Under Fire, One of the World’s Best Businesses

(10 min read)
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FROM THE MEDIA

“Facebook is the New Crapware.”
TECHCRUNCH

“How to Delete Facebook.”
NY TIMES

“Sorry I Forgot Your Birthday, I’ve Stopped Checking Facebook.”
THE WALL STREET JOURNAL

FROM THE EXPERTS

“[Mark Zuckerberg] has the best business model that’s ever been created. [Facebook] benefits from everyone else’s content, for free.”
JOHN MALONE, BILLIONAIRE CHAIRMAN OF LIBERTY MEDIA
Facebook

Under fire, one of the world’s best businesses.

Meet Facebook

Odds are you already have. The media believes the social network’s reputation is forever tarnished, a fatal blow resulting from a “growth at all costs” mentality that’s persisted for years.

Meanwhile, some of the world’s best managers have called Facebook “the best business model ever created” — one that will endure through its growing pains.

Which camp will win? We strongly agree with the latter. The media firestorm seems overdone. As it normalizes in coming years, we believe the quality and resilience of Facebook’s business will prove out.

Elevator Summary

Facebook has one of the best businesses in the world. In some ways, it operates like a classic media company that provides content to users and collects advertising revenue from businesses who want to reach them. However, what’s unique is that Facebook doesn’t have to spend money on content - users provide that content for free. Put differently: imagine you could charge for lemonade without having to pay for lemons. Incredible.

The company’s massive social graph creates a strong network effect, resulting in a wide economic moat that gets stronger as it grows. Facebook also has tremendous pricing power -- the holy grail in business. Along with its ultra-attractive unit economics, this enables Facebook to fortify its moat even further to fend off competitors.

Headlines misunderstand that Facebook is still just getting started. It only has 5% market share of potential sales & marketing dollars. In addition, the company has enormous potential to generate greater sales from Instagram and WhatsApp.

Sentiment is extremely negative on Facebook today, as security and privacy issues have plagued the company of late. But most forget that Facebook has some of the best infrastructure engineers in the world to fix it. We believe this short-term media assault has created a rare opportunity for investors to join the journey of one of the best businesses (ever) at a discount. Near its all-time low valuation, the stock appears attractively valued for long-term investors.
What does Facebook do?

Facebook is the most dominant social network company in the world. Its core platform has 1.5 billion Daily Active Users (DAUs) and 2.3 billion monthly active users (MAUs). Think about it: every day, at least 1 in every 5 people on Earth use a Facebook-owned app. The company operates four distinct platforms you’ve likely heard of: core Facebook, Instagram (acquired in 2012), WhatsApp (acquired in 2014), and Messenger. These social networks are free for consumers to use.

Facebook makes money by selling native advertising to businesses that want to reach its users. You’ve likely seen links on Facebook or videos on Instagram that say “Sponsored” next to them. Those businesses are using Facebook’s dashboards (shown below) to create ads and then paying Facebook to put them in your newsfeed. How far we have come since the days of physical newspaper ads...

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**Business case**

We believe the media firestorm has driven a quality business down to a quality price.

1. Network effects provide a durable moat.
2. Counter-intuitively, growth potential is enormous.
3. Pricing power and strong unit economics are underappreciated.
4. Security and privacy issues can be fixed with its world-class talent.
5. Valuation is extremely compelling and has already priced in many risks.
#1 Network effects provide a durable moat

Network effects are hard to build and even harder to sustain. When you find a company that does both, you may have a wonderful business (and potential investment opportunity).

Facebook has achieved global scale across its platform. With billions of users, its social graph is the most advanced in the industry and creates very strong network effects.

Network effects are a type of economic moat whereby each additional user makes a network more attractive. **The sheer size of Facebook's network acts like a magnet: the more people that join, the harder it becomes to leave.**

What makes network effects a “moat”? It’s hard to leave a place where all of your family, friends, and acquaintances stay in touch and share memories. Similarly, it’s hard for a business to leave the place where all of its potential customers are. This two-sided network gets stronger for both consumers and businesses (advertisers) as it grows.

