Facebook (NASDAQ:FB)

Technology Coverage

02-Mar-2016

"The immovable digital ecosystem is here for the long run"

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Initiating coverage – BUY Report

Target Price: US$135, **representing 24% upside**

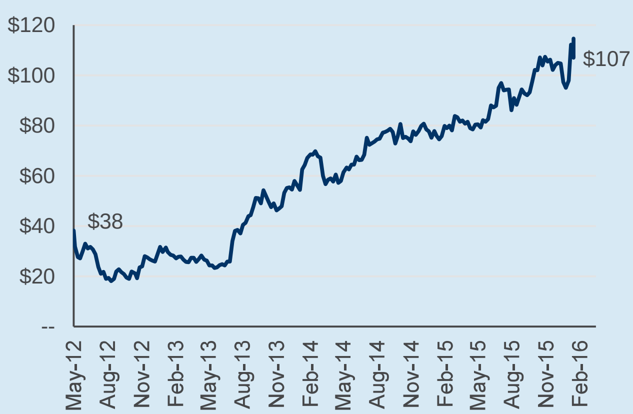
Capitalization table

Price per share (02-Mar-2016)	US$109.00
FD Shares outstanding (m)	2,968.1
Equity value (US$m)	$323,517.9
(+) Capital leases (US$m)	114.0
(-) Cash & equiv. (US$m)	(18,434.0)
Enterprise value (US$m)	$305,197.9

Key data

FY	2015A	2016F	2017F
Sales (US$m)	17,928.0	27,311.8	39,568.3
EBITDA (US$m)	8,171.0	12,534.6	19,860.2
EPS (US$)	1.29	2.33	3.75
EV / EBITDA (x)	37.4x	24.3x	15.4x
P / E (x)	84.5x	46.8x	29.0x

Price Chart Since IPO (US$)



Company description

Facebook ("FB" or the "Company"), founded in 2004, operates as a mobile application and website that enables people to connect, share, discover, and communicate with each other on mobile devices and personal computers worldwide. It primarily operates Facebook, Messenger, WhatsApp, Instagram, and Oculus virtual reality ("VR"). The Company currently has >1bn daily active users.

Investment thesis

"Facebook's unparalleled grip on user engagement, paired with leading management driving continuous innovative approaches to connecting the world, will enable the Company to be the dominant digital ecosystem for years to come…"

Catalyst

- Best of breed platform for consumer shift to mobile
- Scalable business model leaves opportunity for growth investments
- Launch and integration of innovative product / service pipeline into ecosystem

Valuation

We are initiating a buy of Facebook with a target price of US$135 (~19x EV / 2017F EBITDA), representing ~24% upside to its current price (US$109), based on our DCF analysis of Facebook and the mid-high end of the EV / 2017F EBITDA comparables.

Table of contents

Executive summary

Thesis

"Facebook's unparalleled grip on user engagement, paired with leading management driving continuous innovative approaches to connecting the world, will enable the Company to be the dominant digital ecosystem for years to come…"

Facebook has grown from a social media company into a revolutionary digital ecosystem. The Company has unparalleled user engagement levels through continued innovation fuelled by an increasing R&D budget. Aside from user engagement, the Company is devoted to expanding its user base to cover the whole world as well as developing an ease for communication between people and their families, the groups they support, the things they like, and the businesses they care about.

The Company's moat is their users' dependence to the ecosystem, which inevitably leads to greater levels of data collection which they can utilize to increase their service offering to marketers.

Facebook is broadening their business areas while aiming to interconnect them to become a "Wal-Mart" of internet communication: A one stop shop for all your user needs …

Catalysts

- Best of breed platform for consumer shift to mobile
  - The Company is positioned strongly through its extensive depth on the standalone Facebook app, Instagram, and its communication tools, WhatsApp and Messenger
- Scalable business model leaves opportunity for growth investments
  - The high growth nature of the business and its operational scale give significant room to continue pursuing accelerated development through R&D investments and acquisitions
- Launch and integration of innovative product / service pipeline into ecosystem
  - Introduction of Facebook Pay and Oculus VR are clear signs that Facebook is evolving into a wider platform with transformative capabilities, we believe the Company will continue to redefine its ecosystem and the way communication is done between people and businesses

Valuation

We are initiating a buy of Facebook with a target price of US$135, representing ~24% upside to its current price (US$109), based on our DCF analysis of Facebook and the mid-high end of the EV / 2017F EBITDA comparables (~19x).

Financial overview[1]

In US$m, unless noted otherwise

Profit model	2014	2015	2016F	2017F	2018F
Advertising revenues	11,492	17,080	26,560	38,853	56,984
Payment and other	974	848	752	715	716
Total revenues	**12,466**	**17,928**	**27,312**	**39,568**	**57,699**
(-) Cost of revenue	(2,153)	(2,866)	(4,364)	(5,935)	(8,655)
(-) Research and development	(2,666)	(4,817)	(7,879)	(10,683)	(15,579)
(-) Marketing and sales	(1,679)	(2,724)	(3,680)	(5,540)	(8,655)
(-) General and administrative	(973)	(1,295)	(1,355)	(1,415)	(1,475)
(-) Total costs and expenses	**(7,471)**	**(11,702)**	**(17,278)**	**(23,573)**	**(34,364)**
EBIT	**4,995**	**6,226**	**10,034**	**15,995**	**23,336**
(-) Interest expense	(84)	(31)	(54)	(54)	(54)
EBT	**4,911**	**6,195**	**9,980**	**15,941**	**23,282**
(-) Taxes	(1,971)	(2,505)	(3,050)	(4,782)	(6,984)
Net income	**2,940**	**3,690**	**6,929**	**11,159**	**16,297**
(-) Adjustment	(15)	(20)	(20)	(20)	(20)
N.I. to class A / B	**2,925**	**3,670**	**6,909**	**11,139**	**16,277**
Class A shares (m)	2,236	2,295	na	na	na
Class B shares (m)	563	551	na	na	na
(/) Total A/B shares (m)	2,799	2,846	2,968	2,968	2,968
EPS (US$ / share)	**$1.05**	**$1.29**	**$2.33**	**$3.75**	**$5.48**
EBIT	**4,995**	**6,226**	**10,034**	**15,995**	**23,336**
(+) D&A	1,243	1,945	2,501	3,865	5,639
EBITDA	**6,238**	**8,171**	**12,535**	**19,860**	**28,974**

Growth and margins	2014	2015	2016F	2017F	2018F
Sales growth (%)	*58.4%*	*43.8%*	*52.3%*	*44.9%*	*45.8%*
EBITDA growth (%)	*63.5%*	*31.0%*	*53.4%*	*58.4%*	*45.9%*
EBIT growth (%)	*78.1%*	*24.6%*	*61.2%*	*59.4%*	*45.9%*
EPS growth (%)	*78.8%*	*23.4%*	*80.5%*	*61.2%*	*46.1%*
EBITDA margin (%)	*50.0%*	*45.6%*	*45.9%*	*50.2%*	*50.2%*
EBIT margin (%)	*40.1%*	*34.7%*	*36.7%*	*40.4%*	*40.4%*
Net income margin (%)	*23.6%*	*20.6%*	*25.4%*	*28.2%*	*28.2%*

Regional ARPU	2014	2015	2016F	2017F	2018F
US & Canada (US$)	$28.68	$41.65	$65.87	$96.83	$142.21
Europe (US$)	$11.60	$14.30	$17.80	$22.89	$29.81
Asia-Pacific (US$)	$4.45	$5.45	$6.66	$8.30	$10.27
Rest of world (US$)	$3.35	$3.85	$5.16	$5.67	$6.57

Balance sheet	2014	2015	2016F	2017F	2018F
Cash & securities	11,199	18,434	26,952	41,285	62,452
A/R	1,678	2,559	3,910	5,664	8,260
Prepaid expenses and other CA	513	659	1,003	1,365	1,990
PP&E, net	3,967	5,687	8,029	10,233	12,714
Intangibles, goodwill and other	22,609	22,068	22,068	22,068	22,068
Total assets	**39,966**	**49,407**	**61,963**	**80,614**	**107,484**
A/P	378	413	629	855	1,247
Accrued expenses	932	1,505	2,291	3,117	4,545
Current portion of capital leases	114	7	--	--	--
Long term capital leases	119	107	107	107	107
Other	2,327	3,157	3,157	3,157	3,157
Total liabilities	**3,870**	**5,189**	**6,184**	**7,236**	**9,056**
Stockholders equity	**36,096**	**44,218**	**55,779**	**73,378**	**98,428**

Cash flow	2014	2015	2016F	2017F	2018F
CFO					
(+) Net Income	2,940	3,688	6,929	11,159	16,297
(+) D&A	1,243	1,945	2,501	3,865	5,639
(+) Other	1,746	2,977	4,535	6,570	9,581
(-) Deferred taxes	(210)	(795)	(1,010)	(1,230)	(1,929)
(-) Change in NWC	(262)	784	(694)	(1,063)	(1,401)
(+) CFO	**5,457**	**8,599**	**12,262**	**19,301**	**28,187**
CFI					
(-) CAPEX	(1,831)	(2,523)	(4,844)	(6,068)	(8,120)
(-) Buy / sell securities	1,243	(6,700)	(5,000)	(5,000)	(5,000)
(-) Other	(5,325)	(211)	(400)	(400)	(400)
(-) CFI	**(5,913)**	**(9,434)**	**(10,244)**	**(11,468)**	**(13,520)**
(+) CFF	**1,448**	**1,427**	**1,500**	**1,500**	**1,500**
Net impact on cash	**992**	**592**	**3,518**	**9,332**	**16,167**
Beginning cash balance	3,323	4,315	4,907	8,425	17,758
(+) Impact	992	592	3,518	9,332	16,167
Ending cash balance	**4,315**	**4,907**	**8,425**	**17,758**	**33,925**
(+) Marketable securities	6,884	13,527	18,527	23,527	28,527
Ending C&MS balance	**11,199**	**18,434**	**26,952**	**41,285**	**62,452**

Regional user base (MAUs)	2014	2015	2016F	2017F	2018F
US & Canada (m)	204	214	223	231	238
Europe (m)	293	312	330	345	363
Asia-Pacific (m)	411	499	596	703	822
Rest of world (m)	410	475	538	616	703

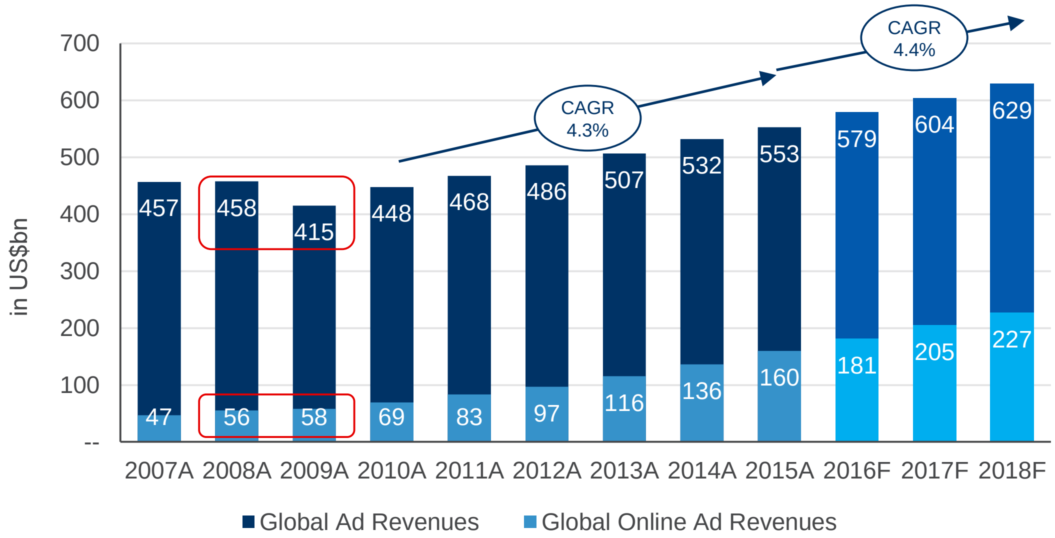
1 Source: Company Fillings (2012 – 2016), KWPMP analysis

Industry review & emerging themes

The Facebook digital ecosystem fights primarily for ad dollars
Overall industry growth has been healthy in recent years after falling 9.4% in 2009 from the economic downturn. The overall growth performance provides promise for Facebook which has its business in online advertising, a segment that actually expanded 4.6% in 2009 (Exhibit 1).

