues from its eCommerce business in 2010, since Facebook focused on expanding its presence across retailers before monetizing this business. However, we expect this business to grow to a significant amount in future.

Forecast Rationale

We considered the following factors for our forecast:

1. SOCIAL NETWORKS GIVES SHOPPERS AN EXCELLENT PLATFORM TO SHOP – People often need advice before buying any product. For example, a user would want to know the reviews of a particular mobile phone, before buying it on eBay or Amazon. Facebook's 'like' feature enables user to understand how many people liked the product.
2. RETAILERS LIKELY TO PAY FACEBOOK ONCE THEY START SEEING RESULTS – In 2010, many retailers have partnered with Facebook, and they have started to see positive results from this partnership. For example, [according to a report](#), referral traffic to the most active retailers on Facebook increased 70% over the period from Black Friday through Cyber Monday. On Black Friday of 2010, there was more than 6x the number of status updates related to retail purchases as the previous Friday.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

	2010	2011	2012	2013	2014	2015	2016	2017
Total Revenue (Bil \$)	0.02	0.05	0.10	0.20	0.36	0.65	1.04	1.30
Direct Expense (Mil \$)	0.76	1.69	3.47	7.82	15.1	28.2	43.9	54.3
Indirect Expense (Mil \$)	17.5	33.1	62.5	119	209	368	584	806
Gross Profit (Bil \$)	0.02	0.05	0.10	0.19	0.34	0.62	0.99	1.24
Free Cash Flow (Mil \$)	N/A	15.2	34.0	72.4	135	251	408	435

In addition, you can see the detailed P&L for the eCommerce business in the Appendix ([link](#))