Thus, Facebook’s competitive advantage lies in the combination of its number of users (1/3rd of the world’s population!) with the amount of data that each user shares with the platform (every user is no more than 3.5 degrees separated).

Facebook’s graph is built to scale up to one trillion pieces of information (edges). More than 10 million websites leverage Facebook’s software development kit to interact with its social graph, adding more edges to the graph in the process. This graph creates captive users and advertisers.
Hence the larger this social network becomes, the more defensible it is versus the competition. At 2.3 billion users, Facebook is ~7x larger than Twitter (300 million users) and ~11x larger than Snap (200 million). Even Instagram alone has over 1 billion users, making it ~2x larger than Twitter and Snap combined.

A huge user base alone doesn't make Facebook infallible. MySpace seemed like a huge social network back in 2008 when it had 75 million users, and we all know how that story ended. But the network effects moat helps explain the resilience Facebook has shown in retaining users in recent months in spite of its many privacy scandals.

User growth is obviously not the full story. The strength of Facebook's network depends on both its size and its usage. Usage is often referred to as "engagement."

Many investors have been concerned that Facebook's engagement is falling. For example, a survey released in September 2018 found that 44% of 18-29 year-old respondents have deleted the Facebook app from their phone in the last 12 months.

While the survey paints a dire picture, the numbers suggest a different story entirely. One of the metrics we track for Facebook is engagement, defined as Daily Active Users (DAUs) / Monthly Active Users (MAUs). This ratio indicates how many monthly active users also use Facebook every day -- the higher the ratio, the stronger Facebook's engagement.

As you can see in the following graph, by this metric, Facebook's engagement has been fairly consistent over the last three years, especially in the U.S. where the media attention has been most negative.
How is this possible? In the U.S., it’s more likely that the users leaving Facebook are just defecting to Instagram (which Facebook owns). We think Snap and Twitter are unlikely to take any meaningful timeshare from Facebook’s properties. Internationally, we think the negative media attention is much less pronounced, hence less user backlash.

To sum up -- if Facebook came to life and posted a status update today, it would probably read something like:

“The reports of my death are greatly exaggerated.” - Mark Twain

Despite the many headlines predicting the death of Facebook, its network appears intact.
## 2 Counter-intuitively, growth potential is enormous

A large and growing market is critical because it can often make or break a long-term investment. Counter-intuitively, despite its large size, we believe Facebook’s growth runway is still long and lucrative. Yes, even despite it having 1/3 of the world’s population and being one of the largest companies ever, it’s only just getting started.

> “The size of the market, the dynamics of the market, the nature of the competition. Our objective is always to build big companies — if you don’t attack a big market, you’re highly unlikely to build a big company.” - Don Valentine, Founder of Sequoia Capital

Let’s look at Facebook’s growth potential in two ways: by market and by product.

### 2a. Market growth

While Facebook is a social media advertising company, its total market opportunity is much bigger. At the broadest level, Facebook’s market is “all sales & marketing dollars spent globally.” Let’s start there.

Businesses spend nearly $1 trillion each year on sales & marketing, trying to reach customers with their products and services. Less than 50% of these dollars are spent online today -- most are still spent in channels like TV and print.

**GLOBAL SALES & MARKETING SPEND ($ IN TRILLIONS)**

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<th>$1.0</th>
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<tr>
<td>$0.75</td>
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<td></td>
<td>Direct</td>
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<td></td>
<td>Other</td>
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Today, Facebook has only ~5% market share of that ~$1 trillion spend.

**That’s right -- one of the top 10 largest companies in the world still has only 5% of its total potential market.**

We believe this share will rise over time as advertising dollars continue to shift from traditional media (such as TV and print) to the much higher return-on-investment (ROI) advertising platforms like Facebook, Google, and Amazon. We’ll explain more about that ROI later.
The shift to online advertising is unstoppable, and it’s accelerating. Within the online advertising market, **Facebook and Google essentially have a duopoly** -- which means it’s a two-horse race. These two companies represented ~96% of the digital advertising market’s growth in 2017 (!). In other words, nearly 100% of every new dollar that advertisers spent online in 2017 was on FB or GOOG. You can see this in the chart below circled in green.