Exhibit 1

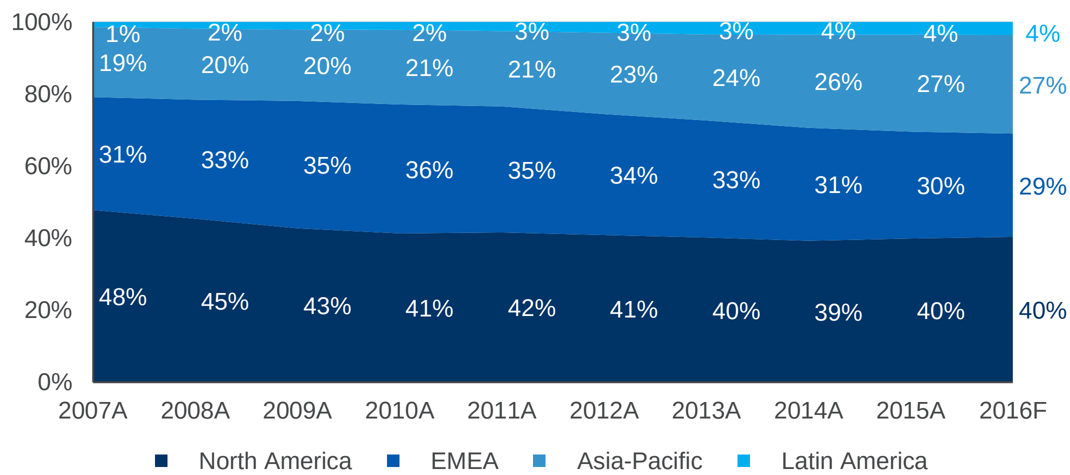
Global online ad revenues vs. total[1]



Forecasted stability is expected to continue in advertising spending in the near future, and online advertising offers the benefit of continuing to take a larger share of the total advertising pie. Growth has been driven by strength in North America and high growth in APAC and LatAm (Exhibit 2).

Exhibit 2

Global online ad revenues by region[1]



1 Source: Zenith Optimedia (2015), Magna Global (2015)

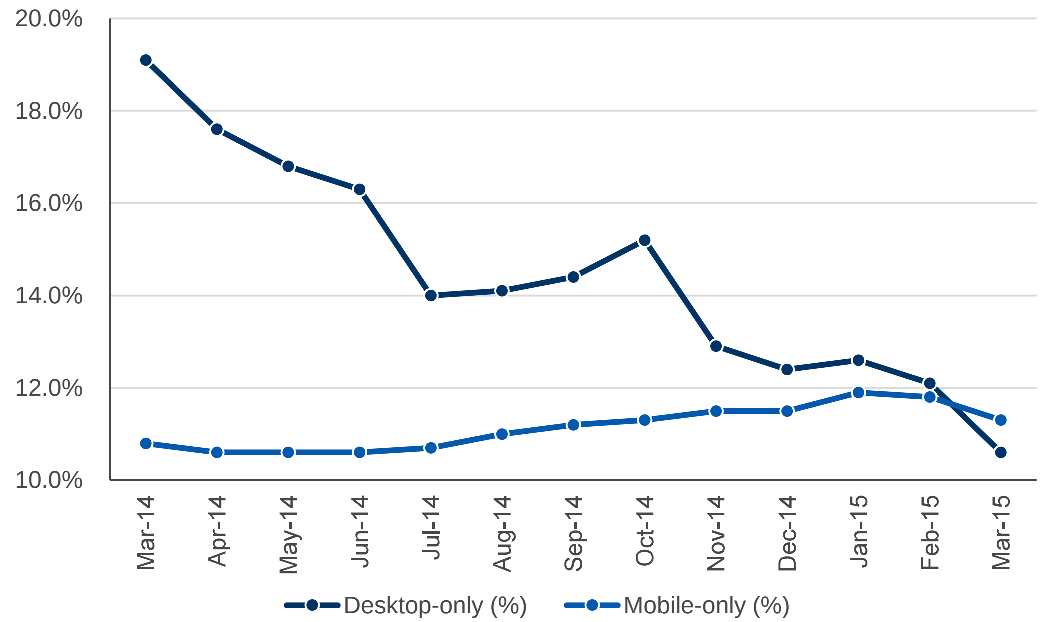
Industry review & emerging themes

Internet usage: desktop vs. mobile

One of the primary themes we've noticed emerged in the last year has been the consumer shift away from desktop internet usage to the mobile space. This is driven primarily by the aggressive smartphone innovation over the last decade. A traditional early adopter market into the global landscape of technological innovation has shown support for this thematic impact (Exhibit 3).

Exhibit 3

Desktop-only vs. mobile-only usage (U.S)[1]



The above chart also provides insight into the activity of users. The crossover does not occur because of the expansiveness of mobile-only users in the last year, but rather the aggressive decline in desktop-only users. This hints at an increase in cross-platform users, signaling the use of mobile to be an impactful theme. It is important to note that mobile in-app advertising is more lucrative for Facebook than desktop ads.

Global competitive landscape

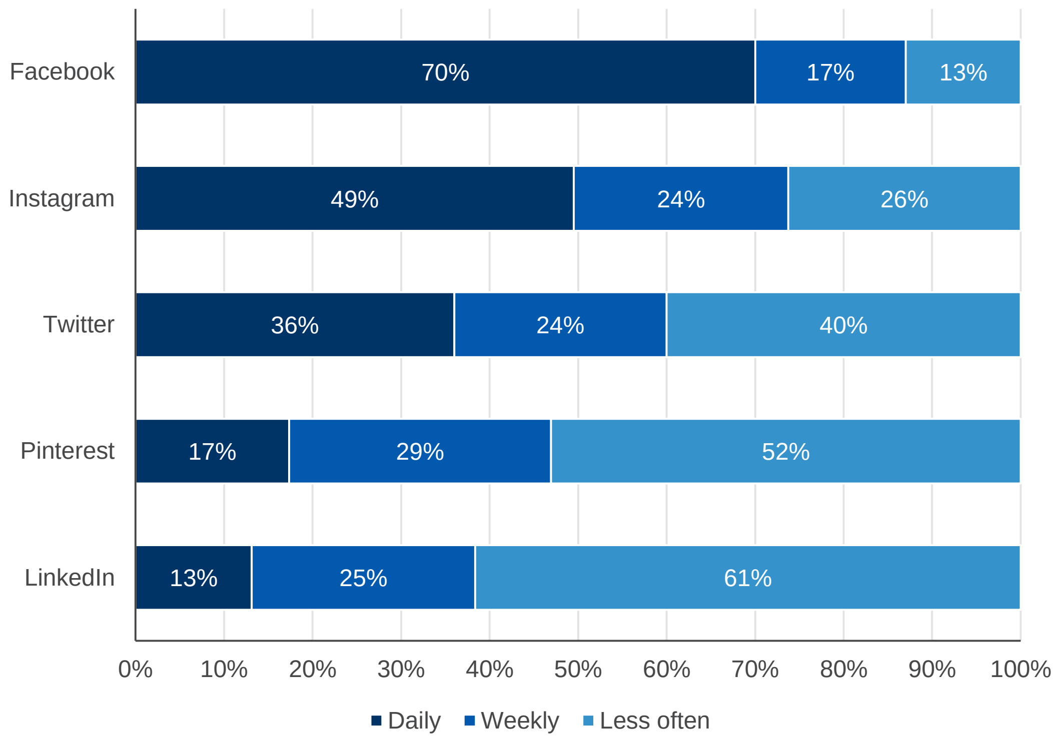
Across Facebook's broad platforms it faces numerous competitors who threaten its positioning in the market. Amongst social media platforms, Facebook holds a monopoly with regards to user engagement and its creation of an interconnected ecosystem serves as a vehicle for the cross-promotion of its numerous platforms (i.e Facebook drives Instagram engagement, etc.) (Exhibit 4).

1 Source: Comscore (2015)

Industry review & emerging themes

Exhibit 4

Frequency of social media site use[1]



Facebook's leadership role in this space has created a cross-platform user dependence that has transferred over to above accelerated growth in a massive market.

The Company is also well-positioned to capitalize on the shift to predominant mobile use, holding a top tier market share, second only to Google (Exhibit 5). However it is worth noting that within the mobile ad revenue segment, Facebook's short-term growth is likely to be driven significantly by their recently launched video capabilities, which are providing a more aggressive competitive environment for Google's YouTube. The Company has noted that they are investigating the development of a dedicated place on Facebook where people can watch videos. The opportunity here lies in the monetization of video ads on mobile, which is expected to surpass video ads on desktop in the near future (Exhibit 6).

1 Source: Pew Research Center (2015)

Industry review & emerging themes

Exhibit 5

Mobile ad revenue share (%)[1]

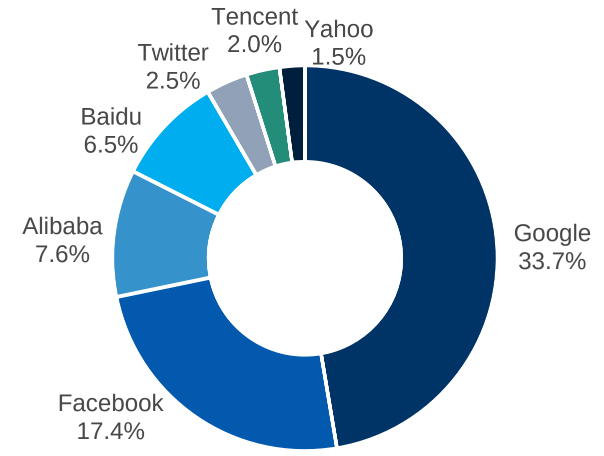
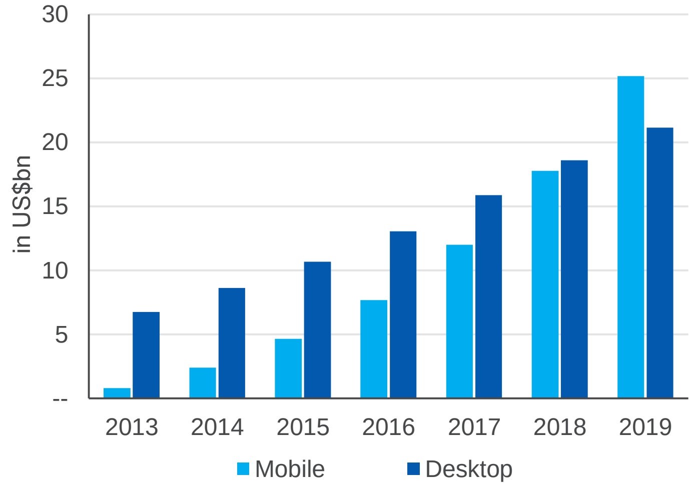


Exhibit 6

Global online video ad revenue[2]



Beyond advertising, Facebook has delved into both payments and hardware. Facebook faces steep competition for its payments segment and low revenue opportunities, but the benefit lies in establishing more of an e-commerce intermediary platform for company pages with items to sell. In hardware, the VR space is led by Facebook's Oculus by wide margins and is a market that has the opportunity to reach ~US$80bn by 2025[3].

Facebook – The sector vanguard

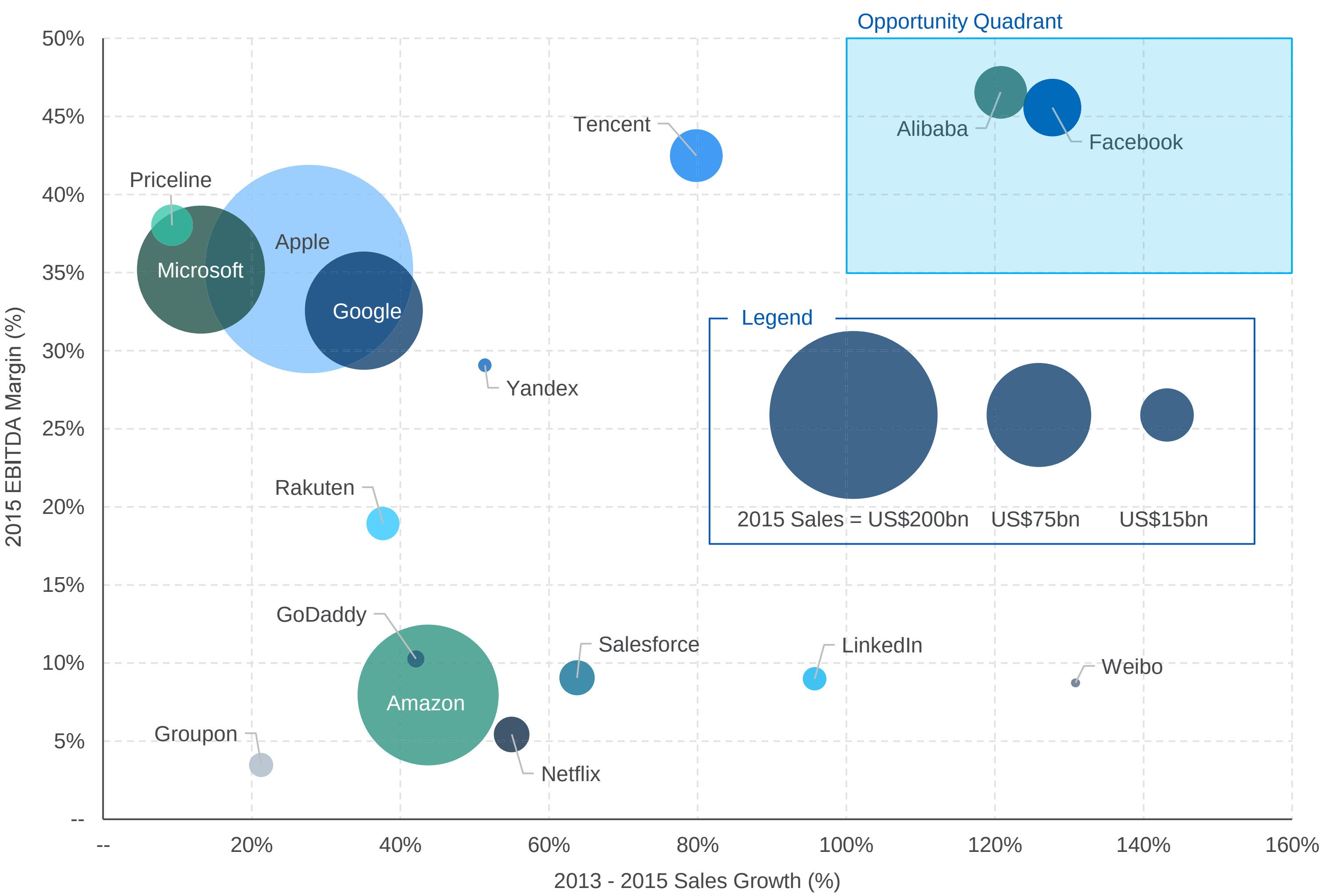
Evaluating the opportunity to invest in best-of-breed technology opportunities, Facebook showed itself as an easy leader in the space, both from a business model and leadership perspective. The Company outpaces other internet / tech companies both from a revenue growth and operating performance perspective. Most importantly, when viewing the playing field and where Facebook stands versus more mature companies, it still holds significant room for growth as it continues to cultivate its share in the advertising marketplace and diversified its business into hardware products (Exhibit 7). We have yet to see the revenue impact from monetizing WhatsApp (advertising revenue) and Oculus (hardware revenue). In addition, it would be to no one's surprise if Facebook went after another home run acquisition between now and the end of 2017.