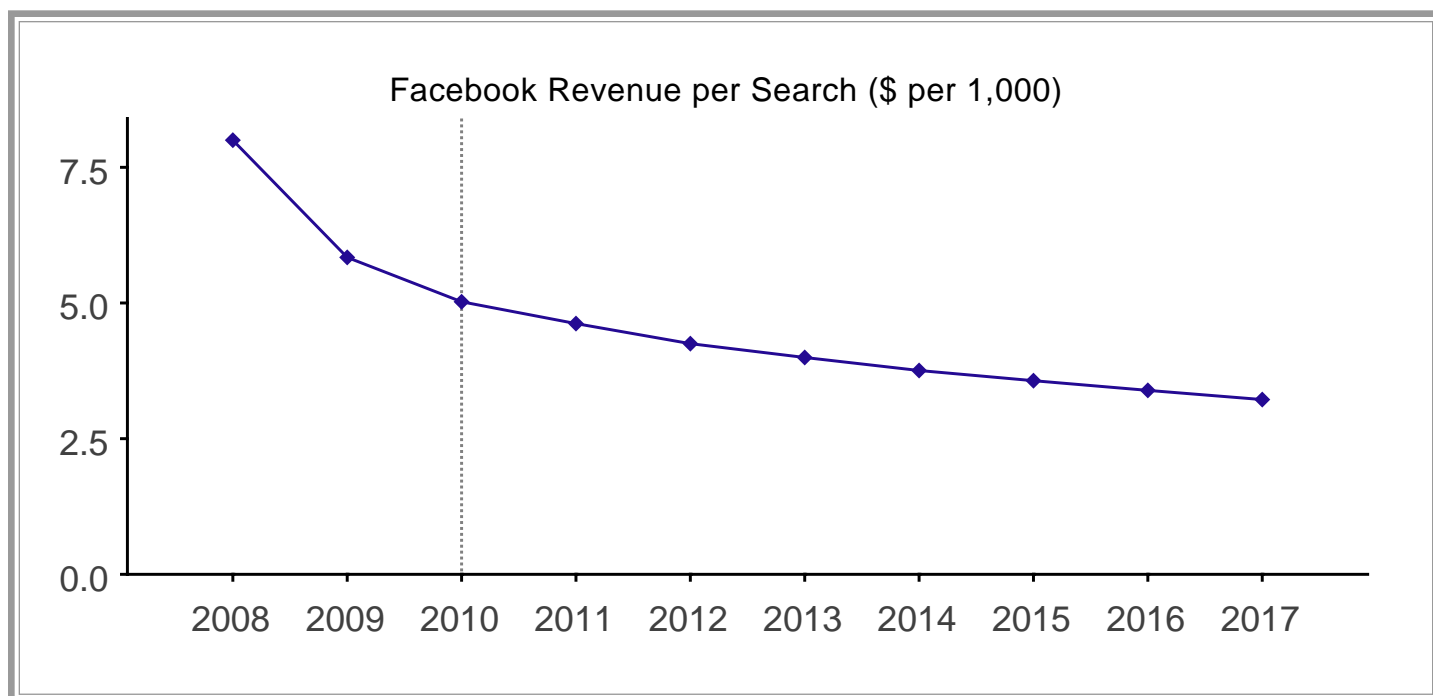
Search Advertising

The most important drivers for the Search Advertising business are:

- Facebook Revenue per Search
- Facebook Search Market Share
- Global Internet Users

— FACEBOOK REVENUE PER SEARCH —

Facebook's Revenue Per Search (RPS) represents the average advertising revenue generated by Facebook for every 1,000 searches conducted on Facebook.com. Revenue per search is primarily a function of the click through rate (CTR) on ads placed alongside search results, as well as the price paid by advertisers for every user click (CPC).



We estimate that Facebook's RPS declined from \$8 in 2008 to around \$5 in 2010. We expect the Facebook Revenue per Search to continue to decline.

Forecast Rationale

Supporting:

1. INCREASING INTERNATIONAL MIX – RPS in the US has always been more than the RPS in most international markets. We would expect the international mix of total searches to increase going forward, which should be a drag on overall RPS, even as we would expect standalone RPS internationally to increase going forward.
2. NATURE OF SEARCHES ON FACEBOOK MAY TO PROVE TO BE A HINDRANCE – It's unclear whether Facebook will become a search destination like Google, Yahoo or Bing. If search becomes central to Facebook, than the nature of searches may become more commercial which will attract higher paying advertisers to advertise on Facebook. A risk is that search on Facebook remains an ancillary feature and that the nature of searches on Facebook will not be as attractive to advertisers

