

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media

## As Facebook opens its advertising platform, the company's leadership position is almost unrivaled.

Updated Forecasts and Estimates from 29 Jan 2015

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### Investment Thesis 29 Jan 2015

Facebook is building the foundation to revolutionize online advertising. However, the company will need to leverage its proprietary consumer data beyond Facebook as an intermediary to place advertising across the Internet at large.

The primary analyst covering this company does not own its stock.

Research as of 29 Jan 2015  
Estimates as of 29 Jan 2015  
Pricing data through 04 Feb 2015  
Rating updated as of 04 Feb 2015

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted.

Facebook's massive base and engagement arguably create advertising opportunities that capture reach and target based on specific criteria. Growth in Facebook's user base across geographies has been impressive. Monthly active users exceed 1.3 billion while daily active users are nearing 900 million, representing the largest social network on the Web. These users are logging into Facebook at least once a month, communicating with friends, posting pictures, and using applications. We believe hundreds of millions of users face switching costs that keep them from leaving Facebook. People are unlikely to leave unless they can take their network of friends, content, and applications with them.

The company's growth in mobile usage has been equally impressive, particularly considering that Facebook was very slow to market with a downloadable application. The company's mobile usage is skyrocketing, and there are almost 1 billion mobile users, with more than one third of MAUs accessing Facebook only from a mobile device. There are now more mobile-only users than desktop-only users, and revenue from mobile ad products exceeds revenue from desktop. After its long delay in building mobile advertising products, we believe the company is a pre-eminent mobile advertiser.

Despite our bullishness about its prospects, the company will need to aggressively increase advertising revenue per user to justify a premium market valuation, in our view. As the company is already the most visited desktop and mobile site in the world, Facebook will have to find new and innovative ways to continue increasing advertising units and pricing. Ultimately, this growth is not limitless, and we believe any meaningful slowdown will have a negative impact on what the stock is worth.

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### Vital Statistics

Market Cap (USD Mil)	211,689
52-Week High (USD)	82.17
52-Week Low (USD)	54.66
52-Week Total Return %	20.5
YTD Total Return %	-3.1
Last Fiscal Year End	31 Dec 2014
5-Yr Forward Revenue CAGR %	22.6
5-Yr Forward EPS CAGR %	25.9
Price/Fair Value	1.15

### Valuation Summary and Forecasts

	Fiscal Year:	2013	2014	2015(E)	2016(E)
Price/Earnings		92.6	70.3	38.8	29.8
EV/EBITDA		33.6	37.9	24.7	18.4
EV/EBIT		45.7	41.2	37.1	23.9
Free Cash Flow Yield %		2.1	1.4	2.6	3.6
Dividend Yield %		—	—	—	—

### Financial Summary and Forecasts (USD Mil)

	Fiscal Year:	2013	2014	2015(E)	2016(E)
Revenue		7,872	12,466	16,921	20,970
Revenue YoY %		54.7	58.4	35.7	23.9
EBIT		2,804	4,994	5,415	8,388
EBIT YoY %		421.2	78.1	8.4	54.9
Net Income, Adjusted		1,491	2,955	5,566	7,744
Net Income YoY %		-8.3	98.2	88.3	39.1
Diluted EPS		0.59	1.11	1.95	2.54
Diluted EPS YoY %		-21.0	87.3	76.0	30.0
Free Cash Flow		1,592	628	3,539	5,531
Free Cash Flow YoY %		-175.7	-60.5	463.3	56.3

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

### Profile

Facebook's 1.3 billion monthly active users create the world's largest online social network. More than 890 million people use Facebook daily, spending more time there than any other website, according to most third-party reports. Users go to Facebook to communicate with friends, share news, and play games, providing the company with a treasure trove of information to target online advertising. Currently, the U.S. represents about 15% of traffic but more than 45% of overall revenue.

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## Morningstar Analysis

### Facebook's 4Q Earnings Reveal Continued Strength in Mobile Advertising 29 Jan 2015

Facebook posted another impressive quarterly report across nearly all facets of the business, including user growth, engagement, overall revenue growth, and success with its mobile advertising products. We fail to notice any particular weakness at this time, and are likely to increase our fair value estimate to \$65 after revising our financial model. We also reiterate our wide moat rating, and consider Facebook one of the highest-quality businesses in the Internet sector.

Total company revenue grew 49% to \$3.85 billion, as the advertising segment approached nearly \$3.6 billion in revenue (up 53%). Facebook is truly a dominant mobile platform (for example, U.S. users spend more than 20% of their time on Facebook and Instagram applications), as mobile ad revenue reached 69% of total ad revenue, up from 53% in 2014. We estimate that Facebook had nearly 8% of the global digital ad market in 2014, and we expect that percentage to go up because of its reach and unique customer data.

On the profitability front, management expects expenses to grow more quickly than revenue in 2015, as the company invests in advertising technology, the messaging platforms Facebook Messenger and WhatsApp, and longer-term initiatives such as virtual reality (through its Oculus acquisition) and Internet connectivity (through a collaborative effort called Internet.org). The firm finished 2014 with a 40% full-year GAAP operating margin, but we anticipate a decline in 2015 (to the low-30s) before expanding again in 2016. Still, we believe that Facebook's business model is unique and likely to be one of the most profitable on a normalized basis. We applaud the firm's patience and long-term vision, although we acknowledge there are few metrics that can justify these investments for investors at this time. For this reason, we encourage investors to wait for an appropriate margin of safety and stay on the sidelines at this time.

Engagement and user growth was also strong, as 890 million people accessed Facebook, an increase of 18% versus 2014. Nearly two thirds of users access Facebook on a daily basis (75% in the U.S. and Canada), and daily user growth continues to outpace monthly user growth. These metrics reinforce our thesis that users are unlikely to divorce themselves from the social platform. Ad pricing has also proven strong, as ad revenue per user grew 35% versus 2014. As the firm continues to improve measurement tools within their advertising technology platform (and thereby create more transparency for advertiser ROI), we would expect ad revenue per user to continue to improve for the foreseeable future.

### Valuation, Growth and Profitability 29 Jan 2015

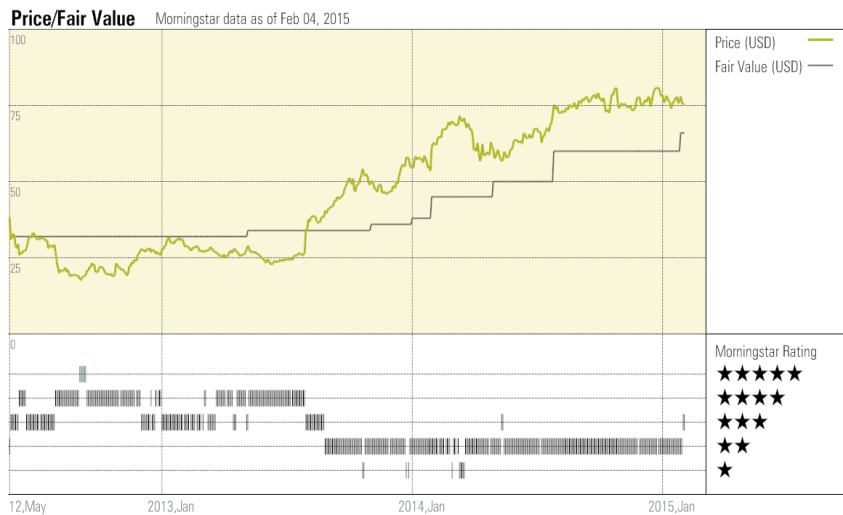
We are increasing our fair value estimate to \$66 per share from \$60 to account for recent results. Our valuation represents a multiple of 34 and 22 times our 2015 adjusted earnings per share and adjusted EBITDA estimates, respectively.