1 Source: eMarketer (2015)
2 Source: Magna Global (2015)
3 Source: Goldman Sachs Investment Research (2016)

Industry review & emerging themes

Exhibit 6

Growth and profitability comparison amongst leading internet companies[1]



1 Source: KWPMP analysis (2016)

Business model and strategic direction

Facebook is more than a social media company, it is a digital ecosystem company

Facebook uses cross-platform integration to control the amount of time per day a user spends on the Facebook ecosystem: through Facebook's web, Messenger, Instagram, and WhatsApp. The Company's underlying goals are focused on connectivity and engagement, elements the Company continuously attempts to drive home. With the successful execution of its strategy over the past 5+ years, Facebook has created an attractive value proposition to three important targets (Exhibit 7).

Exhibit 7 – Facebook value offerings to primary targets

Targets	Offerings	
Users	Facebook web / mobile	Instagram
	Messenger	WhatsApp
Marketers	Ad space	Ad analytics
	Ad planning tools	Other resources (Instagram, Atlas, etc.)
Developers	Development tools & API	Online payment infrastructure
	Mobile application ads	Show Facebook ads within app

Facebook and Messenger web

Facebook originated its business by developing a web-based user platform, which ultimately created the new leader in social media companies. Since then, Facebook's web presence has evolved into a dynamic and interactive platform with engagement vehicles such as Profile, News Feed, Messenger, Groups, Events, Video, Photos, Search, and Pages. In the last year, some of the pilot innovations to garner user engagement have come from providing more of a community feel for users on Facebook. This includes distress signals during crises, profile banners to show support for certain initiatives (from the Paris flag for terror attacks to Star Wars lightsabers for the recently launched movie), the development of the trending section, and live video events. Facebook is creating a one-stop ecosystem for all users' interests and demands. Their high user engagement has not gone unnoticed, as over 3m businesses actively advertise through the platform.

Business model and strategic direction

Facebook's online platform has successfully created an easy space for SMEs to develop their online brand presence free of charge, helping initiate a simple transition to wanting to use their paid advertising service. Beyond that, Facebook has recently implemented a more seamless way for the processing of charitable donations, an initiative that fits their mandate of creating an ecosystem for all user activities.

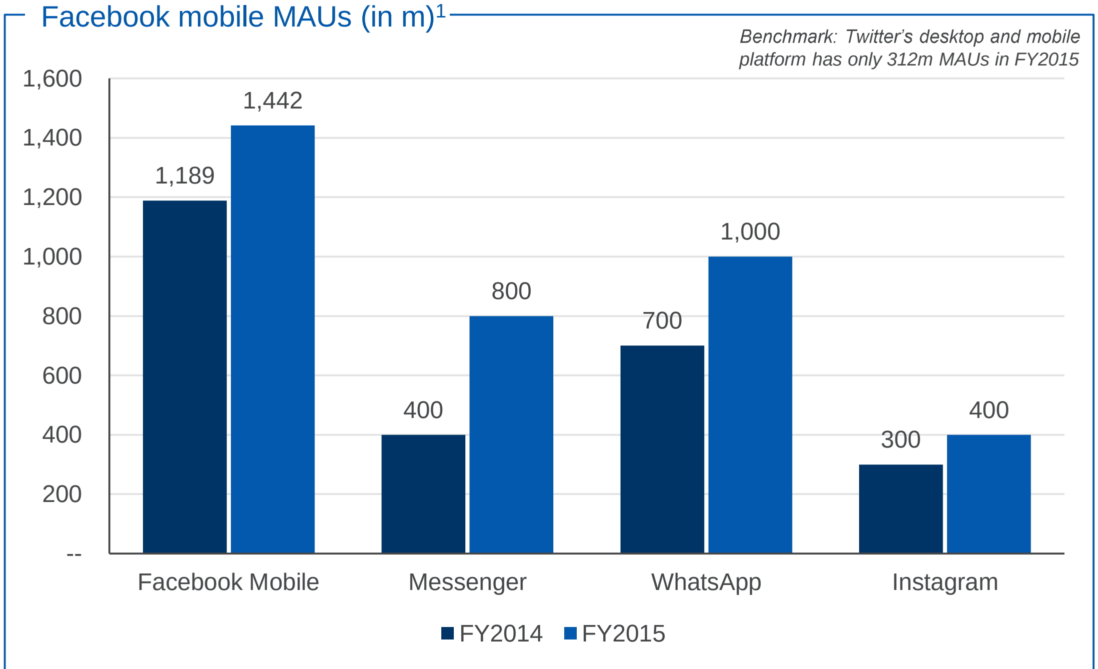
A vital strategic initiative for Facebook is its video viewing platform. This feature is currently solely available on the News Feed. However Facebook is involved in steady investments to create a separate video platform (potential competitor to YouTube).

Facebook and Messenger mobile

The most substantial catalyst for Facebook's continued outperformance is its leading position on the mobile usage theme. Our view is supported by the substantive volume of user-engaging features Facebook has incorporated into their app (along with their ecosystem of apps – Instagram and WhatsApp). This has triggered across-the-board growth in mobile MAUs (Appendix 8).

Exhibit 8

Facebook mobile MAUs (in m)[1]



Due to its strong presence in mobile, Facebook has been capable of leveraging its cross-platform functionality to increase the average price per ad by 23% over the last year, as well as increase ad impressions by 29% over the same period.

1 Source: Facebook (2016)

Business model and strategic direction

The mobile portion of Facebook's business is supplemented with the development of Facebook's Live & Sports Stadium. We believe these two elements will draw noteworthy attention and attract increased traction from users as Facebook builds itself as both a personal experience hub and forum for broad discussion.

Another strategic focus for the Company's mobile platform is working with advertising clients to create more specialized ads depending on target users' regional preferences and network capabilities. To support the feasibility of this, the Company has launched Facebook Lite, a simplified app supported by non-smartphone devices, as well as more custom ads (ads in regions with lower internet access will be slides rather than video).

As a continuation to providing for those with limited online access, Facebook has launched Free Basics, an online platform providing free access to basic internet services to a billion people in underdeveloped nations).

One of the most important levers to Facebook's recent and future success is its development of messenger and its capabilities on mobile. Messenger is being built to run as an add-on to Facebook, as well as a stand-alone application. The app now requests access to your phone contacts to offer you further interactivity, an interesting means of mimicking WhatsApp's offering to users. Beyond this, Messenger also began to integrate three new elements into its system:

- Business partnerships: street addresses in your chats now link to prompts stating "open on Google Maps" or "order an Uber"
    - This element of the business is expected to expand to airline tickets in the future, a testament to Facebook's ecosystem approach to connecting users to "everything" through its all-purpose platform.
    - We do not know of the monetization repercussions, but considering the strong traction of messenger, we expect this to have a meaningful impact on the business.
- Payments, a means for users to pay a friend or a business (early-stage)
    - This service could eventually be interconnected with some of the Company's business partnerships to enable payment through Facebook's platform.
- M, a text-based virtual assistant powered by AI (early-stage)

Instagram

At the end of 2013, Facebook began rolling out ads on its Instagram platform as a primary driver of monetizing on the business they acquired for US$1.0bn in April 2012. Instagram provides users with a photo sharing feed driven by filter customization and more recently, due to Facebook implementations, collages,

Business model and strategic direction

videos (which completely usurped Vine), GIFs, a person-to-person direct photo system, and a more engaging explore page. In addition Instagram has begun rolling out video channels for large scale events such as the holiday season, the US college bowl games, and more. While Instagram started off as a simple user offering, Facebook has been successful in driving engagement to a point where there exists no substitute. The only substantive competition to Instagram, outside of the Facebook ecosystem, remains Snapchat (a company Facebook attempted to acquire in 2014 for US$3.0bn).

Facebook does not disclose the segmentation of revenues by business line, but COO Sheryl Sandberg did note that 98 of Facebook's 100 top spending advertisers are using Instagram for their ads. This however provides little clarity over the amount spent and whether there has been consistent success with the platform. User reactions will be another area to monitor, as ads begin to deplete interest in the app.

WhatsApp

The thesis behind the WhatsApp has been a question of interest for many people trying to understand what sort of benefits Facebook will get from owning a competing messaging service. Little clarity has been provided, but Facebook appears to be developing a communication tool with businesses along with its current people-to-people cross-platform / border chat feature.

In addition, the app will no longer have the US$1 / year service fee that was charged after the first year of usage. This officially makes the app a non-revenue generating business line, but we are bullish on Facebook's ability to adequately monetize the business come 2018.

Oculus

The software master of virtual reality ("VR"), Oculus, is Facebook's unsuspecting platform which we are most excited about in the long term. Zuckerberg committed to a long-term play here that has near term monetization opportunities (it is also their first try at a hardware product). As a member of the Facebook mega-entity, Oculus will receive the proper backing to lead the next generation of market shifting technology.

Facebook is establishing its inventory set-up to begin shipping out Oculus headsets to people in more than 20 countries by March. Later in the year, the Oculus Touch controller will be set to launch as well, thus will supplementing the gaming experience for users.

Business model and strategic direction

Management Overview

Mark Zuckerberg – Founder, Chairman, and CEO (30 y.o)

Facebook's visionary is a Harvard alumni in computer science. He currently is the largest controlling shareholder of Facebook and is responsible for setting the overall direction and product strategy of the enterprise. Additionally, he oversees the service design of the social media giant, all while leading the development of core technology and infrastructure. He has served as CEO and board member since the inception of the Company, and as Chairman of the board since 2012. In 2014, he earned a base salary of US$1 with an additional compensation of US$610,454.

Sheryl K. Sandberg – Chief Operating Officer and Board Member (46 y.o)

Mrs. Sandberg is a Harvard graduate and earned an MBA with a mention for high distinction in addition to a Bachelor's in Economics. She currently oversees Facebook's business operations. Previous employment includes VP of Global Online Sales & Operations at Google, Chief of Staff for the U.S. Treasury department, management consultant at McKinsey & Company, and economist for the World Bank. She has assumed the role of COO since 2008, and has been a member of the board of directors since 2012. In addition, she holds a seat on the Walt Disney, Women for Women International, ONE, and Survey Monkey boards. Including stock awards, Sheryl earned over US$15m in 2014.

David Wehner – Chief Financial Officer (46 y.o)

A perfect example of promotion from within, Mr. Wehner was selected to assume the role of CFO in 2014 after serving the role of VP of Corporate Finance and Business Planning for two years. His mandate currently requires that he lead the finance, facilities and IT teams. He received a Bachelor's in Chemistry from Georgetown University, and earned a Master's degree in Applied Physics from Stanford. Prior to his Facebook experience, David Wehner served as CFO for Zynga, Inc. and as Managing Director at investment banking firm Allen & Company. Including stock awards, David's total compensation for his 2014 service nearly reached US$12m.

Thesis development and catalysts

Thesis

"Facebook's unparalleled grip on user engagement, paired with leading management driving continuous innovative approaches to connecting the world, will enable the Company to be the dominant digital ecosystem for years to come…"

Facebook has grown from a social media company into a revolutionary digital ecosystem. the Company has unparalleled user engagement levels through continued innovation fuelled by an increasing R&D budget. Aside from user engagement, the Company is devoted to expanding its user base to cover the whole world, as well as developing an ease for communication between people and their families, the groups they support, the things they like, and the businesses they care about.

The Company's moat is their users' dependence to the ecosystem, which inevitably leads to greater levels of data collection which they can utilize to increase their service offering to marketers.