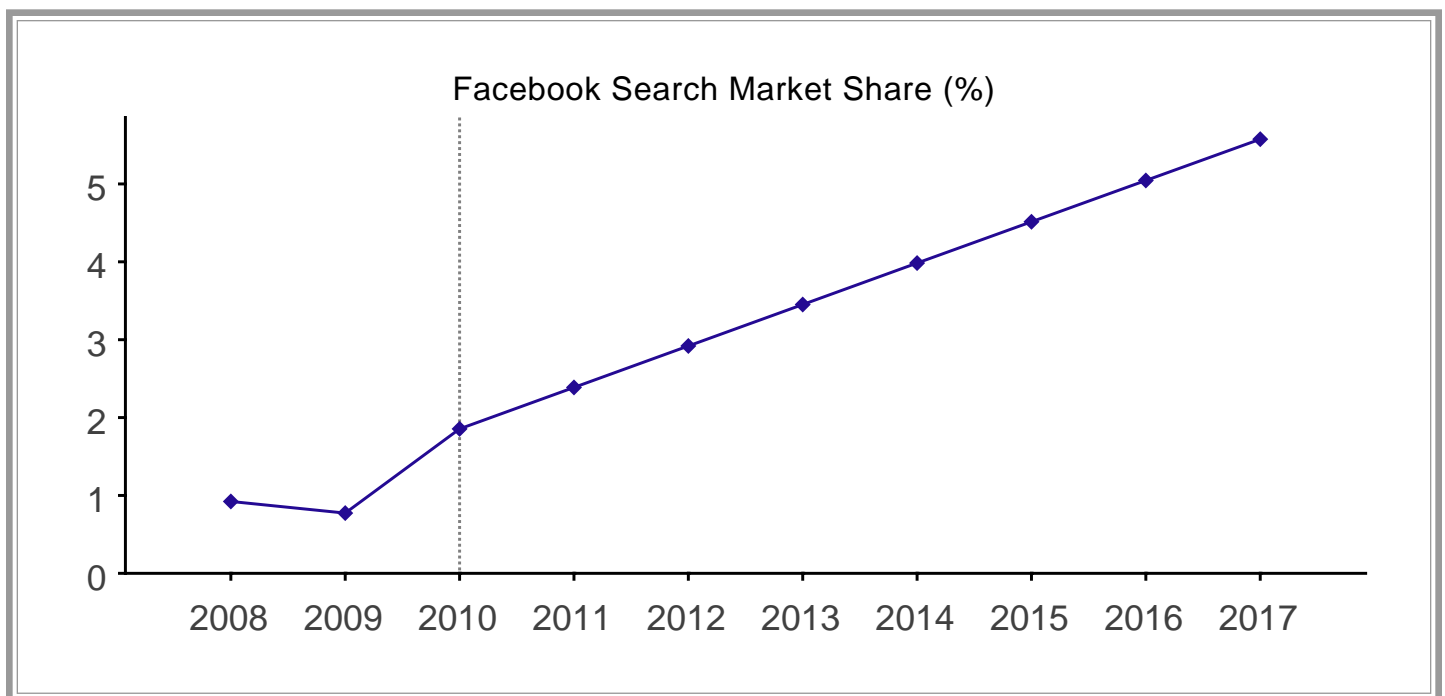
Mitigating:

3. OPTIMIZATION OF E-COMMERCE WEBSITES DRIVING UP CONVERSION RATES – The optimization of e-commerce sites will improve conversion rates and enable merchants to bid more for each click. In particular, online retailers are making significant improvements to improve their search facilities, ramping up their fraud detection technology, and adopting standardized money-back policies--all of which should help drive conversion rates up.
4. KEYWORD PRICE INFLATION – A larger advertiser base and more automated bidding will increase the number of keywords that advertisers bid on.
5. MORE RELEVANT ADS, WHICH WILL CAUSE USERS TO CLICK ON THEM MORE FREQUENTLY

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

– FACEBOOK SEARCH MARKET SHARE –

Facebook Search Market Share represents the percentage of worldwide Internet searches that are conducted on Facebook. Facebook's primary competitors are Google, Yahoo! Search, Microsoft's Bing, and AOL.



We estimate that Facebook Search Market Share increased from around 0.9% in 2008 to around 1.9% in 2010. Trefis forecasts that Facebook will continue to gain share in the future.

Forecast Rationale

Supporting Factors:

1. SOCIAL SEARCH RESULTS GAINING TRACTION – Search results are starting to incorporate social elements that make results increasingly personalized. For example, a user searching about a BlackBerry phone using Facebook can see which friends or other people in his/her network liked the new BlackBerry model.
2. WIDENING PRESENCE OF FACEBOOK – Facebook has more than 500 million average unique visitors per month, which means that Facebook's widening presence gives it a chance to become a major search player.

3. PARTNERSHIP WITH MICROSOFT – Facebook's partnership with Microsoft will enable Facebook to use Microsoft's search technology. This will help Facebook provide better and more relevant search results to users. Microsoft Bing has also started to give real time search results from Facebook by letting users know what their Facebook friends think about the topics they are seeking information on.
4. FACEBOOK IS WELL POSITIONED FOR MOBILE SEARCH – Facebook's mobile apps are amongst the most commonly used apps on devices like the iPhone and Android-based phones. The company's presence on mobile phones across different mobile platforms provides it a wide mobile user base that can potentially drive mobile searches