**TITAN**

**FB & GOOG % of DIGITAL AD GROWTH**

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<td>$4.5</td>
<td>$5.6</td>
<td>$9.8</td>
<td>$13.1</td>
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<td>22%</td>
<td>22%</td>
<td>35%</td>
<td>43%</td>
<td>35%</td>
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<tr>
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<td>$8.6</td>
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<td>42%</td>
<td>3%</td>
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<td>53%</td>
<td>50%</td>
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<td>$13.1</td>
<td>$13.4</td>
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<td>10%</td>
<td>10%</td>
<td>39%</td>
<td>19%</td>
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Source: Titan Research, Magna Global, Goldman Sachs, Company filings

We expect FB & GOOG to account for **71%** of digital ad growth in ’19.

Drilling down further, let’s look at the company’s most immediate market opportunity -- the dollars already being spent on social media advertising.

This is where Facebook is most dominant, with ~90% market share of all social media spend. There’s plenty of competition -- many media pundits thought Snapchat would destroy it years ago -- but Facebook’s market position remains best-in-class.

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<td>$55.0</td>
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<td>% Market Share of Social Ad Revenue</td>
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<td>84%</td>
<td>89%</td>
<td>89%</td>
<td>86%</td>
<td>85%</td>
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<tr>
<td>Others</td>
<td>$5.0</td>
<td>$5.0</td>
<td>$5.0</td>
<td>$7.0</td>
<td>$11.0</td>
<td>$15.0</td>
<td>$21.0</td>
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<td>% Market Share of Social Ad Revenue</td>
<td>23%</td>
<td>16%</td>
<td>11%</td>
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<td>14%</td>
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<td>17%</td>
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<tr>
<td>Total Social Advertising Revenue</td>
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<tr>
<td>% Growth</td>
<td>57%</td>
<td>45%</td>
<td>41%</td>
<td>38%</td>
<td>29%</td>
<td>25%</td>
<td>22%</td>
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</table>

Source: Titan Research, Magna Global, Goldman Sachs, Company filings

FB has ~90% market share in social ad revenue
Dominant market share in a rapidly growing market provides a strong secular tailwind for Facebook. It means more businesses spending more dollars on Facebook over time.

Next, let’s discuss product growth. More specifically, monetization -- the untapped potential revenue Facebook can generate from its products in the future.

2b. Product growth

When a product or service is in its infancy of making money, Wall Street typically excludes it from any future forecasts. That can be a huge opportunity for long-term investors.

While billions of people spend hours on Instagram and WhatsApp every day, these two platforms are still in early innings when it comes to making money. They are under-monetized compared to the tremendous value their users can provide to advertisers.

On Instagram, only in the past few years have ads begun to pop up via “sponsored posts” (#ad). Instagram Stories, which launched in summer 2016 and was initially seen as a Snapchat knock-off, has quickly become the fastest growing part of the network. Users now share over 1 billion Stories every day. Direct messages (DMs) have been similarly successful.
Stories and Messaging are the true growth engines at Facebook today, and Zuck has called out this trend:

“People feel more comfortable being themselves when they know their content will only be seen by a smaller group and when their content won’t stick around forever. Messaging and Stories make up the vast majority of growth in the sharing that we are seeing.” - CEO Mark Zuckerberg, 3Q 2018 Earnings Call

So where is the opportunity?

Zuck is focused on first building the best possible user experience for Stories before ramping up ads. He doesn’t want to put the cart before the horse, so to speak. We think that’s a wise long-term strategic decision.

“We’re earlier in developing our ads product for Stories, so we won’t make as much money from them yet as we do from Feed ads. We’re following our normal playbook here of building out the best consumer products first and focusing on succeeding there before ramping up ads.