In modeling the company, we forecast 10 years of financial statements. Admittedly, there is a great deal of uncertainty about Facebook's ultimate growth trajectory and profit profile, but the exercise is important to us for several reasons. First, we believe the company will reach its structural maturity within 10 years, whereby it has normalized operating margins and cash flow yields. Second, understanding the size of the revenue opportunity at the end of our explicit forecast period helps quantify our level of optimism about the firm's revenue potential. While we would not feel comfortable about our level of precision in forecasting the absolute level of revenue in three years, we do think our 10-year forecast results in a fair representation within a range of possible outcomes.

The key value drivers in our model include revenue of nearly \$50 billion in 2022, operating margins normalizing in the mid-40s, and forward returns on invested capital of more

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than 30%. Facebook's revenue would still be meaningfully lower than Google's, according to our forecasts, but profitability metrics would be similar. We expect Facebook to have to continue investing in sales and marketing, which would drive additional operating expenses. Additionally, the company will have to increase its revenue sharing with third parties for an advertising network, and we would also expect local and payment businesses to have higher-cost structures than the existing business.

### Scenario Analysis

In our bull-case scenario, we value the company at \$89 per share. In this scenario, we assume that Facebook is able to gain additional share in e-commerce and Internet search advertising, reaching \$74 billion in revenue within 10 years.

In our bear-case scenario, we value the company at \$40 per share. In this scenario, we assume that Facebook is unable to create sufficient ad inventory to monetize its user base relative to other Internet properties. We also assume that it achieves higher operating margins as it is unsuccessful in securing lower-margin revenue streams. In this model, we assume revenue growth fades within five years to

midsingle digits.

Given the wide dispersion around potential outcomes, we highlight the difficulty in applying any level of analytical precision around the long-term operating model of the company.

### Economic Moat

In our view, Facebook has a wide economic moat based on its social graph, communications layer, and competitively advantaged platform for brands, application developers, and advertisers. We look at three considerations for the company's moat: Facebook as an identity, Facebook as a platform, and Facebook as a destination site. Largely, Facebook's ownership and control of its user data afford the firm substantial competitive advantages. The company continues to build a rich database of friends, actions, demographics, and applications, but only shares the data with business partners. Third parties cannot track information that happens on the Facebook platform.

We believe identity is the most important component of a social network. Facebook partners can easily use the company's log-in credentials through Facebook Connect instead of requiring users to separately register a new ID and password. This functionality is good for both Facebook and the partner, as data can be more easily shared between the companies, allowing for better personalization, ad targeting, and social functionality, such as sharing. Furthermore, we have seen data suggesting that websites convert casual users into registered users twice as often after deploying Facebook Connect log-in functionality. This rich data set is extremely difficult to replicate. While all partners may not benefit, we believe Facebook has an early and sustainable advantage here.

Using Facebook Connect to own a person's identity is important, but the platform creates a virtuous circle of the sharing of data among Facebook and its partners, including

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brands, merchants, and developers. Recognizing this opportunity, the company has made the obvious move, opening its platform to third parties, including application and content developers. For mobile applications, Apple's iOS platform and Android developers can connect their apps to the Facebook platform as well. Through the social graph, third parties can distribute applications and content for "discovery" by customers, use Facebook data for better personalization (for example, TripAdvisor shows reviews posted by friends), and use future platform capabilities such as payment capabilities. This value creates a virtuous circle between Facebook and its platform partners. Several tech luminaries have commented to us that Facebook integration is a best-practice equivalent to optimizing a site for search engine discovery by Google and others.

The traffic data alone is encouraging, although we believe this is the weakest pillar of Facebook's moat. While daily users have been growing even faster than monthly users, we expect that competition for people's time and attention will naturally pull people away from Facebook's website. However, because many people use Facebook for communication rather than simple entertainment, we wouldn't expect users to abandon their use of the website. The fact that increasing numbers use Facebook on a daily basis is encouraging, in our view.

### Moat Trend

We believe Facebook's moat trend is stable. The company is investing in important areas, but competitive dynamics will keep it from widening its moat. Competitors like Google will be able to provide alternative advertising platforms to Facebook, providing some limits for the company in its advertising rates. Furthermore, we think the power of Facebook's model will be its ability to share returns with its platform partners. If the company were to attempt to exploit its competitive advantages and destroy its partners' returns on capital, the platform would become less useful and

competitive platforms would emerge, in our view.

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## Bulls Say/Bears Say

### Bulls Say

- ▶ People spend more time on Facebook than any other website.
- ▶ By collecting information about users, their social connections, and their activities on the Internet, Facebook has a lucrative database that is highly valuable to advertisers.
- ▶ Despite relatively low advertising rates, the company's low expense base drives high levels of profitability and returns on capital.

### Bears Say

- ▶ Many advertisers are unsure if they are spending money wisely on Facebook ads today.
- ▶ Management recently mentioned that the company may not be able to increase the concentration of its ads shown in its news feed.
- ▶ Laws and regulations surrounding privacy may hinder product development.

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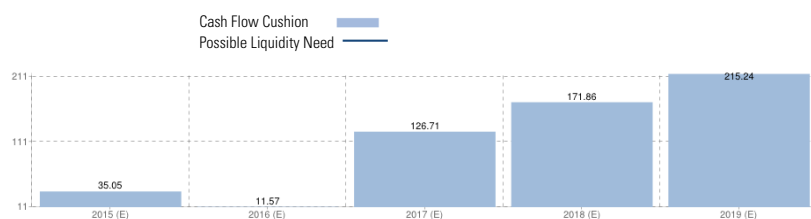
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## Credit Analysis

### Five Year Adjusted Cash Flow Forecast (USD Mil)

	2015(E)	2016(E)	2017(E)	2018(E)	2019(E)
Cash and Equivalents (beginning of period)	11,199	13,187	18,671	24,687	31,909
Adjusted Available Cash Flow	5,978	7,932	8,445	9,856	11,354
Total Cash Available before Debt Service	17,177	21,118	27,115	34,543	43,262
Principal Payments	—	-1,500	—	—	—
Interest Payments	-84	-84	-84	-84	-84
Other Cash Obligations and Commitments	-406	-242	-130	-117	-117
Total Cash Obligations and Commitments	-490	-1,826	-214	-201	-201

### Cumulative Annual Cash Flow Cushion



### Adjusted Cash Flow Summary

	USD Millions	% of Commitments
Beginning Cash Balance	11,199	382.0
Sum of 5-Year Adjusted Free Cash Flow	43,564	1,485.8
Sum of Cash and 5-Year Cash Generation	54,763	1,867.8
Revolver Availability	—	—
Asset Adjusted Borrowings (Repayment)	—	—
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	54,763	1,867.8
Sum of 5-Year Cash Commitments	-2,932	—

### Credit Rating Pillars—Peer Group Comparison

	FB	Sector	Universe
Business Risk	6	—	—
Cash Flow Cushion	2	—	—
Solvency Score	2	—	—
Distance to Default	4	—	—
Credit Rating	—	—	—

Source: Morningstar Estimates

Note: Scoring is on a scale 1-10, 1 being Best, 10 being Worst

### Financial Health & Capital Structure

Given the high level of competition and uncertainty around new technology threats, Facebook's capital structure is quite reasonable. The balance sheet has more than \$11.1 billion in cash and no debt, and we forecast free cash flow margins to exceed 20% within the next three years, even as the firm invests heavily in new initiatives. While we expect investments in growth to accelerate faster than cash flows over the next several years, we do not anticipate the company will need to further access the capital markets to support its current business. Furthermore, the capital structure supports further technology acquisitions to broaden the company's product portfolio.

### Enterprise Risk

Although the revenue opportunity for Facebook is large, the company faces several risks that could ultimately prove our investment thesis to be overly optimistic. First, regulators may prevent the company from tracking its users. Significant regulatory action could detract from the value of its advertising platform. Second, excessive advertising or privacy fears could lead to a mass exodus of users. Other social networks (for example, MySpace, owned by News Corporation) have experienced declines. Lastly, if agencies and advertisers experience a permanent lack of visibility into advertiser return on investment, Facebook's advertising opportunity may be significantly constrained.