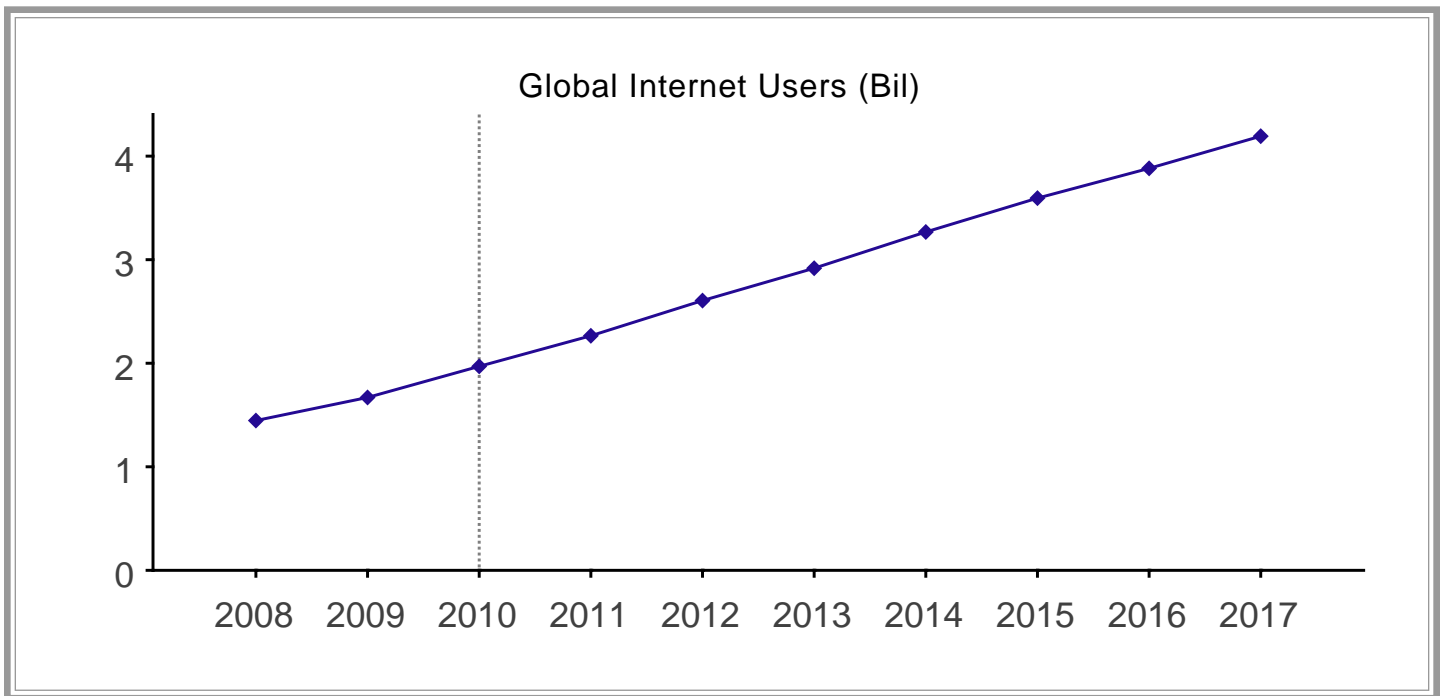
Mitigating factors:

5. FACEBOOK BAN IN SOME COUNTRIES – Facebook has faced issues in the past with some countries banning it completely. It includes [China](#) and Pakistan. However, [the banned order in Pakistan was later revoked](#). If Facebook is able to resolve this issues, then its Facebook Search Market Share can get a boost.
6. PRIVACY ISSUES – Facebook has been involved in a few privacy issues in the past and it presents a major risk to the company. These issues relate to making some of the user's information public by default. Facebook resolving these issues will be important.

Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

— GLOBAL INTERNET USERS —

This represents the number of Internet users globally.



Global Internet Users has increased from 918 million in 2005 to 1.67 billion in 2009. We expect Global Internet Users to increase.