Facebook is broadening their business areas while aiming to interconnect them to become a "Wal-Mart" of internet communication: A one stop shop for all your user needs …

Best of breed platform for consumer shift to mobile

Facebook is best positioned for the thematic shift to mobile use over desktop through its ongoing commitment to user enhancement and efforts to monetize its business lines. Sizing up the number eyeballs staring at the monetized platforms will drive continued strength in ARPU growth.

As mobile becomes the more prevalent consumer go-to technology, we believe Facebook has an impressive platform that will enable it to drive high engagement across business lines. The Company devoted itself early on to two strategic pillars that will define its future success in mobile: 1) Developing an integrated, simplified, and accessible mobile platform 2) Finding innovative ways to drive user dependence on their mobile apps.

Facebook's incoming engagement features on mobile are based on the premise of making it the hub for organized discussion and conference. Everyone already shares their opinions, views, and pride on the website from sports to politics to food. We believe the Company has the capability and intent to develop this opportunity into a structured forum / town hall for specialized discussions. We believe this will create a concentration portion of the website with exceptionally high user engagement, thus enabling more targeted ads as well as selling opportunities for marketers (which as we will elaborate later, will be processed through Facebook's internal payment platform). The Company has begun their

Thesis development and catalysts

development of this type of product for their mobile platform in the form of the previously mentioned Sports Stadium. Facebook considers that it has ~650m sports fans, a number that is comparable to other interest platforms (politics, food, etc.). We expect the initial impact to happen by FY2016.

A major platform that will provide value enhancement opportunities is Facebook's video capabilities, which were only fully launched last year and are in constant development. Management is contemplating launching a standalone video platform within Facebook. Because of the high engagement already observed (over 100m hours of video are watched daily on Facebook), we believe this platform will eventually evolve into a substantial competitor to Google's YouTube. While they will unlikely overtake the giant, this could provide further revenue opportunities through business partnerships.

On the note of business partnerships, we believe Facebook's expansion into hosting platforms like Google Maps and Uber in Messenger will further strengthen the dependence on the use of their ecosystem as a one stop shop as well as eventually provide material revenue streams (they have noted in their most recent earnings call that they will introduce airlines to this in the very near future).

Beyond this, Facebook controls a significant portion of people's time spent online, through the Instagram and WhatsApp platforms. Instagram has just begun its monetization efforts, and while users are adjusting to the adaptation of ads, we believe Facebook will be very careful not to disrupt the high levels of user engagement that they have (the way Twitter has). Monetization of the website is going well with Facebook's top ad spending companies making the switch. We believe down the line the Company may utilize Instagram as a platform connecting paying users directly to purchasable products from paying companies (through the Facebook Pay platform).

With regards to WhatsApp, the Company is planning to monetize the platform in 2018, and as it stands, they are testing methods to use the platform to connect with businesses. They have removed the US$1 subscription fee post year one and are fully focused on driving the user base until the monetization launch they call commercial participation. WhatsApp is a key driver for growth in the emerging markets.

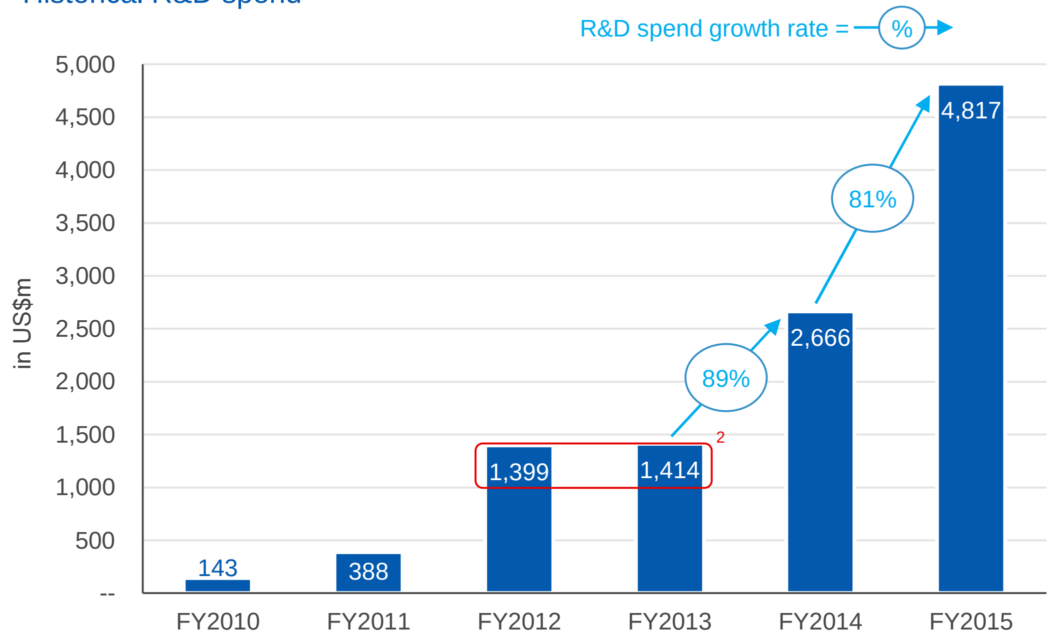
To supplement their approach in key markets, Facebook has launched a plethora of initiatives from Free Basics to the eventual solar powered rockets that will set up Wi-Fi connections in underserved regions. There is undoubtedly opportunity in these regions and Facebook is positioning itself to gain user engagement.

Thesis development and catalysts

Scalable business model leaves opportunity for growth investments
Facebook's business model bolsters impressive margins versus other internet / technology vanguards, as shown previously in Exhibit 6. The most impressive element of this business model is the scalable leverage offered by having lower variable costs than most. The bulk of the Company's expenditures go to employee overhead, data center construction, and R&D spending. We believe ongoing innovations will be a big element in reducing data center costs, which we see scaling more aggressively beyond 2016 (They built a new data center in Texas this year, and will be building one in Ireland in FY2016). With regards to operational costs, one of the most impressive elements of Facebook's cost structure is that as the business has grown and they have been able to scale, they have leveraged this to aggressively focus on R&D spending. If they are going to keep R&D as a percentage of sales, we can expect aggressive product improvements and innovations. In the event they begin to lower spending growth, excess capital can be focused on acquisition financing (Exhibit 9).

Exhibit 9

Historical R&D spend[1]



On the note of acquisition financing, Facebook has used this as a successful means for developing pipeline growth outside traditional R&D spend. The most notable acquisitions include Oculus VR (~US$2bn, 2014), WhatsApp (~US18bn, 2014), Instagram (~US$1bn, 2012), as well as the attempted acquisition of snapchat (~US$3bn, 2014). We believe there will be significant M&A activity for Facebook in the next 5 years.

1 Source: Company Fillings (2012 – 2016)
2 Capital deployment focused on WhatsApp transaction

Thesis development and catalysts

Launch and integration of innovative product / service pipeline into ecosystem

The launch and evolution of the Oculus VR platform for gaming use and eventual integration into the ecosystem as a multifunction platform will drive both short and long term revenue generation outside Facebook's core ad business. Oculus is already licensing their product to Samsung as an add-on to Galaxy purchases and the Rift console is launching this year (Exhibit 10).

Development of a payment platform to support user-to-user payment and integrate user-to-business payments through their existing "Shop" platform is a potential long term opportunity for Facebook. Digital payment is traditionally a low earning business segment, but could be a vehicle to draw in more ad dollars if they integrate a way to engage businesses into the platform. Beyond that, it is certainly value add for users, but the need and trust for this kind of product is currently unproven (Exhibit 11).

Facebook is also beginning the launch of Facebook at Work, the enterprise version of Facebook that lets businesses build their own secure social networks. The wait list hold over 60,000 companies and is set to launch later this year. In recent news, the Company announced it's newest big customer: Telenor, who operates in some 13 countries with 36,000 employees globally.

Exhibit 10

Oculus Product Portfolio[1]

Exhibit 11

Current payment platform on Messenger[1]

1 Source: Company website

Financial assessment and valuation overview

Target price

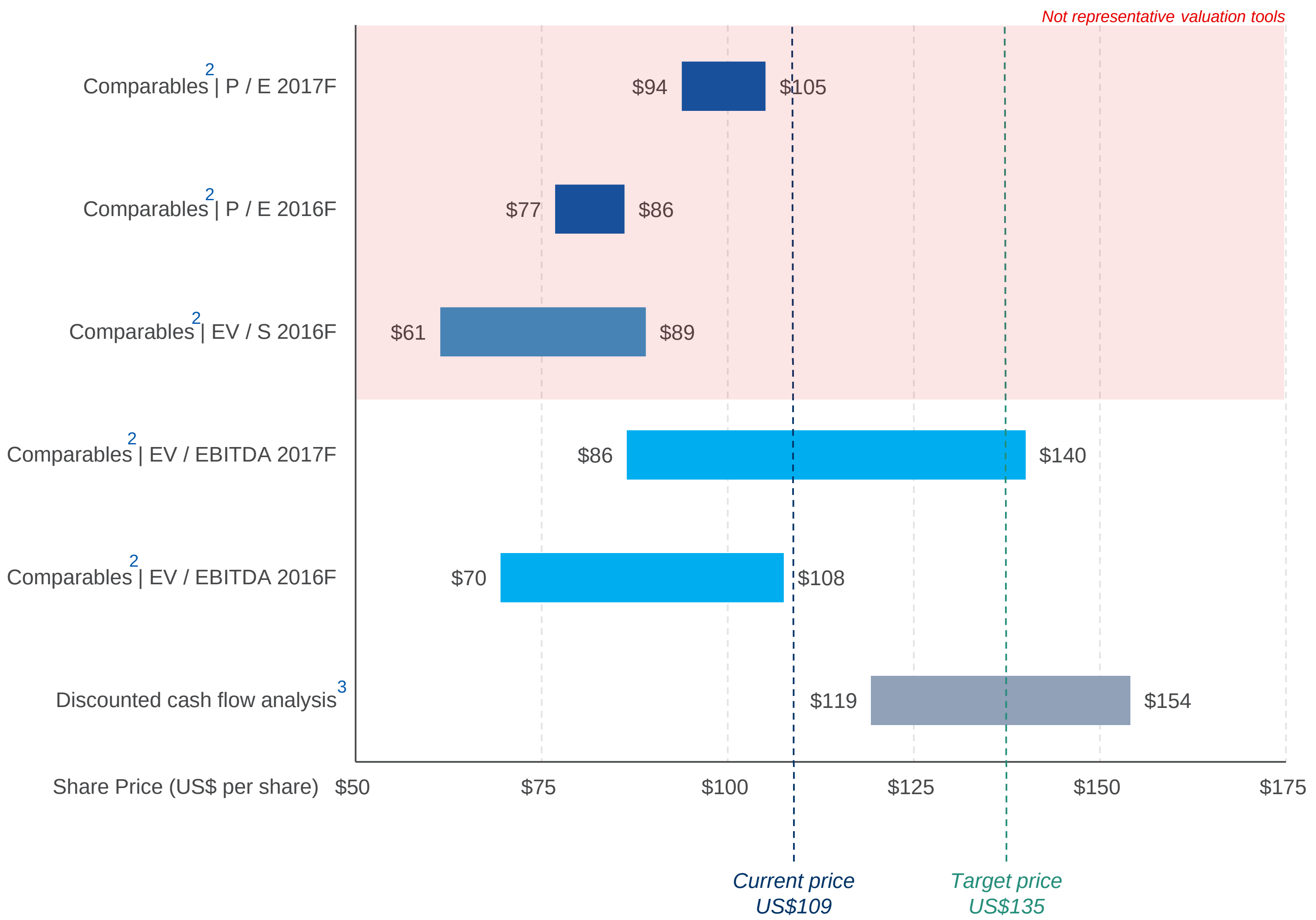
We are initiating a buy of Facebook with a target price of US$135, representing ~24% upside to its current price (US$109), based on our DCF analysis of Facebook and the mid-high end of the EV / 2017F EBITDA comparables (~19x).

Valuation methodology overview

Our valuation was composed of a discounted cash flow analysis and peer company comparable analysis (Exhibit 10). We believe the discounted cash flow analysis to provide the most accurate value as Facebook provides an investment stapled to long term projects and strategies which will roll-out throughout the companies various lifecycles over the next 10 – 15 years.