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## Management & Ownership

### Management Activity

Name	Position	Shares Held	Report Date*	InsiderActivity
MS. SHERYL K. SANDBERG	COO/Director,Director	5,189,482	15 Jan 2015	343,096
MR. DONALD E. GRAHAM	Director	643,783	15 May 2014	—
MR. MICHAEL SCHROEPFER	Chief Technology Officer/Vice President, Divisional	402,698	15 Jan 2015	152,408
MR. DAVID B. FISCHER	Vice President, Divisional	368,003	15 Nov 2014	61,547
JAS ATHWAL	Chief Accounting Officer	124,130	15 Jan 2015	8,559
MR. REED HASTINGS	Director	71,804	15 Jan 2015	—
COLIN STRETCH	Secretary/Vice President/General Counsel	59,722	27 Jan 2015	33,219
MR. ERSKINE B. BOWLES	Director	24,408	15 Jan 2015	—

\*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

### Fund Ownership

Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Fidelity® Contrafund® Fund	1.68	3.31	604	31 Dec 2014
Vanguard Total Stock Mkt Idx	1.28	0.73	2,021	31 Dec 2014
Vanguard Five Hundred Index Fund	0.82	0.89	417	31 Dec 2014
Vanguard Institutional Index Fund	0.77	0.89	246	31 Dec 2014
SPDR® S&P 500 ETF	0.76	0.87	13	03 Feb 2015
Concentrated Holders				
Prudential Jennison Market Neutral Fund	—	21.53	-1	31 Dec 2014
Morgan Stanley Inst Opportunity Port	0.02	13.67	-7	30 Sep 2014
Global X Social Media ETF	—	10.02	—	03 Feb 2015
Nordinvest Nordinternet	—	9.98	3	30 Nov 2014
Global IPO Fund	—	9.90	-1	30 Sep 2014

### Institutional Transactions

Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/Sold (k)	Portfolio Date
Government Pension Fund of Norway - Global	0.45	0.08	11,503	31 Dec 2013
Lone Pine Capital LLC	0.33	2.67	8,639	30 Sep 2014
Vanguard Group, Inc.	3.99	0.64	8,339	30 Sep 2014
State Street Corp	3.04	0.67	8,056	30 Sep 2014
J.P. Morgan Investment Management Inc.	0.97	0.91	7,762	30 Sep 2014
Top 5 Sellers				
Waddell & Reed Investment Management Co	0.34	0.96	-3,768	30 Sep 2014
Morgan Stanley & Co International PLC	—	0.11	-3,700	30 Sep 2014
Morgan Stanley Investment Management Inc	0.59	2.35	-2,971	30 Sep 2014
Goldman, Sachs & Co.	0.16	0.16	-2,092	30 Sep 2014
Marketfield Asset Management LLC	0.12	2.44	-1,863	30 Sep 2014

### Management 29 Jan 2015

Mark Zuckerberg founded Facebook and has held the role of CEO since 2004. He also serves as chairman of the board. Chief operating officer Sheryl Sandberg has worked at Facebook since 2008 after spending more than seven years in an executive-level role at Google. We have a positive view of the skill set and performance of the management team to date and believe its patience and capital allocation have enabled it to drive profits and competitive advantages. While we expect Facebook to continue to be patient as a young public company, we acknowledge management may feel pressure to pursue revenue growth in areas that may actually weaken the firm's economic moat.

The concern about capital allocation becomes even more paramount because Zuckerberg controls about 57% of the voting shares of the company. In 2012, the company acquired Instagram, a social networking site for sharing photos. Although the purchase only represented approximately 1% of the value of Facebook, it has been reported that the deal happened with very little involvement from the board of directors. If Zuckerberg loses discipline in allocating the company's capital, there can be no guarantee that any such mechanism would prevent the company from destroying shareholder value.

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## Analyst Notes

### Facebook's 4Q Earnings Reveal Continued Strength in Mobile Advertising 29 Jan 2015

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Total company revenue grew 49% to \$3.85 billion, as the advertising segment approached nearly \$3.6 billion in revenue (up 53%). Facebook is truly a dominant mobile platform (for example, U.S. users spend more than 20% of their time on Facebook and Instagram applications), as mobile ad revenue reached 69% of total ad revenue, up from 53% in 2014. We estimate that Facebook had nearly 8% of the global digital ad market in 2014, and we expect that percentage to go up because of its reach and unique customer data.

On the profitability front, management expects expenses to grow more quickly than revenue in 2015, as the company invests in advertising technology, the messaging platforms Facebook Messenger and WhatsApp, and longer-term initiatives such as virtual reality (through its Oculus acquisition) and Internet connectivity (through a collaborative effort called Internet.org). The firm finished 2014 with a 40% full-year GAAP operating margin, but we anticipate a decline in 2015 (to the low-30s) before expanding again in 2016. Still, we believe that Facebook's business model is unique and likely to be one of the most profitable on a normalized basis. We applaud the firm's patience and long-term vision, although we acknowledge there are few metrics that can justify these investments for investors at this time. For this reason, we encourage investors to wait for an appropriate margin of safety and

stay on the sidelines at this time.

Engagement and user growth was also strong, as 890 million people accessed Facebook, an increase of 18% versus 2014. Nearly two thirds of users access Facebook on a daily basis (75% in the U.S. and Canada), and daily user growth continues to outpace monthly user growth. These metrics reinforce our thesis that users are unlikely to divorce themselves from the social platform. Ad pricing has also proven strong, as ad revenue per user grew 35% versus 2014. As the firm continues to improve measurement tools within their advertising technology platform (and thereby create more transparency for advertiser ROI), we would expect ad revenue per user to continue to improve for the foreseeable future.

### Facebook's Earnings Impress, but Expense Outlook Brings Stock Closer to Our Fair Value 29 Oct 2014

Facebook reported strong third-quarter earnings, posting 59% revenue growth and 90% growth in GAAP operating income. The largest social network in the world reaches 1.3 billion monthly active users and 864 million daily active users, and our investment thesis for it remains intact. As we adjust our model to account for higher near-term expenses, our long-term model continues to assume operating margin expansion, and we don't anticipate a material revision to our \$60 fair value estimate. In our view, the stock is overvalued, and we wouldn't recommend allocating new money toward the name at this time.

The negative effects of recently closed acquisitions Oculus Rift (a virtual reality company) and WhatsApp (a global messaging company) will amplify operating expenses in 2015 versus this calendar year, according to comments made by management. While we currently model revenue to grow approximately 30% in 2015, expenses are now set to grow 55%-75% (50%-70% non-GAAP). We had not previously expected a dramatic compression of operating margins. Management reiterated its intention to invest in



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## Analyst Notes

projects that may not contribute significantly to revenue or cash flows for the next five years, and the updated expense guidance supports that vision. In our opinion, if public equity investors have a shorter-term time horizon than management's, the stock is likely to trade below our fair value estimate, creating an attractive entry point for investors. Still, we are focused on near-term milestones such as WhatsApp user growth and revenue contribution for the next several quarters, as we aren't fully convinced of the value some recent acquisitions bring to shareholders.

Revenue grew 59% versus 2013, reaching an impressive \$3.2 billion for the quarter. The mobile advertising business grew 122% to \$1.9 billion, as the company continues to benefit from its dominant mobile advertising platform. Operating margins were a robust 44%, a 700-basis-point improvement compared with 2013. Our current valuation model continues to assume market-leading operating margins reaching the high 40s by 2018, while the revenue compound annual growth rate approaches 30%. If we see a continued sell-off, we will happily recommend investment.