Forecast Rationale

- I. MORE ADVANCED MOBILE PHONES WITH INTERNET CAPABILITIES – Growing adoption of Internet-capable mobile phones by non-PC Internet users will increase the total number of Internet users

2. CONTINUED EXPANSION OF THE BROADBAND PENETRATION RATE – The increasing availability of reasonably-priced residential broadband services will make it more attractive for residences currently without Internet access to sign up. Lower cost access to the Internet provided by companies such as AT&T and Verizon should increase access. Sources for historical data and explanations can be found on the Trefis.com website ([link](#))

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Revenue (Mil \$)	71.4	61.6	149	219	300	393	501	623	750	893
Direct Expense (Mil \$)	0.73	1.69	4.52	7.40	10.4	15.4	21.1	27.1	31.8	37.5
Indirect Expense (Mil \$)	61.7	49.0	104	145	188	235	291	354	423	556
Gross Profit (Mil \$)	70.6	59.9	144	211	290	377	480	596	718	856
Free Cash Flow (Mil \$)	N/A	N/A	N/A	66.7	102	142	188	241	295	300

In addition, you can see the detailed P&L for the Search Advertising business in the Appendix ([link](#))

Appendix

Summary P&L for Facebook

Summary P&L for Facebook

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Revenues (Bil \$)	0.11	0.33	0.67	1.89	3.22	4.73	6.58	8.64	10.8	12.7	14.4
Text & Display Ads (% of total)	100	78.3	90.8	64.3	55.6	51.7	48.7	46.8	45.0	43.9	43.5
Credits on Games & Applications (% of total)	N/A	N/A	N/A	26.4	36.0	39.9	42.2	43.2	43.2	42.1	41.3
eCommerce (% of total)	N/A	N/A	N/A	1.32	1.55	2.11	3.04	4.16	6.03	8.14	8.98
Search Advertising (% of total)	N/A	21.7	9.17	7.89	6.81	6.36	5.97	5.80	5.80	5.89	6.19
Direct Expenses (Bil \$)	0.00	0.00	0.02	0.40	0.89	1.44	2.13	2.87	3.58	4.13	4.60
Text & Display Ads (% of total)	100	78.3	90.8	79.0	74.3	71.7	69.2	67.1	64.5	62.2	61.2
Credits on Games & Applications (% of total)	N/A	N/A	N/A	9.74	14.5	16.6	18.0	18.6	18.6	17.9	17.4
eCommerce (% of total)	N/A	N/A	N/A	1.62	2.08	2.93	4.31	5.97	8.64	11.5	12.6
Search Advertising (% of total)	N/A	21.7	9.17	9.68	9.11	8.82	8.48	8.32	8.31	8.35	8.71
Gross Profit (Bil \$)	0.11	0.33	0.65	1.49	2.33	3.29	4.45	5.77	7.18	8.60	9.83
Text & Display Ads (% of total)	100	78.3	90.8	79.0	74.3	71.7	69.2	67.1	64.5	62.2	61.2
Credits on Games & Applications (% of total)	N/A	N/A	N/A	9.74	14.5	16.6	18.0	18.6	18.6	17.9	17.4
eCommerce (% of total)	N/A	N/A	N/A	1.62	2.08	2.93	4.31	5.97	8.64	11.5	12.6
Search Advertising (% of total)	N/A	21.7	9.17	9.68	9.11	8.82	8.48	8.32	8.31	8.35	8.71
Indirect Expenses (Bil \$)	0.13	0.28	0.53	1.08	1.59	2.13	2.78	3.50	4.27	5.06	6.38
Text & Display Ads (% of total)	100	78.3	90.8	79.0	74.3	71.7	69.2	67.1	64.5	62.2	61.2
Credits on Games & Applications (% of total)	N/A	N/A	N/A	9.74	14.5	16.6	18.0	18.6	18.6	17.9	17.4
eCommerce (% of total)	N/A	N/A	N/A	1.62	2.08	2.93	4.31	5.97	8.64	11.5	12.6
Search Advertising (% of total)	N/A	21.7	9.17	9.68	9.11	8.82	8.48	8.32	8.31	8.35	8.71
Free Cash Flow (Bil \$)	N/A	N/A	N/A	N/A	0.73	1.16	1.68	2.27	2.91	3.54	3.44
Text & Display Ads (% of total)	N/A	N/A	N/A	N/A	74.3	71.7	69.2	67.1	64.5	62.2	61.2
Credits on Games & Applications (% of total)	N/A	N/A	N/A	N/A	14.5	16.6	18.0	18.6	18.6	17.9	17.4
eCommerce (% of total)	N/A	N/A	N/A	N/A	2.08	2.93	4.31	5.97	8.64	11.5	12.6
Search Advertising (% of total)	N/A	N/A	N/A	N/A	9.11	8.82	8.48	8.32	8.31	8.35	8.71