Exhibit 10

Illustrative valuation summary[1]



1 Source: Company Fillings, Bloomberg, KWPMP analysis
2 Comparables include Google, Tencent, LinkedIn, and Twitter
3 Assumes weighted average cost of capital of 10.0% and terminal growth rate from 2030F+ of 1.0%

Financial assessment and valuation overview

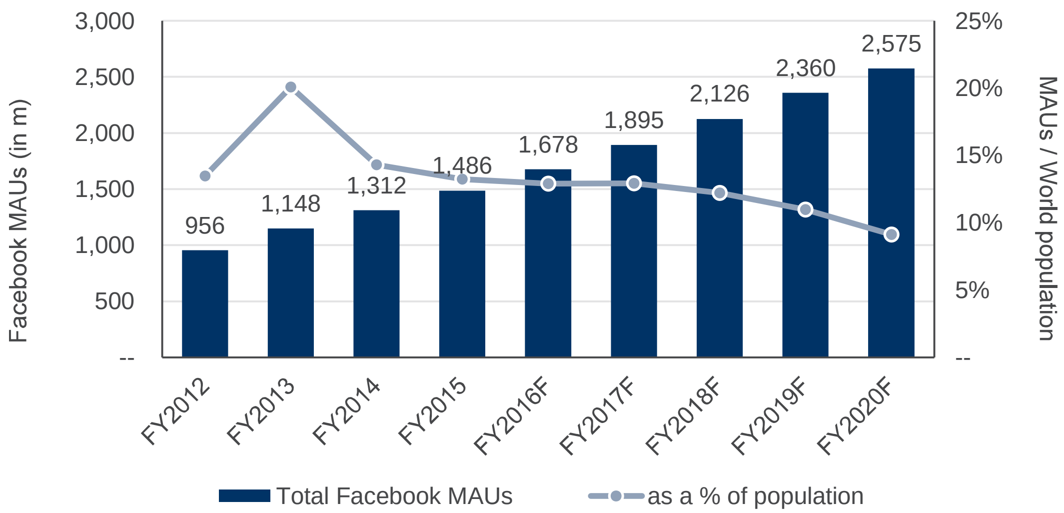
Assumptions of operating model

We drove out revenues through geographic segmentation of “Advertising revenues” separate from “Payment and other” on an ARPU and Monthly Active User base.

We expect ARPU growth to continue to scale up globally with the most short term upside coming from North America as companies transition to a Facebook-focused marketing strategy. This is rationalized by the fact that companies are underweight in ad spend at Facebook when benchmarked versus the amount of time users spend on the platform (i.e. if a user spends 8% of their ad focused time on Facebook, companies only spend 4% of their budget on Facebook – traditionally, companies attempt to be at 8% in this case). This impact will naturally hit North America first, a region where companies focus ad dollars where users yield higher return on investment. From a user growth perspective, we expect saturation to limit growth in Europe and North America, while Asia-Pacific and the Rest of the world will drive growth as accessibility to internet increases and Facebook makes their platform more compatible to regional capabilities. We have rationalized our assumptions on users by benchmarking them to global population expectations (Exhibit 11). We expect headwinds from FX of the high US dollar to impact sales outside the US & Canada in 2016 and early 2017.

Exhibit 11

Facebook forecasted MAU rationalization[1]



We don’t expect to see scale impact EBITDA margins or CAPEX in 2016, as the Company is devoted to building more data centers and hosting heavy R&D investments for their existing platforms. However, we do expect EBITDA to

1 Source: Company Fillings (2012 – 2016), KWPMP analysis, United Nations Population Division

Financial assessment and valuation overview

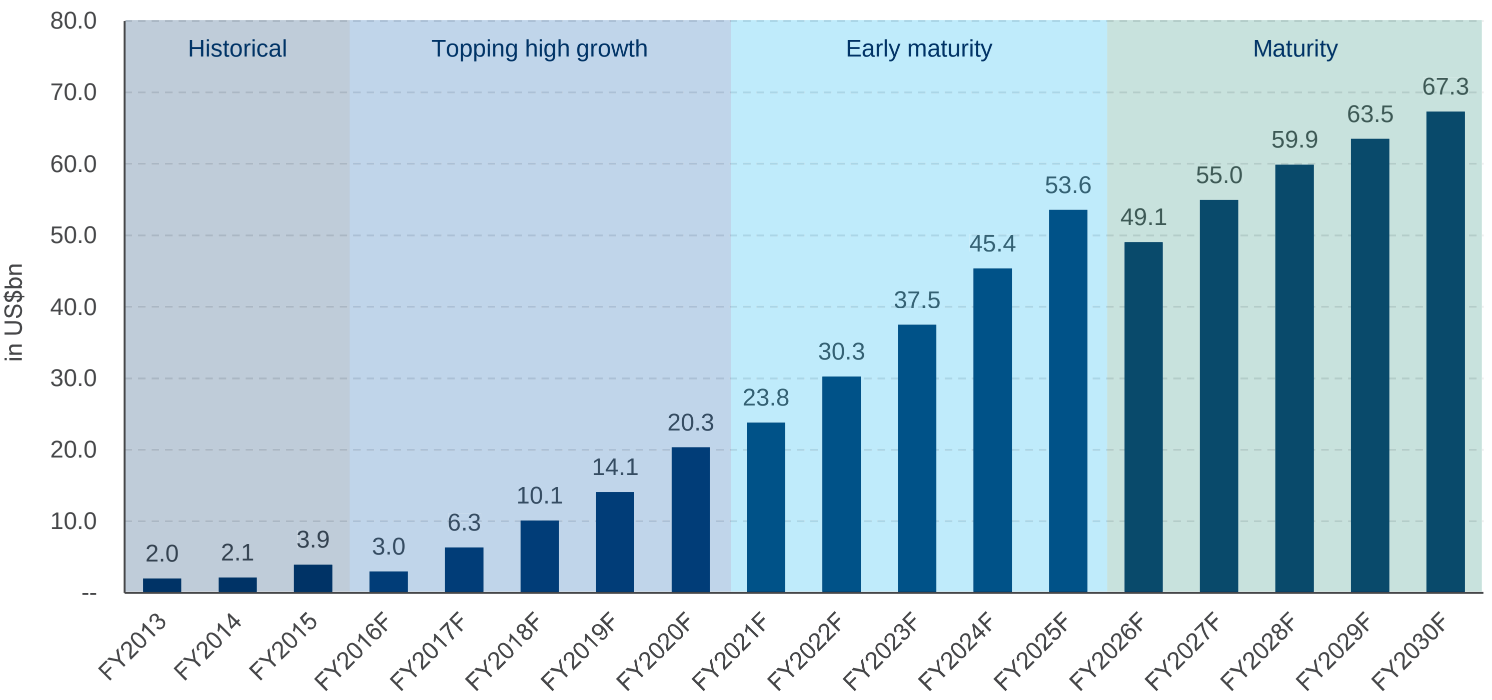
normalize to 2014 levels from 2017 to 2019 before being drawn down by the impact of diversifying further into lower profitability businesses (i.e. hardware).

Assumptions of discounted cash flow analysis

We have forecasted two lifecycles beyond our 5-year DCF: The 5-year DCF is classified as the “Topping high growth” phase, and the two 5-year intervals beyond that are “Early maturity” and “Maturity”, respectively (Exhibit 12). “Early maturity” assumes a declining sales growth rate from 30% (2012F) to 18% (2025F) with EBIT margins flat at 40%. “Maturity” assumes declining sales growth from 15% (2026F) to 6% (2030F). The effective tax rate used is 40%, the weighted average cost of capital is 10%, and the terminal growth rate is 1%.

Exhibit 12

Unlevered free cash flows through various forecasted lifecycles[1]



Peer company comparables analysis

We analyze the peer company comparables analysis with a grain of salt as no business provides a close to similar business model or positioning as Facebook. With that in mind, we attempted to blend some of the impacts by looking at Google, Tencent, LinkedIn, and Twitter, for which we placed the most value on Tencent (large market dominant player with continued high growth). We view the EV / EBITDA as a fair valuation metric for tech companies that should be rewarded for providing higher growth and operational leverage.

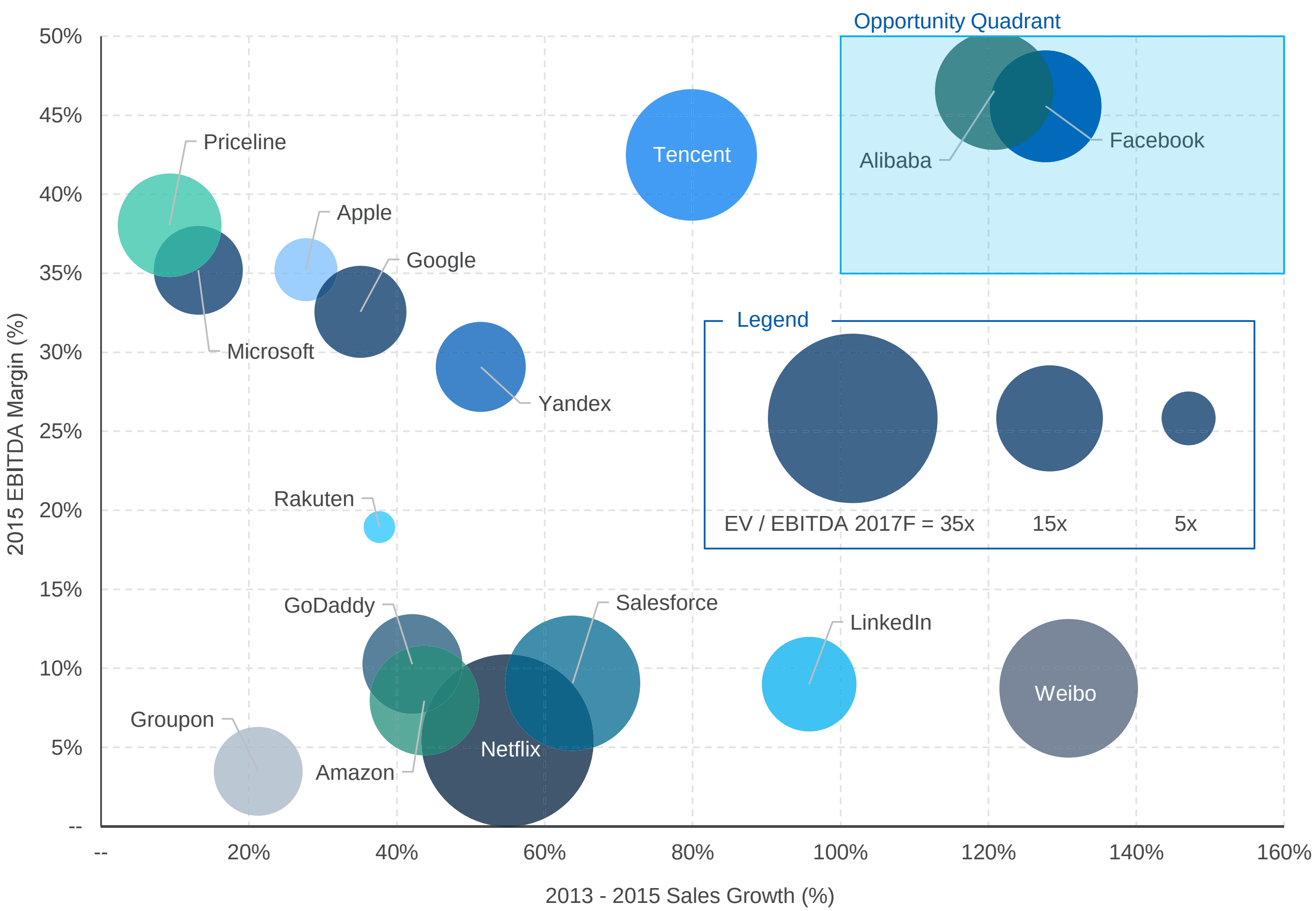
1 Source: Company Fillings, KWPMP analysis

Financial assessment and valuation overview

Beyond these peers, we have re-evaluated the prior internet / tech companies included in our analysis in Exhibit 6 by replacing the sizing of the bubbles from 2015 sales to EV / EBITDA 2017F multiples (Exhibit 13). The analysis provides insight into the valuation space in the tech / internet sector, valuation being high in general. Beyond this, one can clearly see Facebook's strong positioning, thus warranting a higher valuation than the other players.

Exhibit 13

Growth and profitability valuation comparison amongst leading internet companies[1]



1 Source: Company Fillings, Bloomberg, KWPMP analysis

Financial assessment and valuation overview

Sensitized case analysis

To provide clarity on the assumptions driving the discounted cash flow analysis, we have sensitized the WACC, terminal growth rate, and revenue realization percentage[1] (exhibit 14 & 15). Revenue realization is the most sensitive lever.