### **Facebook Launches Atlas Ad Technology to Help Advertisers Better Reach Users on Other Sites** 29 Sep 2014

Facebook has announced the launch of Atlas, an advertising platform that, for the first time, allows advertisers to target audiences using Facebook data on other platforms (away from Facebook websites). Although the effort does not compete directly with Google's DoubleClick platform, we believe advertisers will have a greater ability to purchase targeted display advertising without using Google than they have prior to today. Still, we are not modifying our fair value estimate, and we are sticking with our wide moat ratings for both Google and Facebook.

In our view, this product launch signifies the third pillar of Facebook's wide moat, supporting our initial investment thesis. (The first two pillars are defined by 1) Facebook as

a web identity and 2) Facebook as a social destination for sharing content). Theoretically, advertisers should be able to leverage Facebook's rich dataset to better target advertising (driving effectiveness for advertisers), making them more willing to pay higher prices (driving revenues for web publishers). Furthermore, we expect Facebook to be able to further enrich its own dataset through these commercial relationships, reinforcing its moat.

From an industry perspective, announcements such as these will support a continued shift toward digital advertising (and away from offline channels such as print). We continue to believe that the secular growth story in Internet advertising spending is one of the best growth stories in technology and Facebook and Google have the deepest competitive advantages in the sector. If either were to trade at a reasonable margin of safety to our fair value estimates, we would enthusiastically recommend investment.

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## Morningstar Analyst Forecasts

### Financial Summary and Forecasts

Fiscal Year Ends in December

	3-Year Hist. CAGR	Forecast					
		2012	2013	2014	2015	2016	5-Year Proj. CAGR
Growth (% YoY)							
Revenue	49.8	37.1	54.7	58.4	35.7	23.9	22.6
EBIT	41.7	-69.4	421.2	78.1	8.4	54.9	25.8
EBITDA	37.7	-42.9	221.4	42.3	49.7	34.3	27.5
Net Income	34.4	33.5	-8.3	98.2	88.3	39.1	34.7
Diluted EPS	35.7	69.0	-21.0	87.3	76.0	30.0	25.9
Earnings Before Interest, after Tax	41.1	-111.2	-1,554.1	72.1	14.4	62.7	29.6
Free Cash Flow	-5.5	-382.7	-175.7	-60.5	463.3	56.3	68.5

	3-Year Hist. Avg	Forecast					
		2012	2013	2014	2015	2016	5-Year Proj. Avg
Profitability							
Operating Margin %	28.8	10.6	35.6	40.1	32.0	40.0	41.4
EBITDA Margin %	38.4	23.3	48.5	43.5	48.0	52.0	52.2
Net Margin %	24.9	31.9	18.9	23.7	32.9	36.9	37.1
Free Cash Flow Margin %	-5.4	-41.3	20.2	5.0	20.9	26.4	24.2
ROIC %	5.8	-0.9	10.7	7.5	8.3	11.9	12.7
Adjusted ROIC %	7.3	-0.8	9.7	12.9	20.5	25.2	24.7
Return on Assets %	6.5	0.4	9.0	10.2	7.7	11.4	12.2
Return on Equity %	7.6	0.5	11.0	11.5	8.5	12.5	13.5

	3-Year Hist. Avg	Forecast					
		2012	2013	2014	2015	2016	5-Year Proj. Avg
Leverage							
Debt/Capital	0.04	0.11	—	—	—	—	—
Total Debt/EBITDA	0.42	1.26	—	—	—	—	—
EBITDA/Interest Expense	52.00	23.27	68.13	64.61	96.69	129.82	158.60

### Valuation Summary and Forecasts

	2013	2014	2015(E)	2016(E)
Price/Fair Value	1.52	1.30	—	—
Price/Earnings	92.6	70.3	38.8	29.8
EV/EBITDA	33.6	37.9	24.7	18.4
EV/EBIT	45.7	41.2	37.1	23.9
Free Cash Flow Yield %	2.1	1.4	2.6	3.6
Dividend Yield %	—	—	—	—

### Key Valuation Drivers

Cost of Equity %	10.0
Pre-Tax Cost of Debt %	—
Weighted Average Cost of Capital %	10.0
Long-Run Tax Rate %	35.9
Stage II EBI Growth Rate %	10.1
Stage II Investment Rate %	20.2
Perpetuity Year	20

Additional estimates and scenarios available for download at <http://select.morningstar.com>.

### Discounted Cash Flow Valuation

	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	51,460	28.4	17.46
Present Value Stage II	54,295	30.0	18.43
Present Value Stage III	75,217	41.6	25.53
<b>Total Firm Value</b>	<b>180,971</b>	<b>100.0</b>	<b>61.41</b>
Cash and Equivalents	11,199	—	3.80
Debt	—	—	—
Preferred Stock	—	—	—
Other Adjustments	—	—	—
<b>Equity Value</b>	<b>192,170</b>	<b>—</b>	<b>65.21</b>
Projected Diluted Shares	2,947		
<b>Fair Value per Share (USD)</b>	<b>—</b>		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media

## Morningstar Analyst Forecasts

### Income Statement (USD Mil)

Fiscal Year Ends in December

	2012	2013	2014	Forecast	
				2015	2016
<b>Revenue</b>	<b>5,089</b>	<b>7,872</b>	<b>12,466</b>	<b>16,921</b>	<b>20,970</b>
Cost of Goods Sold	1,364	1,875	2,153	2,877	3,355
<b>Gross Profit</b>	<b>3,725</b>	<b>5,997</b>	<b>10,313</b>	<b>14,044</b>	<b>17,615</b>
Selling, General & Administrative Expenses	1,788	1,778	2,653	3,892	4,194
Research & Development	1,399	1,415	2,666	2,369	2,516
Employee Compensation & Benefits	—	—	—	2,369	2,516
Depreciation & Amortization (if reported separately)	—	—	—	—	—
<b>Operating Income (ex charges)</b>	<b>538</b>	<b>2,804</b>	<b>4,994</b>	<b>5,415</b>	<b>8,388</b>
Restructuring & Other Cash Charges	—	—	—	—	—
Impairment Charges (if reported separately)	—	—	—	—	—
Other Non-Cash (Income)/Charges	—	—	—	—	—
<b>Operating Income (incl charges)</b>	<b>538</b>	<b>2,804</b>	<b>4,994</b>	<b>5,415</b>	<b>8,388</b>
Interest Expense	51	56	84	84	84
Interest Income	7	6	—	8	9
<b>Pre-Tax Income</b>	<b>494</b>	<b>2,754</b>	<b>4,910</b>	<b>5,339</b>	<b>8,313</b>
Income Tax Expense	441	1,254	1,970	2,142	3,086
Other After-Tax Cash Gains (Losses)	—	—	—	—	—
Other After-Tax Non-Cash Gains (Losses)	—	—	—	—	—
(Minority Interest)	—	-9	15	—	—
(Preferred Dividends)	—	—	—	—	—
<b>Net Income</b>	<b>53</b>	<b>1,491</b>	<b>2,955</b>	<b>3,197</b>	<b>5,227</b>
Weighted Average Diluted Shares Outstanding	2,166	2,517	2,664	2,850	3,050
<b>Diluted Earnings Per Share</b>	<b>0.02</b>	<b>0.59</b>	<b>1.11</b>	<b>1.12</b>	<b>1.71</b>
Adjusted Net Income	1,625	1,491	2,955	5,566	7,744
<b>Diluted Earnings Per Share (Adjusted)</b>	<b>0.75</b>	<b>0.59</b>	<b>1.11</b>	<b>1.95</b>	<b>2.54</b>
Dividends Per Common Share	—	—	—	—	—
<b>EBITDA</b>	<b>1,187</b>	<b>3,815</b>	<b>5,427</b>	<b>8,122</b>	<b>10,905</b>
<b>Adjusted EBITDA</b>	<b>1,187</b>	<b>3,815</b>	<b>5,427</b>	<b>8,122</b>	<b>10,905</b>