I’m optimistic that we’ll get ads in Stories to perform as well as Feed over time, and that the opportunity will be even bigger because it looks like Stories will be a bigger medium than Feed has been.” - CEO Mark Zuckerberg, 3Q 2018 Earnings Call

On the one hand, the transition from the classic Feed to the Stories format will take time. Short-term investors have punished the stock given the slowing sales growth during this transition.

On the other hand, we think it’s clearly worth it if Stories is a bigger opportunity than the ubiquitous Feed format. Stories is a more immersive experience for consumers, but the format is still very novel for advertisers. We believe they’ll adapt to the short video format over time just like they did with the shift from desktop to mobile ads years ago.

THE INSTAGRAM STORIES DEBATE

What the skeptics are saying

“The transition to the Stories format will take a long time and weigh on sales growth”

“Advertisers aren’t paying as much for Stories as they do on Feed ads”

What the bulls are saying

“Stories is a bigger opportunity than the Feed format, so it’s worth the wait”

“Advertisers will eventually pay much more for Stories ads because they’re more popular with consumers and enable better storytelling”
As users increasingly share Stories and Messages, we believe advertiser demand for these formats will rise. If it does, ad prices and revenue should follow for Instagram and WhatsApp.

Side thought: The discussion about Stories vs. Feed reminds us of the concern Wall Street had on Google back in 2013 when Google’s stock was punished. Google was shifting its attention to more mobile ads. The concern was that mobile ad prices were so much lower than desktop ad prices (due to low adoption from advertisers).

Eventually, however, Google perfected the mobile ad format and consumers continued to shift usage there. Advertisers followed those eyeballs. It didn’t matter whether they were on mobile or desktop. We think a similar dynamic will play out for Instagram and WhatsApp.

#3 Pricing power and strong unit economics are underappreciated

There is a lot about Facebook that is not well understood. That is especially true when it comes to how the company makes money, pays its expenses, and generates cash flow. First, let’s discuss how Facebook makes money and how it leads to pricing power -- the holy grail for a business.

“Pricing power is the single most important decision in evaluating a business...if you’ve got the power to raise prices without losing business to a competitor, you’ve got a very good business.” - Warren Buffett

Pricing Power

Facebook generates revenue primarily from showing ads. Advertisers set up ad campaigns that target users based on their likes, interests, and demographic information which Facebook tracks with its data. Every time a Facebook user sees an ad, that counts as an “impression.”

The price for an ad is decided via a real-time bidding auction, where advertisers compete head-to-head. Bids are usually based on a “cost per 1,000 impressions” (called “CPM” in industry jargon). So if an advertiser bids $10 CPM for an ad, that’s $10 / 1,000 impressions = $0.01 for each user that views the ad.

Putting these together, here’s the simple formula for Facebook’s revenue:

1. Number of impressions (ad supply)
2. Price per impression (advertiser demand for available supply)
So the more ads Facebook shows you, and the higher the price an advertiser pays for the ad, the more revenue Facebook generates. As Facebook improves its ability to target users and measure ad performance, advertisers are able to gain stronger returns on their advertising efforts on Facebook. This increases their willingness to pay to advertise on Facebook -- resulting in higher prices and higher revenues.

**Is Pricing Power Enough?**

On the one hand, there is a finite amount of screen space that we can scroll through each minute on our social media apps. We don’t want to be bombarded with 100 ads per minute. That means there’s a ceiling on how many ads we can be shown (limited supply). That’s a limit to our revenue equation above. On the other hand, we’re spending more and more minutes on social media every day. Facebook has a stronghold on the primary apps the world uses (e.g. Instagram, WhatsApp). Advertisers want to go where the eyeballs are, so advertisers are willing to bid more and more for ads over time (increasing demand).

The key question is: will advertiser demand (prices) grow strongly enough to overcome the limited ad capacity on our phones (supply)?

**We Think So**

We believe demand for Facebook's ads (price per impression) will continue to grow faster than supply (impressions) will decline. Why? The company's transition from the Feed format to the Stories format will be the main driver. Video ad prices critically are higher than static (image-based) ad prices because video is more engaging and generates higher ROI for advertisers. While Instagram Feed primarily offers static ad space, Instagram Stories has been optimized for the video format. We believe this is an underappreciated factor that will be very powerful in driving Instagram's growth over the next five years and strong revenue growth over the long term. Much stronger than the current stock price implies, in our view.