Exhibit 11

Discounted cash flow analysis sensitivity[1]

Price per share (US$)

Terminal Growth Rate	WACC 11.5%	11.0%	10.5%	10.0%	9.5%
--	$105	$112	$119	$128	$138
0.5%	$106	$114	$122	$131	$141
1.0%	$108	$116	$124	**$134**	$145
1.5%	$111	$119	$127	$138	$149
2.0%	$113	$121	$131	$142	$154
2.5%	$116	$124	$135	$146	$160
3.0%	$119	$128	$139	$152	$166

Return (%)

Terminal Growth Rate	WACC 11.5%	11.0%	10.5%	10.0%	9.5%
--	(4.0%)	2.4%	9.4%	17.3%	26.2%
0.5%	(2.3%)	4.3%	11.7%	20.0%	29.3%
1.0%	(0.5%)	6.4%	14.2%	**22.9%**	32.9%
1.5%	1.4%	8.7%	16.9%	26.3%	36.9%
2.0%	3.6%	11.3%	20.0%	30.0%	41.4%
2.5%	6.0%	14.2%	23.5%	34.2%	46.5%
3.0%	8.7%	17.5%	27.5%	39.0%	52.5%

Price per share (US$)

Revenue realization	WACC 11.5%	11.0%	10.5%	10.0%	9.5%
99.0%	$94	$101	$108	$116	$125
99.5%	$101	$108	$116	$125	$134
100.0%	$108	$116	$124	**$134**	$145
100.5%	$116	$125	$134	$144	$156
101.0%	$125	$134	$144	$155	$168
101.5%	$134	$143	$154	$167	$181
102.0%	$143	$154	$166	$179	$194

Return (%)

Revenue realization	WACC 11.5%	11.0%	10.5%	10.0%	9.5%
99.0%	(13.6%)	(7.8%)	(1.2%)	6.1%	14.4%
99.5%	(7.3%)	(0.9%)	6.2%	14.2%	23.3%
100.0%	(0.5%)	6.4%	14.2%	**22.9%**	32.9%
100.5%	6.7%	14.2%	22.7%	32.3%	43.1%
101.0%	14.4%	22.6%	31.9%	42.3%	54.1%
101.5%	22.6%	31.6%	41.6%	53.0%	65.9%
102.0%	31.4%	41.1%	52.1%	64.4%	78.4%

1 Revenue realization reflects the % of forecasted revenue achieved in each year
2 KWPMP analysis

Facebook as a sustainable investment decision

ESG analysis

In evaluating Facebook as a true long term investment in a changing and evolving world, we deemed a sustainable investment analysis as a necessity. The conclusion of our analysis sheds positive light on certain initiatives Facebook has been involved in, and yet shows that there is still a lot of room for improvement. We deem Facebook as an appropriate sustainable investment: although they are not ideally positioned at the moment, they have the ability to be highly successful in implementing ESG initiatives and responsibly managing their global footprint on environmental, social, and governance issues.

Environmental

With regards to environmentalism, one of the Company's first initiatives was to create their *Green on Facebook* page back in 2010 whose main focus is to promote the sustainability efforts made by Facebook as well as other organizations. In 2011, a group of engineers at Facebook launched the *Open Compute Project*, an initiative whose aim is to publically share technological designs to increase the energy efficiency use of computing infrastructures, all while minimizing their long-term costs. This led Facebook to reduce the global footprint of many of its data centers, which currently account for 80% of the Company's carbon impact. In 2012, the Company named Bill Weihl as Director of Sustainability, one of Google's sustainability gurus, to lead Facebook down a path of renewable energy use. The firm's long-term goal is to operate its data centers fully on renewable energy. Currently, 19% of the Company's energy consumption comes from renewable sources. By the end of 2018, Facebook targets a 50% use of green energies to operate its data centers. the Company's efforts have not been limited to its data centers, as it has implemented a transportation program for employees, thus reducing GHG emissions through the use of shuttles and carpooling. In addition, LED lighting, high-efficiency toilets, compost, and the selection of healthy materials are all environmental solutions Facebook has put into action throughout its many facilities. In terms of public disclosure, the Company renders available data on water usage and energy consumption for particular data centers. Finally, the Company has just recently signed the *American Business Act on Climate Change Pledge* and are founders of the *Corporate Renewables Partnership*, two initiatives the Company has taken to blend corporate effectiveness to the efficient implementation of renewable energy sources.

Social

Facebook has been a fair performer in terms of social concerns, and has shown improvement with regards to human capital management. the Company currently has in place a discrimination policy as well as a strong diversity program aiming to increase its 32% women base. Facebook extended parental leave for full time employees to four months of fully paid salary last November.

Facebook as a sustainable investment decision

From a quantitative perspective, the firm has yet to provide data on employee turnover and training. Facebook seems to perform quite well as an employer as employee incidents are kept at a minimum. With regards to its customer base, Facebook has faced moderate criticism concerning data privacy and protection. In 2013, the Company collaborated with the U.S. National Security Agency through the provision of confidential customer data. In 2014, lawsuits were initiated under the claims that the corporation was selling user data to advertisers, sharing user information without consent, and in breach of EU privacy laws.

Governance

From a governance standpoint, Facebook earned a rating positioning them as an underperformer. To this day, the Company has yet to sign the *UN Global Compact*, a set of principles around human rights, labor, the environment, and anti-corruption to which corporate strategies ought to be aligned to advance societal goals. The enterprise also has not published any CSR reports, and recently rejected shareholders' request to produce sustainability and human rights reports during their 2015 annual meeting, stating no such document was necessary to highlight their improvements with regards to social responsibility. Executive compensation also lacks a direct tie to ESG performance. Additionally, Facebook has participated in several lobbying activities, expensing nearly US$23m. Structure-wise, there is currently no separation between the chairman and CEO position, as both are assumed by Mark Zuckerberg. On a brighter note, the corporation has achieved gender diversity amid the board of directors, also reaching the two-third quota for board independence. The audit committee is also fully separate from the Company. The social network giant does have a committee below board level responsible for the revision of ESG issues and principles. Finally, several low-impact controversies arose in recent years encircling business ethics and corporate governance, such as Facebook's psychological test on unknowing users and a lawsuit regarding the unsuitable compensation of non-executive directors.

In summary

Taking all of the above into consideration, Facebook's dedication and collaborative efforts to reduce its global footprint through the use of clean energies and quality as an employer make the corporation a rather sustainable investment. Surely, much more is expected of a company with the financial ability, smarts, and grandeur of Facebook, a good start being the publication of CSR reports. Though user security might seem worrisome, Facebook is currently under a high level of scrutiny and is very likely to comply with regulations.

Risk considerations

US currency impact on Facebook's global pricing

Although uncontrollable, Facebook faces near term headwinds from FX rates outside of its US & Canada region. These impacts have been accounted for in the operating model for 2016, and is a secondary reason for margins not expanding.

Upcoming cash tax impact on cash flow

As a result of long time cash tax deferrals, Facebook is finally expecting to be paying significant cash taxes in 2016 for the first time. Although being a considerable cash impact, the Company remains heavily liquid and this should not pose a threat on their 2016 capital allocation strategies with regard to internal investments.

Greenfield monetization delays

With Oculus launching to the everyday consumer earlier this year, Facebook appears to be in good hands with that product. On the other hand, both Messenger and WhatsApp are yet to be triggered for monetization and are large drivers behind sustainable high ARPU growth in the next 5 – 10 years. Facebook has noted strategies related to business partnerships and communications are currently in development (some have even launched – i.e. Uber and Google Maps on Messenger).

Sectoral valuation rationalization

Facebook, and the majority of the high growth technology sector, trade at skyrocketing valuations based on the promise of continued growth and operational improvements. To date, no company has been able to deliver such consistently positive results as Facebook, all while keeping a long term strategic focus and not rushing monetization plans.

Privacy regulations and net neutrality public perception

These remain the biggest risk for Facebook as countries like Germany conduct probes on the organization and India's ban on Free Basics. While this risk is undoubtedly significant, it remains with individual countries and Facebook usually tends to adopt the necessary practises to continue conducting business.

Out of favour platform: Twitter / Myspace syndrome

While companies in the social media space has plateaued or dwindled in the past, Facebook has the unique advantage of being more of a communication ecosystem. The Company brings people and businesses together through events and group pages, while delivering real time / simple chat together under messenger and WhatsApp. The Company is poised to continuously redevelop itself and compete in the most relevant spaces, while other players simply focus on growth of their current business and creating a sustainable business model.

Appendix A – Annual income statement

In US$m, unless noted otherwise

Income statement

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
Advertising revenues	1,869	3,154	4,279	6,986	11,492	17,080	26,560	38,853	56,984	88,251	123,422
Payment and other	106	557	810	886	974	848	752	715	716	768	828
Total revenues	**1,975**	**3,711**	**5,089**	**7,872**	**12,466**	**17,928**	**27,312**	**39,568**	**57,699**	**89,019**	**124,250**
(-) Cost of revenue	(492)	(860)	(1,364)	(1,876)	(2,153)	(2,866)	(4,364)	(5,935)	(8,655)	(12,463)	(17,395)
(-) Research and development	(143)	(388)	(1,399)	(1,414)	(2,666)	(4,817)	(7,879)	(10,683)	(15,579)	(24,035)	(33,548)
(-) Marketing and sales	(184)	(415)	(912)	(997)	(1,679)	(2,724)	(3,680)	(5,540)	(8,655)	(12,463)	(18,638)
(-) General and administrative	(122)	(291)	(876)	(781)	(973)	(1,295)	(1,355)	(1,415)	(1,475)	(1,535)	(1,595)
(-) Total costs and expenses	**(941)**	**(1,954)**	**(4,551)**	**(5,068)**	**(7,471)**	**(11,702)**	**(17,278)**	**(23,573)**	**(34,364)**	**(50,495)**	**(71,175)**
EBIT	**1,034**	**1,757**	**538**	**2,804**	**4,995**	**6,226**	**10,034**	**15,995**	**23,336**	**38,524**	**53,075**
(-) Interest expense	na	(61)	(44)	(50)	(84)	(31)	(54)	(54)	(54)	(54)	(54)
EBT	**na**	**1,696**	**494**	**2,754**	**4,911**	**6,195**	**9,980**	**15,941**	**23,282**	**38,470**	**53,021**
(-) Taxes	na	(694)	(441)	(1,254)	(1,971)	(2,505)	(3,050)	(4,782)	(6,984)	(11,541)	(15,906)
Net income	**na**	**1,002**	**53**	**1,500**	**2,940**	**3,690**	**6,929**	**11,159**	**16,297**	**26,929**	**37,115**
(-) Adjustment	na	(335)	(78)	(10)	(15)	(20)	(20)	(20)	(20)	(20)	(20)
N.I. to class A / B	**na**	**667**	**(25)**	**1,490**	**2,925**	**3,670**	**6,909**	**11,139**	**16,277**	**26,909**	**37,095**
Class A shares (m)	na	na	1,684	1,976	2,236	2,295					
Class B shares (m)	na	na	698	574	563	551					
(/) Total A/B shares (m)	na	na	2,382	2,550	2,799	2,846	2,968	2,968	2,968	2,968	2,968
EPS (US$ / share)	**na**	**na**	**na**	**$0.58**	**$1.05**	**$1.29**	**$2.33**	**$3.75**	**$5.48**	**$9.07**	**$12.50**
EBIT	**1,034**	**1,757**	**538**	**2,804**	**4,995**	**6,226**	**10,034**	**15,995**	**23,336**	**38,524**	**53,075**
(+) D&A	139	323	649	1,011	1,243	1,945	2,501	3,865	5,639	6,324	8,865
EBITDA	**1,173**	**2,080**	**1,187**	**3,815**	**6,238**	**8,171**	**12,535**	**19,860**	**28,974**	**44,847**	**61,940**
Implied tax rate		*40.9%*	*89.3%*	*45.5%*	*40.1%*	*40.4%*	*30.6%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*