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media

## Morningstar Analyst Forecasts

### Balance Sheet (USD Mil)

Fiscal Year Ends in December

	2012	2013	2014	Forecast	
				2015	2016
Cash and Equivalents	9,626	11,449	11,199	13,187	18,671
Investments	—	—	—	—	—
Accounts Receivable	719	1,109	1,678	2,494	3,091
Inventory	—	—	—	—	—
Deferred Tax Assets (Current)	451	—	—	—	—
Other Short Term Assets	471	512	793	1,076	1,334
<b>Current Assets</b>	<b>11,267</b>	<b>13,070</b>	<b>13,670</b>	<b>16,757</b>	<b>23,096</b>
Net Property Plant, and Equipment	2,391	2,882	3,967	3,260	2,743
Goodwill	1,388	839	17,981	17,981	17,981
Other Intangibles	—	883	3,929	3,929	3,929
Deferred Tax Assets (Long-Term)	—	—	—	—	—
Other Long-Term Operating Assets	57	221	637	865	1,072
Long-Term Non-Operating Assets	—	—	—	—	—
<b>Total Assets</b>	<b>15,103</b>	<b>17,895</b>	<b>40,184</b>	<b>42,791</b>	<b>48,820</b>
Accounts Payable	65	268	378	505	589
Short-Term Debt	—	—	—	—	—
Deferred Tax Liabilities (Current)	—	—	—	—	—
Other Short-Term Liabilities	987	832	1,046	1,420	1,760
<b>Current Liabilities</b>	<b>1,052</b>	<b>1,100</b>	<b>1,424</b>	<b>1,925</b>	<b>2,349</b>
Long-Term Debt	1,500	—	—	—	—
Deferred Tax Liabilities (Long-Term)	—	—	—	—	—
Other Long-Term Operating Liabilities	796	1,325	1,164	1,580	1,958
Long-Term Non-Operating Liabilities	—	—	—	—	—
<b>Total Liabilities</b>	<b>3,348</b>	<b>2,425</b>	<b>2,588</b>	<b>3,505</b>	<b>4,307</b>
Preferred Stock	—	—	—	—	—
Common Stock	—	—	—	—	—
Additional Paid-in Capital	10,094	12,297	30,225	30,225	30,225
Retained Earnings (Deficit)	1,659	3,173	5,871	9,068	14,295
(Treasury Stock)	—	—	—	—	—
Other Equity	2	—	—	-6	-6
<b>Shareholder's Equity</b>	<b>11,755</b>	<b>15,470</b>	<b>36,096</b>	<b>39,287</b>	<b>44,514</b>
Minority Interest	—	—	—	—	—
<b>Total Equity</b>	<b>11,755</b>	<b>15,470</b>	<b>36,096</b>	<b>39,287</b>	<b>44,514</b>

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media

## Morningstar Analyst Forecasts

### Cash Flow (USD Mil)

Fiscal Year Ends in December	Forecast				
	2012	2013	2014	2015	2016
Net Income	53	1,500	2,940	3,197	5,227
Depreciation	649	1,011	433	2,707	2,516
Amortization	—	—	—	—	—
Stock-Based Compensation	1,572	906	1,572	2,191	2,243
Impairment of Goodwill	—	—	—	—	—
Impairment of Other Intangibles	—	—	—	—	—
Deferred Taxes	-186	-37	-186	—	—
Other Non-Cash Adjustments	15	166	15	—	—
(Increase) Decrease in Accounts Receivable	-170	-378	-170	-816	-597
(Increase) Decrease in Inventory	—	—	—	—	—
Change in Other Short-Term Assets	-463	213	-463	-283	-258
Increase (Decrease) in Accounts Payable	159	38	159	127	84
Change in Other Short-Term Liabilities	-17	803	-17	374	340
<b>Cash From Operations</b>	<b>1,612</b>	<b>4,222</b>	<b>4,283</b>	<b>7,496</b>	<b>9,556</b>
(Capital Expenditures)	-1,235	-1,362	-1,235	-2,000	-2,000
Net (Acquisitions), Asset Sales, and Disposals	-911	-368	-911	—	—
Net Sales (Purchases) of Investments	-4,876	-882	-4,876	—	—
Other Investing Cash Flows	-2	-12	-2	188	171
<b>Cash From Investing</b>	<b>-7,024</b>	<b>-2,624</b>	<b>-7,024</b>	<b>-1,812</b>	<b>-1,829</b>
Common Stock Issuance (or Repurchase)	3,915	1,504	3,915	—	—
Common Stock (Dividends)	—	—	—	—	—
Short-Term Debt Issuance (or Retirement)	—	—	—	—	—
Long-Term Debt Issuance (or Retirement)	1,496	-1,500	1,496	—	—
Other Financing Cash Flows	872	-671	872	-2,191	-2,243
<b>Cash From Financing</b>	<b>6,283</b>	<b>-667</b>	<b>6,283</b>	<b>-2,191</b>	<b>-2,243</b>
Exchange Rates, Discontinued Ops, etc. (net)	1	8	1	-6	—
<b>Net Change in Cash</b>	<b>872</b>	<b>939</b>	<b>3,543</b>	<b>3,488</b>	<b>5,484</b>

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media

## Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

### Valuation Analysis

Company/Ticker	Price/Fair Value	Price/Earnings			EV/EBITDA			Price/Free Cash Flow			Price/Book			Price/Sales		
		2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Google Inc GOOG USA	0.87	20.0	17.6	16.8	15.1	11.8	10.5	30.6	20.3	16.2	3.5	3.0	2.6	5.4	4.7	4.2
Yahoo! Inc YHOO USA	0.76	7.7	42.8	34.1	3.4	57.1	70.6	78.2	40.4	37.9	1.1	1.0	1.0	8.9	8.8	8.6
Twitter Inc TWTR USA	1.04	407.2	61.7	44.3	110.6	30.5	23.7	NM	44.6	38.3	6.7	6.9	6.7	18.1	10.3	6.5
Average		145.0	40.7	31.7	43.0	33.1	34.9	54.4	35.1	30.8	3.8	3.6	3.4	10.8	7.9	6.4
<b>Facebook Inc FB US</b>	<b>1.15</b>	<b>70.3</b>	<b>38.8</b>	<b>29.8</b>	<b>37.9</b>	<b>24.7</b>	<b>18.4</b>	<b>71.1</b>	<b>38.5</b>	<b>28.0</b>	<b>6.0</b>	<b>5.4</b>	<b>4.8</b>	<b>17.4</b>	<b>12.5</b>	<b>10.1</b>

### Returns Analysis

Company/Ticker	Last Historical Year Total Assets (Mil)	ROIC %			Adjusted ROIC %			Return on Equity %			Return on Assets %			Dividend Yield %		
		2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Google Inc GOOG USA	— USD	12.8	13.2	12.5	20.4	21.5	21.0	14.8	14.8	14.1	11.8	12.2	11.8	—	—	—
Yahoo! Inc YHOO USA	61,960 USD	130.6	-41.7	-75.7	42.0	-10.3	-11.3	29.0	5.1	5.5	19.1	3.2	3.6	—	—	—
Twitter Inc TWTR USA	— USD	-15.1	-3.3	2.6	-16.6	-3.7	2.8	-17.2	-3.0	3.2	-15.0	-2.5	2.5	—	—	—
Average		42.8	-10.6	-20.2	15.3	2.5	4.2	8.9	5.6	7.6	5.3	4.3	6.0	—	—	—
<b>Facebook Inc FB US</b>	<b>40,184 USD</b>	<b>7.5</b>	<b>8.3</b>	<b>11.9</b>	<b>12.9</b>	<b>20.5</b>	<b>25.2</b>	<b>11.5</b>	<b>8.5</b>	<b>12.5</b>	<b>10.2</b>	<b>7.7</b>	<b>11.4</b>	—	—	—