**Unit Economics**

We’ve talked about network effects and pricing power, but with any business, profits are what ultimately drive value. Fortunately for Facebook, generating profits is no problem. Facebook is an advertising media platform without any content costs. Users provide content for free. This results in extremely high profit margins of ~60%. If you’re wondering where the other ~40% of every sales dollar goes, it goes to cover fixed costs such research and development and employee salaries. When Facebook first launched, these fixed costs were enormous and required tremendous amounts of venture capital funding. But as Facebook has scaled, it has been able to spread those fixed costs over more and more users.

As a result of its mostly fixed-cost business, Facebook has economies of scale. Each new ad shown on Facebook is 100% profit because there are basically no additional costs required. While the company invests heavily in data centers and software to support new users, an ad that sells for $5 requires no more infrastructure than one that sells for $1. Simply put -- as Facebook's revenue grows, it can spread its costs over a larger user base, resulting in higher profit margins and earnings. Pricing power and economies of scale result in incredible unit economics.
Now we arrive at the main criticisms of Facebook: that its network health and societal risks are worsening and will erode the user base over time. Some key questions come to mind:

What if Facebook's privacy and data security problems worsen?  
What is the company doing to prevent them, if anything?  
Why should we trust management?

One of our favorite investors, John Huber at Saber Capital Management, described Facebook as a “giant stadium” where the entire world comes to watch events and interact with each other. We like this metaphor.

The stadium itself is a great asset -- immense capacity (2.3 billion spectators), endless sporting events and concerts (which Facebook can make money on), and not much daily wear-and-tear. However, occasionally bad actors sneak past the guards and hurt people inside the stadium. For most of 2018, it felt like Facebook's security guards were nowhere to be found.

To address the security issues, Facebook has a lot of work to do. Most importantly, it needs to upgrade the stadium’s security so that the bad actors can no longer sneak in. This won’t be cheap -- it takes a lot of security to protect 2.3 billion people -- but it's critical to get people to return to the stadium.

We believe Facebook has taken note. The company grew operating expenses by over 60% in 4Q18, hiring more people and spending more on security infrastructure. We expect this to continue. They plan to spend over $10 billion on R&D and nearly $20 billion in capital expenditures in the next year, mostly to address its core security issues.
Belief in Mr. Zuckerberg

In addition to its investments in security, one needs to believe in Facebook's management team.

In years past, CEO Mark Zuckerberg and COO Sheryl Sandberg were lauded for being true visionaries. They created more equity value for shareholders in the past decade than nearly any other duo in history. However, media attention turned sharply negative in 2018 after the data privacy scandals emerged.

It's clear that management made plenty of mistakes in years past. The "growth at all costs" mentality has come back to bite them, which is unsurprising for a company of such global scale. We're reminded of a quote from Warren Buffett when describing the massive fines charged to J.P. Morgan under Jamie Dimon's leadership in 2013:

“If a cop follows you for 500 miles, you're going to get a ticket. And you've had a lot of cops following for a long time...they're going to write some tickets.” - Warren Buffett, 2013

That's no excuse for management's past actions. Violations of user privacy is inexcusable and, if unaddressed, destroy users' trust over time. Without users, Facebook’s network is worthless.

However, through our conversations with the company, it’s clear to us that Facebook’s management team is highly motivated to clean up the network. Given all the negative press, they’ve now got a bit of a “chip of their shoulder.” They’ve got something to prove. We believe they’re committed to achieving the mission they signed up for: to help the world build meaningful connections.
At $150 per share, Facebook is valued at roughly 17 times earnings (excluding net cash). In our view, that’s a bargain for a company with a wide moat from network effects, pricing power, and industry-leading unit economics.

For context, that’s nearly in line with the S&P 500, an index of the average company, which is valued at 16 times earnings today. Should Facebook, one of the best businesses in the world, be valued the same as the average company?