Appendix B – Quarterly income statement

In US$m, unless noted otherwise

Income statement

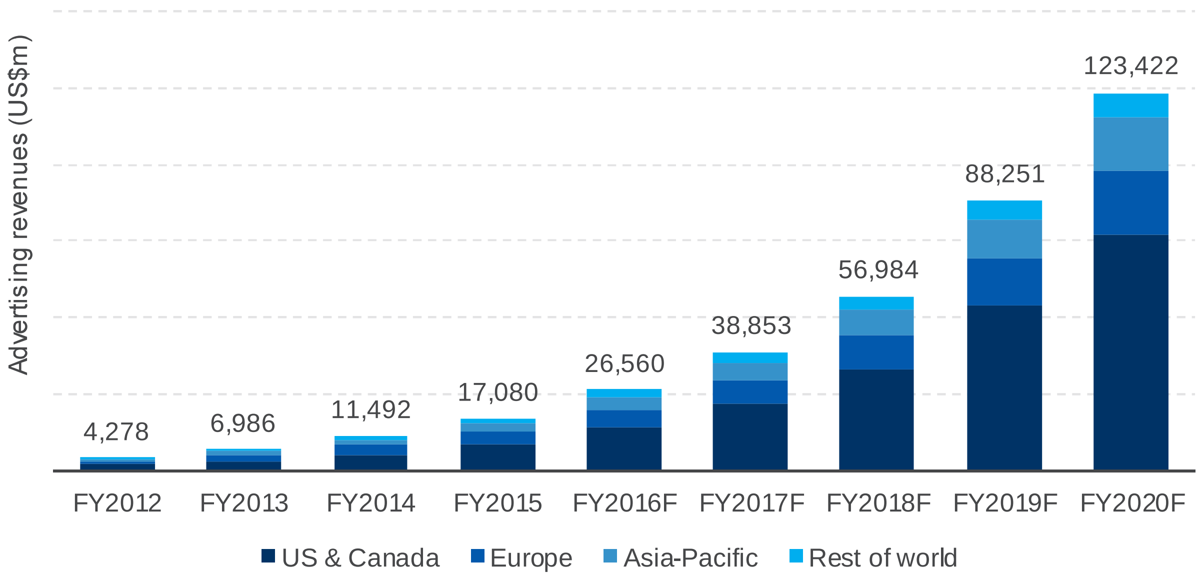
	FY2014					FY2015					FY2016				
	Q1	Q2	Q3	Q4	FY2014	Q1	Q2	Q3	Q4	FY2015	Q1	Q2	Q3	Q4	FY2016F
Advertising revenues	2,265	2,676	2,957	3,594	11,492	3,317	3,827	4,299	5,637	17,080	5,168	5,933	6,682	8,776	26,560
Payment and other	237	234	246	257	974	226	215	202	204	848	189	183	187	194	752
Total revenues	**2,502**	**2,910**	**3,203**	**3,851**	**12,466**	**3,543**	**4,042**	**4,501**	**5,841**	**17,928**	**5,357**	**6,115**	**6,869**	**8,971**	**27,312**
(-) Cost of revenue	(462)	(473)	(565)	(653)	(2,153)	(654)	(668)	(720)	(824)	(2,866)	(989)	(1,011)	(1,099)	(1,265)	(4,364)
(-) Research and development	(455)	(492)	(608)	(1,111)	(2,666)	(1,062)	(1,170)	(1,271)	(1,314)	(4,817)	(1,713)	(1,892)	(2,077)	(2,197)	(7,879)
(-) Marketing and sales	(323)	(358)	(374)	(624)	(1,679)	(620)	(626)	(706)	(772)	(2,724)	(696)	(856)	(962)	(1,166)	(3,680)
(-) General and administrative	(187)	(197)	(259)	(330)	(973)	(274)	(305)	(345)	(371)	(1,295)	(339)	(339)	(339)	(339)	(1,355)
(-) Total costs and expenses	**(1,427)**	**(1,520)**	**(1,806)**	**(2,718)**	**(7,471)**	**(2,610)**	**(2,769)**	**(3,042)**	**(3,281)**	**(11,702)**	**(3,737)**	**(4,098)**	**(4,476)**	**(4,968)**	**(17,278)**
EBIT	**1,075**	**1,390**	**1,397**	**1,133**	**4,995**	**933**	**1,273**	**1,459**	**2,560**	**6,226**	**1,620**	**2,018**	**2,393**	**4,003**	**10,034**
(-) Interest expense	--	(4)	(61)	(19)	(84)	(1)	--	(27)	(3)	(31)	--	--	(43)	(11)	(54)
EBT	**1,075**	**1,386**	**1,336**	**1,114**	**4,911**	**932**	**1,273**	**1,432**	**2,557**	**6,195**	**1,620**	**2,018**	**2,350**	**3,992**	**9,980**
(-) Taxes	(433)	(595)	(530)	(413)	(1,971)	(420)	(554)	(536)	(995)	(2,505)	(510)	(625)	(717)	(1,198)	(3,050)
Net income	**642**	**791**	**806**	**701**	**2,940**	**512**	**719**	**896**	**1,562**	**3,690**	**1,110**	**1,392**	**1,633**	**2,794**	**6,929**
(-) Adjustment	(3)	(3)	(4)	(5)	(15)	(3)	(4)	(5)	(7)	(20)	(5)	(5)	(5)	(5)	(20)
N.I. to class A / B	**639**	**788**	**802**	**696**	**2,925**	**509**	**715**	**891**	**1,555**	**3,670**	**1,105**	**1,387**	**1,628**	**2,789**	**6,909**
Class A shares (m)	1,994	2,015	2,224	2,236	2,236	2,249	2,260	2,270	2,295	2,295					
Class B shares (m)	573	585	564	563	563	559	558	558	551	551					
(/) Total A/B shares (m)	2,566	2,600	2,788	2,799	2,799	2,808	2,818	2,828	2,846	2,846	2,968	2,968	2,968	2,968	2,968
EPS (US$ / share)	**$0.25**	**$0.30**	**$0.29**	**$0.25**	**$1.05**	**$0.18**	**$0.25**	**$0.32**	**$0.55**	**$1.29**	**$0.37**	**$0.47**	**$0.55**	**$0.94**	**$2.33**
EBIT	**1,075**	**1,390**	**1,397**	**1,133**	**4,995**	**933**	**1,273**	**1,459**	**2,560**	**6,226**	**1,620**	**2,018**	**2,393**	**4,003**	**10,034**
(+) D&A	264	257	289	433	1,243	457	459	486	543	1,945	491	865	1,418	2,077	2,501
EBITDA	**1,339**	**1,647**	**1,686**	**1,566**	**6,238**	**1,390**	**1,732**	**1,945**	**3,103**	**8,171**	**2,111**	**2,883**	**3,811**	**6,080**	**12,535**
Implied tax rate	*40.3%*	*42.9%*	*39.7%*	*37.1%*	*40.1%*	*45.1%*	*43.5%*	*37.4%*	*38.9%*	*40.4%*	*31.5%*	*31.0%*	*30.5%*	*30.0%*	*30.6%*

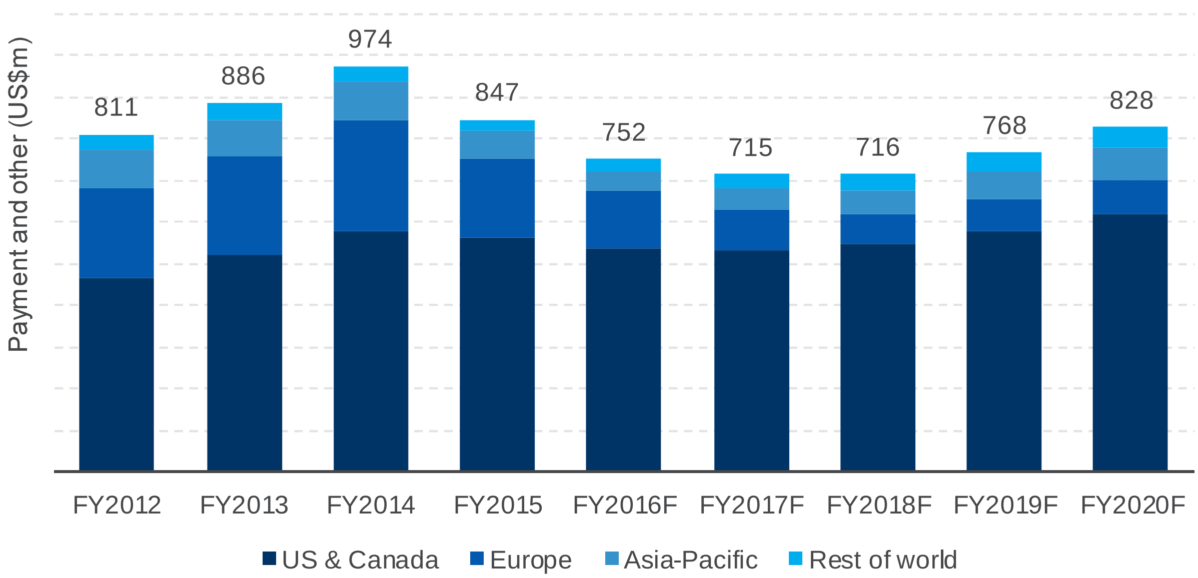
Appendix C – Revenue buildout

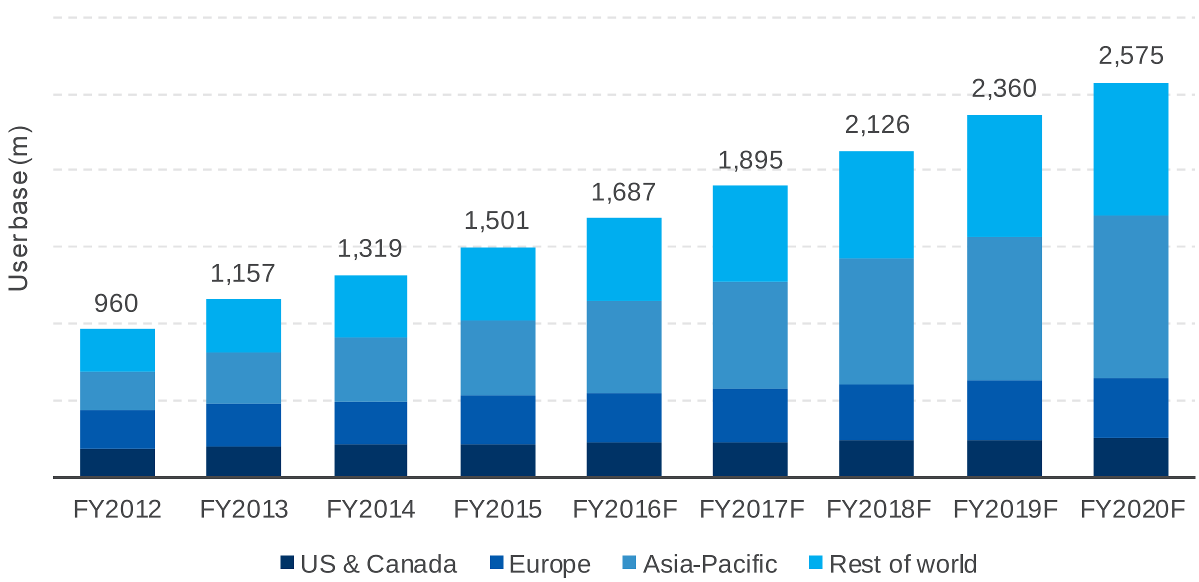
Revenue buildout

	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
Advertising revenues	**4,278**	**6,986**	**11,492**	**17,080**	**26,560**	**38,853**	**56,984**	**88,251**	**123,422**
US & Canada	**2,067**	**3,173**	**5,285**	**8,349**	**14,163**	**21,821**	**33,263**	**54,080**	**77,226**
ARPU	$11.08	$16.05	$25.84	$39.01	$63.45	$94.53	$139.91	$221.06	$309.48
User base	186	198	204	214	223	231	238	245	250
Europe	**1,237**	**1,958**	**3,131**	**4,274**	**5,729**	**7,790**	**10,756**	**15,275**	**20,811**
ARPU	$5.02	$7.17	$10.70	$13.69	$17.38	$22.60	$29.61	$39.97	$51.96
User base	246	273	293	312	330	345	363	382	401
Asia-Pacific	**515**	**974**	**1,741**	**2,655**	**3,919**	**5,781**	**8,387**	**12,538**	**17,132**
ARPU	$2.00	$2.88	$4.23	$5.32	$6.58	$8.22	$10.20	$13.26	$16.18
User base	258	338	411	499	596	703	822	946	1,059
Rest of world	**459**	**881**	**1,335**	**1,802**	**2,749**	**3,462**	**4,578**	**6,358**	**8,253**
ARPU	$1.70	$2.54	$3.25	$3.79	$5.11	$5.62	$6.51	$8.08	$9.53
User base	270	347	410	475	538	616	703	787	866
Payment and other	**811**	**886**	**974**	**847**	**752**	**715**	**716**	**768**	**828**
US & Canada	**465**	**522**	**580**	**564**	**539**	**531**	**546**	**579**	**620**
ARPU	$2.50	$2.65	$2.84	$2.64	$2.42	$2.30	$2.30	$2.37	$2.49
User base	186	197	204	213	223	231	238	245	250
Europe	**218**	**235**	**265**	**190**	**136**	**100**	**74**	**77**	**83**
ARPU	$0.89	$0.86	$0.91	$0.61	$0.41	$0.29	$0.20	$0.20	$0.21
User base	246	272	292	311	329	345	363	382	401
Asia-Pacific	**90**	**89**	**90**	**65**	**47**	**50**	**56**	**66**	**76**
ARPU	$0.35	$0.27	$0.22	$0.13	$0.08	$0.07	$0.07	$0.07	$0.07
User base	257	335	408	492	591	703	822	946	1,059
Rest of world	**38**	**40**	**39**	**28**	**30**	**34**	**39**	**44**	**49**
ARPU	$0.14	$0.12	$0.10	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
User base	267	343	408	471	535	616	703	787	866
Total user base	**956**	**1,148**	**1,312**	**1,486**	**1,678**	**1,895**	**2,126**	**2,360**	**2,575**
Growth (%)		*20.1%*	*14.3%*	*13.2%*	*12.9%*	*12.9%*	*12.2%*	*11.0%*	*9.1%*

Appendix D – Illustrative revenue driver







Appendix E & F – Costs and expense buildout / Balance sheet

In US$m, unless noted otherwise

Costs and expenses buildout

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
(-) Cost of revenue	**(492)**	**(860)**	**(1,364)**	**(1,876)**	**(2,153)**	**(2,866)**	**(4,364)**	**(5,935)**	**(8,655)**	**(12,463)**	**(17,395)**
As a % of total rev.	*24.9%*	*23.2%*	*26.8%*	*23.8%*	*17.3%*	*16.0%*	*16.0%*	*15.0%*	*15.0%*	*14.0%*	*14.0%*
									--	--	--
(-) Research and development	**(143)**	**(388)**	**(1,399)**	**(1,414)**	**(2,666)**	**(4,817)**	**(7,879)**	**(10,683)**	**(15,579)**	**(24,035)**	**(33,548)**
As a % of total rev.	*7.2%*	*10.5%*	*27.5%*	*20.2%*	*21.4%*	*26.9%*	*28.8%*	*27.0%*	*27.0%*	*27.0%*	*27.0%*
									--	--	--
(-) Marketing and sales	**(184)**	**(415)**	**(912)**	**(997)**	**(1,679)**	**(2,724)**	**(3,680)**	**(5,540)**	**(8,655)**	**(12,463)**	**(18,638)**
As a % of total rev.	*9.3%*	*11.2%*	*17.9%*	*12.7%*	*13.5%*	*15.2%*	*13.5%*	*14.0%*	*15.0%*	*14.0%*	*15.0%*
(-) General and administrative	**(122)**	**(291)**	**(876)**	**(781)**	**(973)**	**(1,295)**	**(1,355)**	**(1,415)**	**(1,475)**	**(1,535)**	**(1,595)**
Net inc. in G&A	(18)	(52)	(82)	(87)	(69)	(41)	(60)	(60)	(60)	(60)	(60)