### Growth Analysis

Company/Ticker	Last Historical Year Revenue (Mil)	Revenue Growth %			EBIT Growth %			EPS Growth %			Free Cash Flow Growth %			Dividend/Share Growth %		
		2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Google Inc GOOG USA	65,948 USD	10.2	14.1	11.7	17.4	17.6	12.6	12.2	13.4	5.0	-34.3	114.0	32.3	—	—	—
Yahoo! Inc YHOO USA	4,618 USD	-1.3	2.5	2.8	NM	-90.8	-0.2	1,248.3	-84.3	25.2	-513.8	-210.9	2.3	—	—	—
Twitter Inc TWTR USA	1,426 USD	114.5	75.7	58.2	1.0	-68.8	-179.1	-142.3	562.8	38.7	6.3	-93.4	-269.5	—	—	—
Average		41.1	30.8	24.2	9.2	-47.3	-55.6	372.7	164.0	23.0	-180.6	-63.4	-78.3	—	—	—
<b>Facebook Inc FB US</b>	<b>12,466 USD</b>	<b>58.4</b>	<b>35.7</b>	<b>23.9</b>	<b>78.1</b>	<b>8.4</b>	<b>54.9</b>	<b>87.3</b>	<b>76.0</b>	<b>30.0</b>	<b>-60.5</b>	<b>463.3</b>	<b>56.3</b>	—	—	—

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media

## Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

### Profitability Analysis

Company/Ticker	Last Historical Year Net Income (Mil)	Gross Margin %			EBITDA Margin %			Operating Margin %			Net Margin %			Free Cash Flow Margin %		
		2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Google Inc GOOG USA	17,929 USD	60.4	59.6	59.3	29.9	33.6	33.8	24.9	25.6	25.8	27.2	27.6	26.4	17.6	23.3	26.0
Yahoo! Inc YHOO USA	6,582 USD	71.9	70.1	69.5	244.9	11.8	9.3	231.8	20.7	20.1	142.5	20.7	25.3	11.4	21.8	22.6
Twitter Inc TWTR USA	76 USD	69.0	70.0	72.0	15.0	31.1	25.3	-45.0	-8.0	4.0	5.4	21.3	18.6	-6.3	23.1	17.0
Average		67.1	66.6	66.9	96.6	25.5	22.8	70.6	12.8	16.6	58.4	23.2	23.4	7.6	22.7	21.9
<b>Facebook Inc FB US</b>	<b>2,955 USD</b>	<b>82.7</b>	<b>83.0</b>	<b>84.0</b>	<b>43.5</b>	<b>48.0</b>	<b>52.0</b>	<b>40.1</b>	<b>32.0</b>	<b>40.0</b>	<b>23.7</b>	<b>32.9</b>	<b>36.9</b>	<b>24.5</b>	<b>32.5</b>	<b>36.0</b>

### Leverage Analysis

Company/Ticker	Last Historical Year Total Debt (Mil)	Debt/Equity %			Debt/Total Cap %			EBITDA/Interest Exp.			Total Debt/EBITDA			Assets/Equity		
		2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Google Inc GOOG USA	5,245 USD	5.2	4.5	3.9	4.9	4.3	3.7	—	—	—	0.3	0.2	0.2	1.2	1.2	1.2
Yahoo! Inc YHOO USA	1,170 USD	3.0	2.9	2.7	2.9	2.8	2.7	—	—	—	0.1	2.1	2.6	1.6	1.6	1.5
Twitter Inc TWTR USA	198 USD	5.1	5.3	5.1	4.9	5.0	4.9	48.5	176.1	226.5	0.9	0.3	0.2	1.1	1.2	1.3
Average		4.4	4.2	3.9	4.2	4.0	3.8	48.5	176.1	226.5	0.4	0.9	1.0	1.3	1.3	1.3
<b>Facebook Inc FB US</b>	<b>— USD</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>64.6</b>	<b>96.7</b>	<b>129.8</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>

### Liquidity Analysis

Company/Ticker	Market Cap (Mil)	Cash per Share			Current Ratio			Quick Ratio			Cash/Short-Term Debt			Payout Ratio %		
		2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
Google Inc GOOG USA	354,622 USD	94.63	110.71	131.61	5.02	5.75	6.69	4.99	5.72	6.66	21.58	25.76	31.23	—	—	—
Yahoo! Inc YHOO USA	41,726 USD	10.18	11.61	12.55	2.63	2.81	3.00	2.63	2.81	3.00	—	—	—	—	—	—
Twitter Inc TWTR USA	25,837 USD	2.11	1.96	2.08	10.10	6.69	4.95	10.10	6.69	4.95	18.39	18.01	19.17	—	—	—
Average		35.64	41.43	48.75	5.92	5.08	4.88	5.91	5.07	4.87	19.99	21.89	25.20	—	—	—
<b>Facebook Inc FB US</b>	<b>211,689 USD</b>	<b>4.20</b>	<b>4.63</b>	<b>6.12</b>	<b>9.60</b>	<b>8.71</b>	<b>9.83</b>	<b>9.60</b>	<b>8.71</b>	<b>9.83</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

# Research Methodology for Valuing Companies

## Components of Our Methodology

- ▶ Economic Moat™ Rating
- ▶ Moat Trend™ Rating
- ▶ Moat Valuation
- ▶ Three-Stage Discounted Cash Flow
- ▶ Weighted Average Cost of Capital
- ▶ Fair Value Estimate
- ▶ Scenario Analysis
- ▶ Uncertainty Ratings
- ▶ Margin of Safety
- ▶ Consider Buying/Selling
- ▶ Stewardship Rating

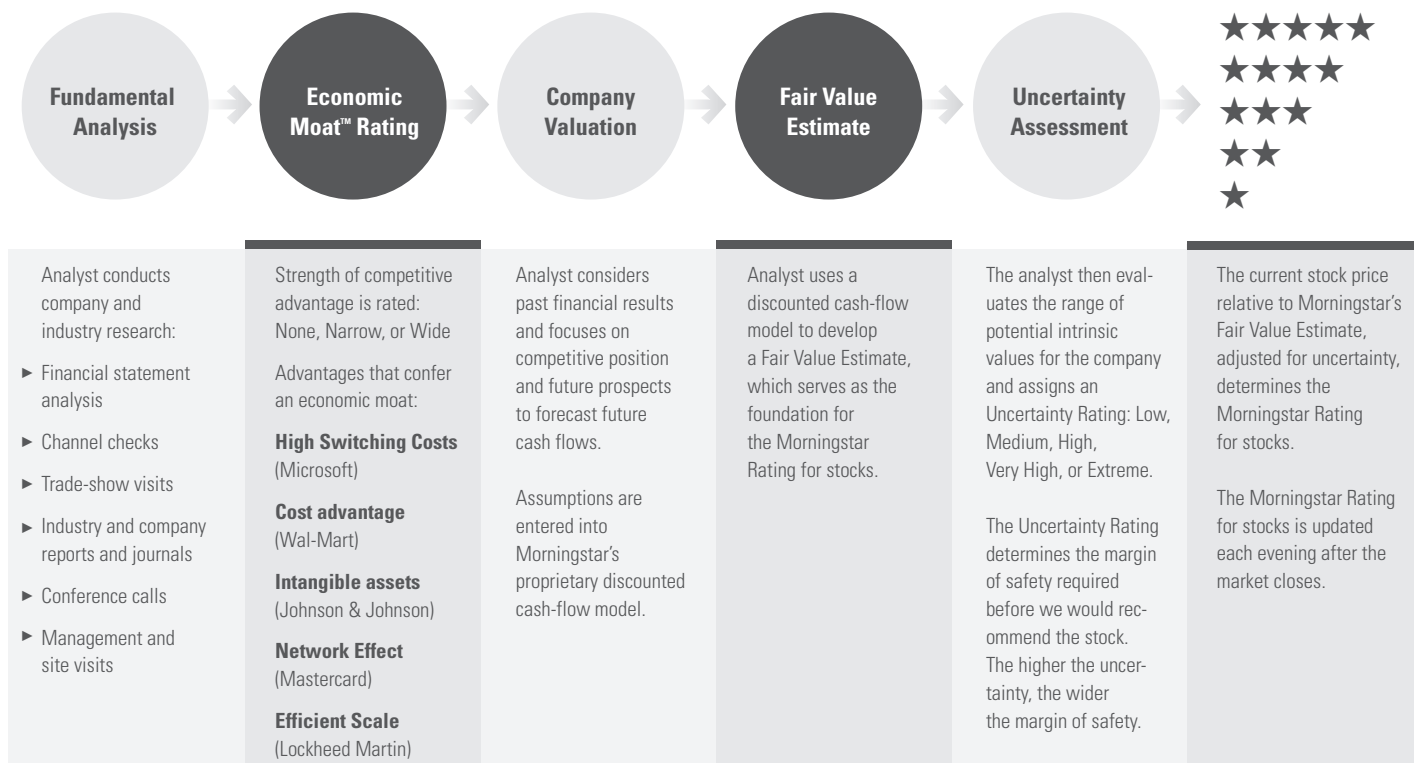
The Morningstar Rating for stocks identifies companies trading at a discount or premium to our analysts’ assessment of their fair value. A number of components drive this rating: (1) our assessment of the firm’s economic moat, (2) our estimate of the stock’s intrinsic value based on a discounted cash-flow model, (3) the margin of safety bands we apply to our Fair Value Estimate, and (4) the current stock price relative to our fair value estimate.