Detailed P&L for the Text & Display Ads business

The most important drivers for the Text & Display Ads business are discussed above, here is the detailed P&L.

Text & Display Ads: Detailed P&L

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenues											
Text & Display Ads Revenue (Bil \$)	0.11	0.26	0.61	1.22	1.79	2.44	3.21	4.05	4.84	5.59	6.28
Revenue per Page View (RPM)	0.55	0.47	0.38	0.45	0.46	0.48	0.49	0.51	0.52	0.53	0.54
Page Views per User (per Month)	347	372	392	413	422	430	439	447	456	465	470
Facebook Unique Visitors (Bil)	0.05	0.12	0.34	0.54	0.76	0.99	1.24	1.49	1.71	1.90	2.07
<i>Total Revenues</i> (Bil \$)	0.11	0.26	0.61	1.22	1.79	2.44	3.21	4.05	4.84	5.59	6.28
Expenses											
Direct Expenses (Mil \$)	1.02	2.64	16.8	36.9	60.4	84.7	125	170	210	236	263
Storage Cost per Megabyte (\$ per 1,000)	4.95	3.58	2.15	1.50	1.05	0.79	0.67	0.57	0.48	0.41	0.35
Data stored per registered user (Megabytes)	5.50	8.15	26.1	52.2	78.3	109	153	199	249	299	344
Registered Users (Bil)	0.04	0.12	0.35	0.60	0.86	1.12	1.40	1.68	1.93	2.13	2.30
Average page size (Megabytes)	0.25	0.50	0.90	1.62	2.59	4.15	5.81	8.13	10.6	12.2	14.6
Page Views per User (per Month)	347	372	392	413	422	430	439	447	456	465	470
Facebook Unique Visitors (Bil)	0.05	0.12	0.34	0.54	0.76	0.99	1.24	1.49	1.71	1.90	2.07
Cost per 1000 Gbps (\$)	34.5	34.0	33.3	32.7	32.0	31.4	30.7	30.1	29.5	28.9	28.3
Indirect Expenses (Bil \$)	0.13	0.22	0.49	0.85	1.18	1.53	1.92	2.35	2.75	3.15	3.91
CapEx % of Gross Profit (%)	49.4	27.2	25.2	23.2	21.7	20.2	19.2	18.2	17.2	16.2	15.2
Corporate Tax rate (%)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Net working capital as % of Revenues (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Facebook Employees (K)	0.45	0.80	1.20	1.74	2.26	2.83	3.53	4.42	5.30	6.36	7.32
Salary, Benefits & Overhead Costs per Facebook Employee (\$ K)	206	225	261	287	316	338	355	370	384	400	414
<i>Total Expenses</i> (Bil \$)	0.13	0.23	0.50	0.89	1.24	1.61	2.05	2.52	2.96	3.39	4.17
Gross Profits (Bil \$)	0.11	0.26	0.59	1.18	1.73	2.36	3.08	3.88	4.63	5.35	6.01
Free Cash Flow (Bil \$)	N/A	N/A	N/A	N/A	0.54	0.83	1.16	1.52	1.88	2.20	2.11

Detailed P&L for the Credits on Games & Applications business

The most important drivers for the Credits on Games & Applications business are discussed above, here is the detailed P&L.