Balance sheet

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
Cash & securities			9,626	11,449	11,199	18,434	26,952	41,285	62,452	93,433	136,129
A/R			1,170	1,160	1,678	2,559	3,910	5,664	8,260	12,740	17,783
Prepaid expenses and other CA			471	461	513	659	1,003	1,365	1,990	2,866	4,000
PP&E, net			2,391	2,882	3,967	5,687	8,029	10,233	12,714	18,918	27,539
Intangibles, goodwill and other			1,445	1,943	22,609	22,068	22,068	22,068	22,068	22,068	22,068
Total assets	**--**	**--**	**15,103**	**17,895**	**39,966**	**49,407**	**61,963**	**80,614**	**107,484**	**150,025**	**207,518**
A/P			234	268	378	413	629	855	1,247	1,796	2,507
Accrued expenses			453	593	932	1,505	2,291	3,117	4,545	6,544	9,135
Current portion of capital leases			365	239	114	7	--	--	--	--	--
Long term capital leases			1,991	237	119	107	107	107	107	107	107
Other			305	1,088	2,327	3,157	3,157	3,157	3,157	3,157	3,157
Total liabilities	**--**	**--**	**3,348**	**2,425**	**3,870**	**5,189**	**6,184**	**7,236**	**9,056**	**11,604**	**14,905**
Stockholders Equity	**--**	**--**	**11,755**	**15,470**	**36,096**	**44,218**	**55,779**	**73,378**	**98,428**	**138,421**	**192,613**

Appendix G – Cash flow statement

In US$m, unless noted otherwise

Cash flow statement

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
CFO											
(+) Net Income			53	1,500	2,940	3,688	6,929	11,159	16,297	26,929	37,115
(+) D&A			649	1,011	1,243	1,945	2,501	3,865	5,639	6,324	8,865
(+) Other			1,587	1,072	1,746	2,977	4,535	6,570	9,581	14,782	20,632
(-) Deferred taxes			(186)	(37)	(210)	(795)	(1,010)	(1,230)	(1,929)	(2,817)	(4,655)
(-) Change in NWC			(491)	676	(262)	784	(694)	(1,063)	(1,401)	(2,808)	(2,876)
(+) CFO			**1,612**	**4,222**	**5,457**	**8,599**	**12,262**	**19,301**	**28,187**	**42,409**	**59,081**
CFI											
(-) CAPEX			(1,235)	(1,362)	(1,831)	(2,523)	(4,844)	(6,068)	(8,120)	(12,528)	(17,486)
(-) Buy / sell securities			(4,876)	(882)	1,243	(6,700)	(5,000)	(5,000)	(5,000)	(5,000)	(5,000)
(-) Other			(913)	(380)	(5,325)	(211)	(400)	(400)	(400)	(400)	(400)
(-) CFI			**(7,024)**	**(2,624)**	**(5,913)**	**(9,434)**	**(10,244)**	**(11,468)**	**(13,520)**	**(17,928)**	**(22,886)**
(+) CFF			**6,284**	**(659)**	**1,448**	**1,427**	**1,500**	**1,500**	**1,500**	**1,500**	**1,500**
Net impact on cash			**872**	**939**	**992**	**592**	**3,518**	**9,332**	**16,167**	**25,981**	**37,695**
Beginning cash balance			1,512	2,384	3,323	4,315	4,907	8,425	17,758	33,925	59,906
(+) Impact			872	939	992	592	3,518	9,332	16,167	25,981	37,695
Ending cash balance			**2,384**	**3,323**	**4,315**	**4,907**	**8,425**	**17,758**	**33,925**	**59,906**	**97,602**
(+) Marketable securities			7,242	8,126	6,884	13,527	18,527	23,527	28,527	33,527	38,527
Ending C&MS balance			**9,626**	**11,449**	**11,199**	**18,434**	**26,952**	**41,285**	**62,452**	**93,433**	**136,129**

Appendix H – Supplemental financials

In US$m, unless noted otherwise

Capex, PP&E and depreciation schedule

	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
Capex	1,235	1,362	1,831	2,523	4,844	6,068	8,120	12,528	17,486
As a % of rev.	*24.3%*	*17.3%*	*14.7%*	*14.1%*	*14.1%*	*14.1%*	*14.1%*	*14.1%*	*14.1%*
Incremental for special					1,000	500	--	--	--
As a % of rev. (post inc.)	*24.3%*	*17.3%*	*14.7%*	*14.1%*	*17.7%*	*15.3%*	*14.1%*	*14.1%*	*14.1%*

	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
PP&E:									
Network equipment			3,020	3,633					
Buildings			1,420	2,273					
Computer software, office equipment and other			149	248					
Leased equipment and leasehold improvements			304	447					
Other			891	1,218					
Total			**5,784**	**7,819**	**10,531**	**14,098**	**18,353**	**25,242**	**36,403**
(-) Acc. Depreciation			(1,817)	(2,132)	(2,501)	(3,865)	(5,639)	(6,324)	(8,865)
PP&E, net			**3,967**	**5,687**	**8,029**	**10,233**	**12,714**	**18,918**	**27,539**

	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
PP&E beginning				5,784	5,687	8,029	10,233	12,714	18,918
(+) Capex				2,035	4,844	6,068	8,120	12,528	17,486
(-) Depreciation				(2,132)	(2,501)	(3,865)	(5,639)	(6,324)	(8,865)
PP&E, net				**5,687**	**8,029**	**10,233**	**12,714**	**18,918**	**27,539**

	Period	Capex	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
Existing straight line year	3 years										
New straight line years	4 years										
Depreciation to existing assets							1,896	1,896	1,896	--	--
FY2016F	1	4,844					605	1,211	1,211	1,211	--
FY2017F	2	6,068					--	759	1,517	1,517	1,517
FY2018F	3	8,120					--	--	1,015	2,030	2,030
FY2019F	4	12,528					--	--	--	1,566	3,132
FY2020F	5	17,486					--	--	--	--	2,186
Total depreciation			**649**	**1,011**	**1,243**	**1,945**	**2,501**	**3,865**	**5,639**	**6,324**	**8,865**
As a % of total costs and expenses			*14.3%*	*19.9%*	*16.6%*	*16.6%*	*14.5%*	*16.4%*	*16.4%*	*12.5%*	*12.5%*

Working capital analysis

	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
(+) A/R	1,170	1,160	1,678	2,559	3,898	5,648	8,236	12,706	17,735
(+) Prepaid expenses	471	461	513	659	1,003	1,365	1,990	2,866	4,000
(+) Inventory	--	--	--	--	12	16	24	34	48
(-) A/P	234	268	378	413	629	855	1,247	1,796	2,507
(-) Accrued expenses	453	593	932	1,505	2,291	3,117	4,545	6,544	9,135
Net working capital	**954**	**760**	**881**	**1,300**	**1,994**	**3,057**	**4,458**	**7,266**	**10,141**
Change in NWC		**(194)**	**121**	**419**	**694**	**1,063**	**1,401**	**2,808**	**2,876**
Cash Impact		**194**	**(121)**	**(419)**	**(694)**	**(1,063)**	**(1,401)**	**(2,808)**	**(2,876)**
Days Outstanding	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days	365 days
A/R	84 days	54 days	49 days	52 days	52 days	52 days	52 days	52 days	52 days
Prepaid expenses	126 days	90 days	87 days	84 days	84 days	84 days	84 days	84 days	84 days
Inventory	na	na	na	na	1 days	1 days	1 days	1 days	1 days
A/P	63 days	52 days	64 days	53 days	53 days	53 days	53 days	53 days	53 days
Accrued expenses	121 days	115 days	158 days	192 days	192 days	192 days	192 days	192 days	192 days

Appendix I & J – Discounted cash flow / Peer company comparables

In US$m, unless noted otherwise

Discounted cash flow analysis

					Topping high growth				
t					0.83	1.83	2.83	3.83	4.83
	FY2012	FY2013	FY2014	FY2015	FY2016F	FY2017F	FY2018F	FY2019F	FY2020F
Revenue	5,089	7,872	12,466	17,928	27,312	39,568	57,699	89,019	124,250
Growth (%)	37.1%	54.7%	58.4%	43.8%	52.3%	44.9%	45.8%	54.3%	39.6%
(-) Total costs and expenses	(4,551)	(5,068)	(7,471)	(11,702)	(17,278)	(23,573)	(34,364)	(50,495)	(71,175)
EBIT	538	2,804	4,995	6,226	10,034	15,995	23,336	38,524	53,075
Margin	10.6%	35.6%	40.1%	34.7%	36.7%	40.4%	40.4%	43.3%	42.7%
(-) Taxes	(215)	(1,122)	(1,998)	(2,490)	(4,013)	(6,398)	(9,334)	(15,409)	(21,230)
NOPAT	323	1,682	2,997	3,736	6,020	9,597	14,001	23,114	31,845
(+) D&A	649	1,011	1,243	1,945	2,501	3,865	5,639	6,324	8,865
(-) Capex	(1,235)	(1,362)	(1,831)	(2,523)	(4,844)	(6,068)	(8,120)	(12,528)	(17,486)
(-) Increase in NWC	(491)	676	(262)	784	(694)	(1,063)	(1,401)	(2,808)	(2,876)
Unlevered FCFs	(754)	2,007	2,147	3,942	2,984	6,330	10,119	14,102	20,349
DFCFs					2,756	5,316	7,725	9,787	12,838

	Early maturity					Maturity					Terminal
t	5.83	6.83	7.83	8.83	9.83	10.83	11.83	12.83	13.83	14.83	15.83
	FY2021F	FY2022F	FY2023F	FY2024F	FY2025F	FY2026F	FY2027F	FY2028F	FY2029F	FY2030F	Terminal
Revenue	161,526	205,138	254,371	307,788	363,190	417,669	467,789	509,890	540,483	572,912	
Growth (%)	30.0%	27.0%	24.0%	21.0%	18.0%	15.0%	12.0%	9.0%	6.0%	6.0%	
(-) Total costs and expenses	(96,915)	(123,083)	(152,622)	(184,673)	(217,914)	(271,485)	(304,063)	(331,428)	(351,314)	(372,393)	
EBIT	64,610	82,055	101,748	123,115	145,276	146,184	163,726	178,461	189,169	200,519	
Margin	40.0%	40.0%	40.0%	40.0%	40.0%	35.0%	35.0%	35.0%	35.0%	35.0%	
(-) Taxes	(25,844)	(32,822)	(40,699)	(49,246)	(58,110)	(58,474)	(65,490)	(71,385)	(75,668)	(80,208)	
NOPAT	38,766	49,233	61,049	73,869	87,166	87,710	98,236	107,077	113,502	120,312	
(+) D&A	11,524	14,636	18,148	21,959	25,912	29,799	33,375	36,378	38,561	40,875	
(-) Capex	(22,731)	(28,869)	(35,797)	(43,315)	(51,112)	(58,778)	(65,832)	(71,757)	(76,062)	(80,626)	
(-) Increase in NWC	(3,738)	(4,748)	(5,887)	(7,123)	(8,406)	(9,666)	(10,826)	(11,801)	(12,509)	(13,259)	
Unlevered FCFs	23,821	30,252	37,513	45,390	53,560	49,064	54,952	59,898	63,492	67,301	755,270
DFCFs	13,662	15,773	17,781	19,559	20,981	17,473	17,791	17,629	16,988	16,370	167,008

Valuation

Growth rate	1.0%
PV of Topping high growth	38,421
PV of Early maturity	87,757
PV of Maturity	86,250
PV of Terminal	167,008
Enterprise value	**379,436**
(-) Debt	--
(-) Capital leases	(114)
(+) Cash & equiv.	18,434
Equity value	**397,756**
(/) FD shares oustanding	2,968
Implied price per share	**US$134.01**
Implied return	22.9%
Impled EV / 2016F EBITDA	30.3x
Impled EV / 2017F EBITDA	19.1x

Assumptions

Effective tax rate	40.0%
WACC	10.0%

Peer company comparables

	EV / EBITDA 2016F	EV / EBITDA 2017F	EV / Sales 2016F	P / E 2016F	P / E 2017F
Google	11.9x	10.2x	5.0x	20.3x	17.5x
Tencent	25.6x	20.2x	8.6x	35.4x	27.8x
LinkedIn	13.9x	11.0x	3.1x	36.5x	27.8x
Twitter	13.8x	10.6x	2.9x	32.9x	24.1x
Peer Average	*16.3x*	*13.0x*	*4.9x*	*31.3x*	*24.3x*
Peer Median	*13.9x*	*10.8x*	*4.0x*	*34.1x*	*25.9x*