The concept of the Morningstar Economic Moat™ Rating plays a vital role not only in our qualitative assessment of a firm’s investment potential, but also in our valuation process. We assign three moat ratings—none, narrow, or wide—as well as the Morningstar Moat Trend™ Rating—positive, stable, or negative—to each company we cover. There are two major requirements for firms to earn either a narrow or wide moat rating: (1) the prospect of earning above-average returns on capital; and (2) some competitive edge that prevents these returns from quickly eroding. The assumptions we make about a firm’s moat determine the length of “economic outperformance” that we assume in the latter stages

of our valuation model. We also quantify the value of each firm’s moat, which represents the difference between a firm’s enterprise value and the value of the firm if no future net investment were to occur. Said differently, moat value identifies the value generated by the firm as a result of any future net new investment. Our Moat Trend Rating reflects our assessment of whether each firm’s competitive advantage is either getting stronger or weaker, since we think of moats as dynamic, rather than static.

At the heart of our valuation system is a detailed projection of a company’s future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model—where a firm’s return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from 0 years (for no-moat firms) to 20 years (for wide-moat companies). In our third stage, we assume the firm’s RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard

## Morningstar Research Methodology for Valuing Companies





# Research Methodology for Valuing Companies

## Detailed Methodology Documents and Materials\*

- ▶ Comprehensive Equity Research Methodology
- ▶ Uncertainty Methodology
- ▶ Cost of Equity Methodology
- ▶ Morningstar DCF Valuation Model
- ▶ Stewardship Rating Methodology

\* Please contact a sales representative for more information.

perpetuity formula. In deciding on the rate at which to discount future cash flows, we ignore stock-price volatility. Instead, we rely on a system that measures the estimated volatility of a firm’s underlying future free cash flows, taking into account fundamental factors such as the diversity of revenue sources and the firm’s fixed cost structure.

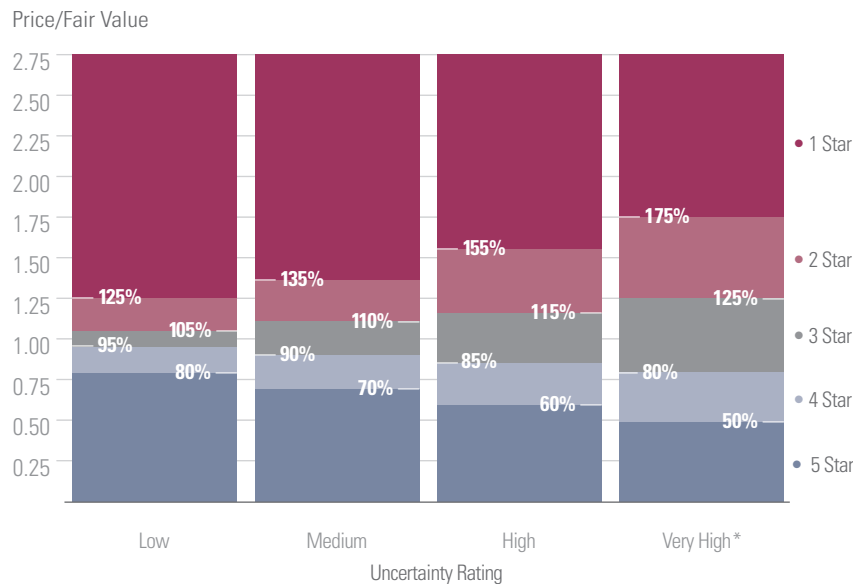
We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts typically model three to five scenarios for each company we cover, stress-testing the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of these potential fair values, based on an assessment of a company’s future sales range, the firm’s operating and financial leverage, and any other contingent events that may impact the business. Our analysts use this range to assign an appropriate margin of safety—or the discount/premium

to a fair value we apply in setting our consider buying/consider selling prices. Firms trading below our consider-buying prices receive our highest rating of five stars, whereas firms trading above our consider-selling prices receive our lowest rating of one star.

Our corporate Stewardship Rating represents our assessment of management’s stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies’ investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they’ve had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder’s perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

### Morningstar Margin of Safety and Star Rating Bands



\* Occasionally a stock’s uncertainty will be too high for us to estimate, in which case we label it Extreme.

# Morningstar’s Approach to Rating Corporate Credit

- ▶ Offers a proprietary measure of the credit quality of companies on our coverage list.
- ▶ Encapsulates our in-depth modeling and quantitative work in one letter grade.
- ▶ Allows investors to rank companies by each of the four underlying components of our credit ratings, including both analyst-driven and quantitative measures.
- ▶ Provides access to all the underlying forecasts that go into the rating, available through our institutional service.

## Purpose

The Morningstar Corporate Credit Rating measures the ability of a firm to satisfy its debt and debt-like obligations. The higher the rating, the less likely we think the company is to default on these obligations.

The Morningstar Corporate Credit Rating builds on the modeling expertise of our securities research team. For each company, we publish:

- ▶ Five years of detailed pro-forma financial statements
- ▶ Annual estimates of free cash flow
- ▶ Annual forecasts of return on invested capital
- ▶ Scenario analyses, including upside and downside cases
- ▶ Forecasts of leverage, coverage, and liquidity ratios for five years
- ▶ Estimates of off balance sheet liabilities

These forecasts are key inputs into the Morningstar Corporate Credit Rating and are available to subscribers at [select.morningstar.com](http://select.morningstar.com).

## Methodology

We feel it’s important to perform credit analysis through different lenses—qualitative and quantitative, as well as fundamental and market-driven. We therefore evaluate each company in four broad categories.