Taking a step back, the global sales & marketing industry has nearly $1 trillion (and growing) of spending up for grabs. Given the strength of its network, we believe Facebook could very reasonably double its ad sales to $100 billion within the next three years. This doesn’t include any upside from messaging, payments, VR, or the other potential business lines.

Profit-wise, the company increased its reported operating margins from 11% in 2012 to 50% in 2017. This improvement wasn’t a fluke -- it’s driven by Facebook’s economies of scale. Profit margins will take a hit in the next few years, driven by investments in security and regulatory compliance. Eventually, however, we think those costs will level out. Earnings power should resume its march upward thereafter, in our view.

Finally, management has been strong stewards of shareholder capital. Facebook throws off way more cash than it can readily spend (a good thing). With the stock near its lowest valuation in history, we think Facebook will spend more of its cash hoard ($40+ billion) on buying back its own stock.

Putting these together, we think Facebook can generate ~25% sales growth, ~35% profit margins, and excellent returns on invested capital (20%+) over the next five years -- resulting in $16 earnings per share. Not to mention the long runway ahead as advertisers shift their spending to digital platforms.

The near term is highly uncertain. We would not be surprised if media headlines (many of which are warranted) continue to weigh on Facebook’s sentiment in coming months. However, once emotions eventually normalize, we believe the quality and earnings power of the Facebook platform will be valued at a much higher level.
## Risks

There’s a lot of criticism on Facebook. If you’re going to critique this business, at least one can do it from an informed view. Here’s what you should say if you’re a skeptic and disagree with our analysis above.

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<tr>
<th><strong>Users could become disinterested in social media and use the platform less over time</strong></th>
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<td>Many surveys and media articles have called out the threat of dwindling interest in Facebook’s platform as users defect to Instagram, Snap, and Twitter. This is a big risk if Facebook does not address the two reasons users would likely leave its network: (1) lack of trust and (2) lack of innovation vs. competitors.</td>
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<td>As mentioned earlier, we believe Facebook’s investments in security and regulatory compliance will help protect its stadium against bad actors (though it may never be 100% impenetrable). And while core Facebook hasn’t seen game-changing innovation of late, Instagram Stories and WhatsApp Status are clear indications that Facebook can leverage its R&amp;D prowess to build features people love.</td>
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<td>The company’s stable engagement data suggests that, thus far, challenges with trust and innovation have not eroded the power of the network.</td>
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<th><strong>Advertising is exposed to the economic cycle and a downturn would mute Facebook’s growth</strong></th>
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<td>Advertising spending is cyclical, which means it is often the first expense that companies cut in an economic downturn. For example, Google’s revenue growth slowed from +30% to +8% in 2008-09 (although earnings still grew +53%).</td>
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<td>A downturn would certainly slow Facebook’s growth, but we don’t think it would permanently impair its value creation -- it would simply delay it. In addition, a downturn could actually cause some of its weaker competitors (e.g. Snap) to go out of business, enabling Facebook to gain market share.</td>
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<th><strong>Increased security and regulatory costs will weigh on Facebook’s profit margins and earnings</strong></th>
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<td>The company was likely underinvesting in security, compliance, and other “stadium-protecting” measures previously given the frequency and magnitude of recent privacy scandals. Management now seems committed to investing much more, which will drive greater expenses and weigh on earnings in the near term.</td>
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<td>We think this actually benefits Facebook in the long run. Higher regulatory compliance costs act as a new barrier to entry that would likely make it more difficult for start-ups and smaller incumbents to compete. In the short term, the stock’s valuation seems to already reflect the lower profits that will result.</td>
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Risks (continued)

**Fallout from the Cambridge Analytica scandal could drive users to abandon Facebook**

As we mentioned earlier, users on the core Facebook platform are growing in all regions except the U.S. & Canada, where they are flattish due to market saturation, and Europe, where they’ve fallen slightly post the implementation of GDPR regulation. We believe any fallout from recent scandals would likely be immediate. Given the lack of apparent impact on platform usage thus far, we think fallout has been minimal.