Credits on Games & Applications: Detailed P&L

	2010	2011	2012	2013	2014	2015	2016	2017
Revenues								
Games & Applications Revenue (Bil \$)	0.50	1.16	1.88	2.78	3.74	4.64	5.36	5.96
Games & Applications Revenue per Registered User (\$)	0.84	1.34	1.68	1.98	2.22	2.40	2.52	2.59
Registered Users (Bil)	0.60	0.86	1.12	1.40	1.68	1.93	2.13	2.30
<i>Total Revenues</i> (Bil \$)	0.50	1.16	1.88	2.78	3.74	4.64	5.36	5.96
Expenses								
Direct Expenses (Bil \$)	0.35	0.82	1.34	1.98	2.66	3.31	3.82	4.25
Facebook share % (%)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Storage Cost per Megabyte (\$ per 1,000)	1.50	1.05	0.79	0.67	0.57	0.48	0.41	0.35
Data stored per registered user (Megabytes)	52.2	78.3	109	153	199	249	299	344
Registered Users (Bil)	0.60	0.86	1.12	1.40	1.68	1.93	2.13	2.30
Average page size (Megabytes)	1.62	2.59	4.15	5.81	8.13	10.6	12.2	14.6
Page Views per User (per Month)	413	422	430	439	447	456	465	470
Facebook Unique Visitors (Bil)	0.54	0.76	0.99	1.24	1.49	1.71	1.90	2.07
Cost per 1000 Gbps (\$)	32.7	32.0	31.4	30.7	30.1	29.5	28.9	28.3
Indirect Expenses (Bil \$)	0.11	0.23	0.35	0.50	0.65	0.79	0.91	1.11
CapEx % of Gross Profit (%)	23.2	21.7	20.2	19.2	18.2	17.2	16.2	15.2
Corporate Tax rate (%)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Net working capital as % of Revenues (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Facebook Employees (K)	1.74	2.26	2.83	3.53	4.42	5.30	6.36	7.32
Salary, Benefits & Overhead Costs per Facebook Employee (\$ K)	287	316	338	355	370	384	400	414
<i>Total Expenses</i> (Bil \$)	0.46	1.05	1.69	2.48	3.31	4.10	4.73	5.36
Gross Profits (Bil \$)	0.15	0.34	0.55	0.80	1.07	1.33	1.54	1.71
Free Cash Flow (Mil \$)	N/A	105	192	301	422	540	633	600

Detailed P&L for the eCommerce business

The most important drivers for the eCommerce business are discussed above, here is the detailed P&L.

eCommerce: Detailed P&L

	2010	2011	2012	2013	2014	2015	2016	2017
Revenues								
eCommerce Revenues (Bil \$)	0.02	0.05	0.10	0.20	0.36	0.65	1.04	1.30
eCommerce Revenues (\$ Bil)	0.02	0.05	0.10	0.20	0.36	0.65	1.04	1.30
<i>Total Revenues</i> (Bil \$)	0.02	0.05	0.10	0.20	0.36	0.65	1.04	1.30
Expenses								
Direct Expenses (Mil \$)	0.76	1.69	3.47	7.82	15.1	28.2	43.9	54.3
Storage Cost per Megabyte (\$ per 1,000)	1.50	1.05	0.79	0.67	0.57	0.48	0.41	0.35
Data stored per registered user (Megabytes)	52.2	78.3	109	153	199	249	299	344
Registered Users (Bil)	0.60	0.86	1.12	1.40	1.68	1.93	2.13	2.30
Average page size (Megabytes)	1.62	2.59	4.15	5.81	8.13	10.6	12.2	14.6
Page Views per User (per Month)	413	422	430	439	447	456	465	470
Facebook Unique Visitors (Bil)	0.54	0.76	0.99	1.24	1.49	1.71	1.90	2.07
Cost per 1000 Gbps (\$)	32.7	32.0	31.4	30.7	30.1	29.5	28.9	28.3
Indirect Expenses (Mil \$)	17.5	33.1	62.5	119	209	368	584	806
CapEx % of Gross Profit (%)	23.2	21.7	20.2	19.2	18.2	17.2	16.2	15.2
Corporate Tax rate (%)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Net working capital as % of Revenues (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Facebook Employees (K)	1.74	2.26	2.83	3.53	4.42	5.30	6.36	7.32
Salary, Benefits & Overhead Costs per Facebook Employee (\$ K)	287	316	338	355	370	384	400	414
<i>Total Expenses</i> (Mil \$)	18.3	34.8	66.0	127	224	396	628	860
Gross Profits (Bil \$)	0.02	0.05	0.10	0.19	0.34	0.62	0.99	1.24
Free Cash Flow (Mil \$)	N/A	15.2	34.0	72.4	135	251	408	435