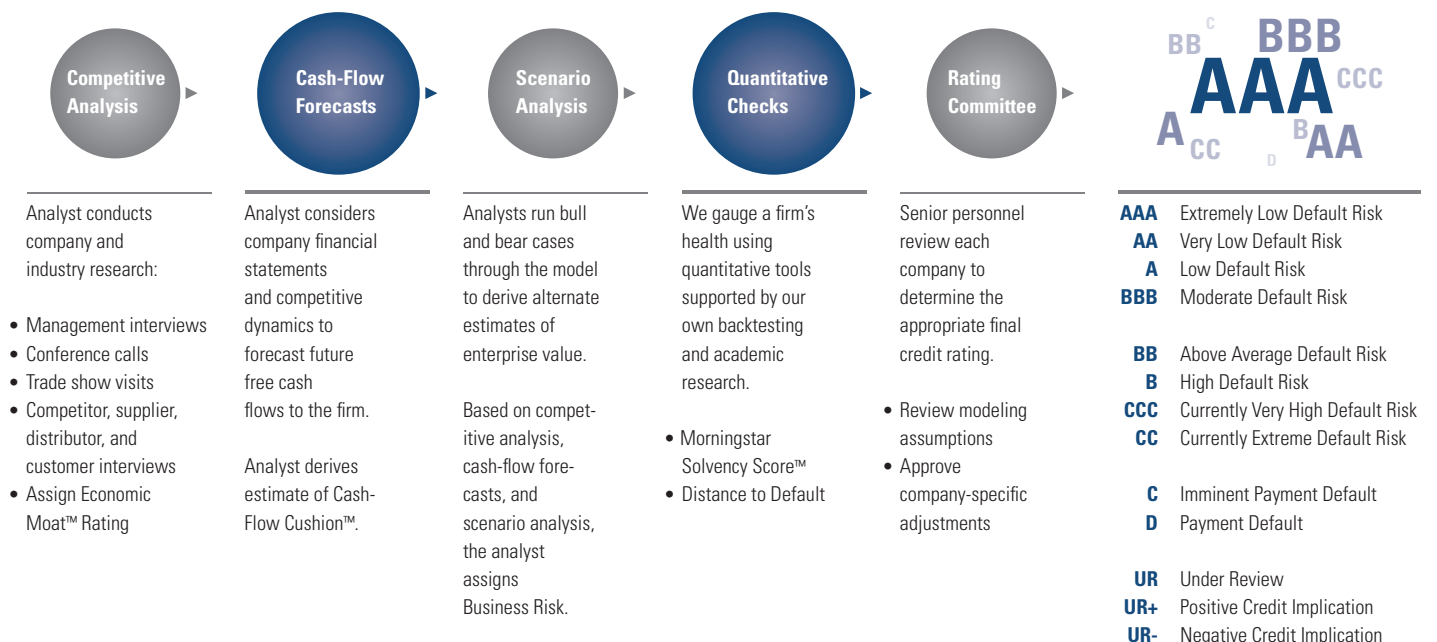
### Business Risk

Business Risk captures the fundamental uncertainty around a firm’s business operations and the cash flow generated by those operations. Key components of the Business Risk rating include the Morningstar Economic Moat™ Rating and the Morningstar Uncertainty Rating.

### Cash Flow Cushion™

Morningstar’s proprietary Cash Flow Cushion™ ratio is a fundamental indicator of a firm’s future financial health. The measure reveals how many times a company’s internal cash generation plus total excess liquid cash will cover its debt-like contractual commitments over the next five years. The Cash Flow Cushion acts as a predictor of financial distress, bringing to light potential refinancing, operational, and liquidity risks inherent to the firm.

## Morningstar Research Methodology for Determining Corporate Credit Ratings



## Morningstar's Approach to Rating Corporate Credit

The advantage of the Cash Flow Cushion ratio relative to other fundamental indicators of credit health is that the measure focuses on the future cash-generating performance of the firm derived from Morningstar's proprietary discounted cash flow model. By making standardized adjustments for certain expenses to reflect their debt-like characteristics, we can compare future projected free cash flows with debt-like cash commitments coming due in any particular year. The forward-looking nature of this metric allows us to anticipate changes in a firm's financial health and pinpoint periods where cash shortfalls are likely to occur.

### *Morningstar Solvency Score™*

The Morningstar Solvency Score™ is a quantitative score derived from both historical and forecasted financial ratios. It includes ratios that focus on liquidity (a company's ability to meet short term cash outflows), profitability (a company's ability to generate profit per unit of input), capital structure (how does the company finance its operations), and interest coverage (how much of profit is used up by interest payments).

### *Distance to Default*

Morningstar's quantitative Distance to Default measure ranks companies on the likelihood that they will tumble into financial distress. The measure is a linear model of the percentile of a firm's leverage (ratio of Enterprise Value to Market Value), the percentile of a firm's equity volatility relative to the rest of the universe and the interaction of these two percentiles. This is a proxy methodology for the common definition of Distance to Default which relies on option-based pricing models. The proxy has the benefit of increased breadth of coverage, greater simplicity of calculation, and more predictive power.

For each of these four categories, we assign a score, which we then translate into a descriptive rating along the scale of Very Good / Good / Fair / Poor / Very Poor.

### **Overall Credit Rating**

The four component ratings roll up into a single preliminary credit rating. To determine the final credit rating, a credit committee of at least five senior research personnel reviews each preliminary rating.

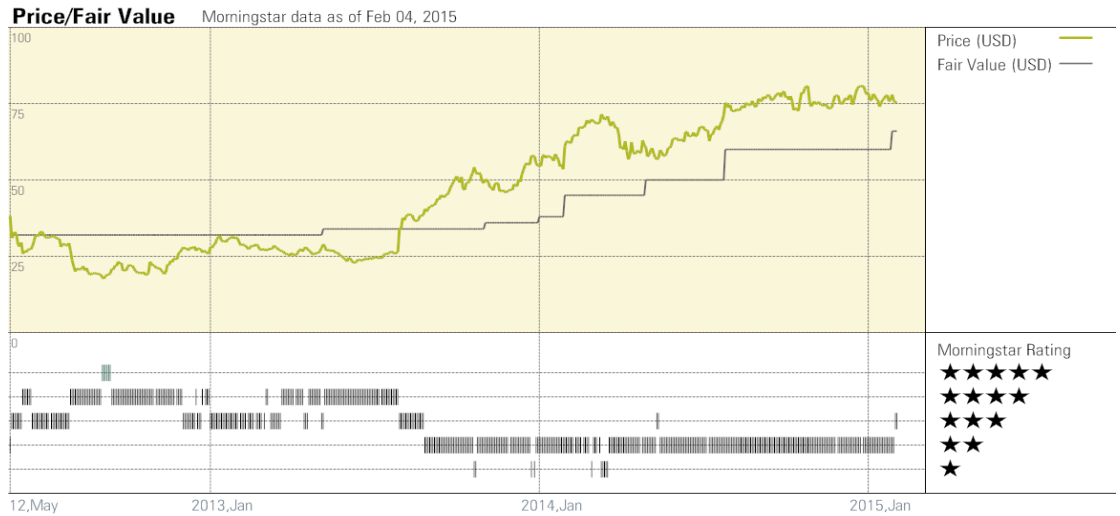
We review credit ratings on a regular basis and as events warrant. Any change in rating must be approved by the Credit Rating Committee.

### **Investor Access**

Morningstar Corporate Credit Ratings are available on Morningstar.com. Our credit research, including detailed cash-flow models that contain all of the components of the Morningstar Corporate Credit Rating, is available to subscribers at [select.morningstar.com](http://select.morningstar.com).

# Facebook Inc FB (NAS) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
75.63 USD	66.00 USD	39.60 USD	102.30 USD	High	Wide	Stable	Standard	—	Online Media



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The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic value.

Five-star stocks sell for the biggest risk-adjusted discount whereas one-star stocks trade at premiums to their intrinsic value. Based on a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's Equity Analysts, four key components drive the Morningstar Rating: 1. Assessment of the firm's economic moat, 2. Estimate of the stock's fair value, 3. Uncertainty around that fair value estimate and 4. Current market price. Further information on Morningstar's methodology is available from <http://global.morningstar.com/equitydisclosures>.

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