Detailed P&L for the Search Advertising business

The most important drivers for the Search Advertising business are discussed above, here is the detailed P&L.

Search Advertising: Detailed P&L

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenues										
Facebook Search Net Revenues (Mil \$)	71.4	61.6	149	219	300	393	501	623	750	893
Facebook Revenue per Search (\$ per 1,000)	8.00	5.84	5.02	4.62	4.25	4.00	3.76	3.57	3.39	3.22
Facebook Search Market Share (%)	0.92	0.77	1.85	2.39	2.92	3.45	3.98	4.51	5.04	5.57
Global Internet Users (Bil)	1.45	1.67	1.97	2.27	2.61	2.92	3.27	3.59	3.88	4.19
Searches Per Internet User (per Month)	55.7	68.1	77.0	83.1	88.1	92.5	97.1	101	107	112
Facebook's Share of RPS (%)	N/A	N/A	88.0	88.0	88.0	88.0	88.0	88.0	88.0	88.0
<i>Total Revenues</i> (Mil \$)	71.4	61.6	149	219	300	393	501	623	750	893
Expenses										
Direct Expenses (Mil \$)	0.73	1.69	4.52	7.40	10.4	15.4	21.1	27.1	31.8	37.5
Storage Cost per Megabyte (\$ per 1,000)	3.58	2.15	1.50	1.05	0.79	0.67	0.57	0.48	0.41	0.35
Data stored per registered user (Megabytes)	8.15	26.1	52.2	78.3	109	153	199	249	299	344
Registered Users (Bil)	0.12	0.35	0.60	0.86	1.12	1.40	1.68	1.93	2.13	2.30
Average page size (Megabytes)	0.50	0.90	1.62	2.59	4.15	5.81	8.13	10.6	12.2	14.6
Page Views per User (per Month)	372	392	413	422	430	439	447	456	465	470
Facebook Unique Visitors (Bil)	0.12	0.34	0.54	0.76	0.99	1.24	1.49	1.71	1.90	2.07
Cost per 1000 Gbps (\$)	34.0	33.3	32.7	32.0	31.4	30.7	30.1	29.5	28.9	28.3
Indirect Expenses (Mil \$)	61.7	49.0	104	145	188	235	291	354	423	556
CapEx % of Gross Profit (%)	27.2	25.2	23.2	21.7	20.2	19.2	18.2	17.2	16.2	15.2
Corporate Tax rate (%)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Net working capital as % of Revenues (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Facebook Employees (K)	0.80	1.20	1.74	2.26	2.83	3.53	4.42	5.30	6.36	7.32
Salary, Benefits & Overhead Costs per Facebook Employee (\$ K)	225	261	287	316	338	355	370	384	400	414
<i>Total Expenses</i> (Mil \$)	62.5	50.7	108	152	198	250	312	381	454	593
Gross Profits (Mil \$)	70.6	59.9	144	211	290	377	480	596	718	856
Free Cash Flow (Mil \$)	N/A	N/A	N/A	66.7	102	142	188	241	295	300

