

Operator

Good afternoon. My name is Mike, and I will be your conference operator today. At this time, I would like to welcome everyone to the Facebook First Quarter 2018 Earnings Call. All lines have been placed on mute to prevent any background noise. After the speakers' remarks, there'll be a question-and-answer session. This call will be recorded. Thank you very much.

Ms. Deborah Crawford, Facebook's Vice President of Investor Relations, you may begin.

Deborah Crawford - Facebook, Inc.

Thank you. Good afternoon and welcome to Facebook's first quarter 2018 earnings conference call. Joining me today to discuss our results are Mark Zuckerberg, CEO; Sheryl Sandberg, COO; and Dave Wehner, CFO.

Before we get started, I'd like to take this opportunity to remind you that our remarks today will include forward-looking statements. Actual results may differ materially from those contemplated by these forward-looking statements. Factors that could cause these results to differ materially are set forth in today's press release and in our Annual Report on Form 10-K filed with the SEC.

Any forward-looking statements that we make on this call are based on assumptions as of today, and we undertake no obligation to update these statements as a result of new information or future events. During this call, we may present both GAAP and non-GAAP financial measures. A reconciliation of GAAP to non-GAAP measures is included in today's earnings press release. The press release and an accompanying investor presentation are available on our website at investor.fb.com.

And now, I'd like to turn the call over to Mark.

Mark Elliot Zuckerberg - Facebook, Inc.

Thanks, Deborah, and thanks everyone for joining us today. Despite facing important challenges, our community and business are off to a strong start in 2018. More than 2.2 billion people now use Facebook every month, and more than 1.4 billion people use it every day. Our business grew 49% year-over-year to \$12 billion. But as you know, we have important issues to address.

For most of our existence, we've focused on all the good that connecting people can bring. But it's clear now we didn't do enough to prevent these tools from being used for harm as well, whether that's foreign interference in

elections, fake news, hate speech, or app developers and data privacy. So now, we're going through every part of our relationship with people and making sure we're taking a broad enough view of our responsibility, not just to build tools, but to make sure those tools are used for good. This means continuing to invest heavily in safety, security and privacy.

Some of this will come in the form of new technology. We're restricting that data developers can access. We're building advanced AI tools that have helped us detect and remove tens of thousands of fake accounts ahead of the elections in France, Germany and Alabama last year. We're investing more in people. We are doubling our team working on security and content review to more than 20,000 people by the end of this year, and this includes content reviewers with specific language skills to detect hate speech in places like Myanmar. We're also working to protect political discourse by making ads more transparent.

We recently announced that from now on we will require everyone running political and issue ads or running a large page to be verified with a government ID. And we're also starting to roll out ads transparency tools that bring our ads to an even higher standard of transparency than TV or print ads. You'll be able to see who is running a political ad, who they're targeting, how much they're paying, and what other messages they're sending to different people. And we're going to get this done in time for the 2018 U.S. midterm as well as upcoming elections in Mexico, Brazil, India, Pakistan and more.

We have a responsibility to keep our community safe and secure, and we're going to invest heavily to do that. At the same time, we also have a responsibility to keep moving forward and keep building tools that bring people together in meaningful new ways. That's what makes Facebook so important to so many people and that's our responsibility too.

I'm proud that more than 2 billion people use our services to stay connected with the people that matter to them most. In just the last several months, we've seen the #metoo movement and the March for Our Lives, organized, at least in part, on Facebook. We've seen people come together after Hurricane Harvey to raise more than \$20 million for relief, and we've seen more than 80 million small businesses use Facebook to grow and create jobs.

That's why beyond the investments we're making to secure our platform, we're going to invest even more in building the experiences that bring people together on Facebook in the first place. Over the next three years, we're going to keep building Facebook to not only be a service that people love to use, but also one that's good for people and good for society.

Last quarter, we shared our well-being research into the good and bad uses of technology that showed that when you use the internet to interact and build relationships that's correlated with greater long-term well-being and greater health and happiness over time. But when you're just passively watching videos or news online, that's not as positive.

This quarter, we've continued shifting from passive consumption to encouraging meaningful interaction. It's still early, but we're starting to see some signs that this is working. Some types of sharing are increasing even as passive consumption of video is down. And at the same time, we're rolling out more interactive video features like Watch Party that let you watch video with your friend. This is something we can uniquely do and the feedback on it so far is great.

Groups is also a major focus for us. This quarter, we announced that 200 million people are now members of meaningful groups on Facebook. Now we just need to keep doubling that for the next few years to reach our goal of helping 1 billion people belong to meaningful groups. As membership in physical groups continues declining as it has for decades, we hope helping people connect online will help strengthen our society's social fabric.

Stories is also a big part of the future of video sharing, which is why we're all in on it across our family. Instagram was the first to really take off here, Facebook started slower, but is now growing quickly, too, and WhatsApp Status is by far the biggest of views products and continues to grow quickly. There's also a clear trend towards sharing with smaller groups, which is why messaging is so important. Between WhatsApp and Messenger, people now send almost 100 billion messages every day. They also do more than 3 billion minutes of video and voice calling every day, making us by far the largest network for video calling as well.

Over the next five years, we're focused on building out the business ecosystems around our apps like Instagram, WhatsApp and Messenger. This quarter, we released WhatsApp Business, which lets small businesses create a presence and offers better tools for messaging. And in just a few months more than 3 million people are actively using WhatsApp Business. It's a hit and it's growing quickly.

One of the interesting opportunities and challenges over the coming years will be making sure that ads are as good in Stories as they are in feeds. If we don't do this well, then as more sharing shifts to Stories, that could hurt our business. But there's real upside here, too, if we do a good job. And we're leading the way here with Instagram, and the results so far are promising both on product quality and business performance.

Over the next 10 years, we're continuing to work on the long-term technology that we need to break down barriers and bring the world closer together. We continue to work on connectivity and our Internet.org efforts have now helped almost 100 million people get access to the Internet who may not have had it otherwise.

AI is the most important technological trend right now and I'm optimistic that it can help us amplify the good that's happening on our services as well as proactively remove harmful content. For example, one thing that I'm proud of is our AI tools that help us take down ISIS and Al Qaeda related terror content, with 99% of that content being removed before any person flags it to us.

We've also built AI tools that have flagged when people are posting thoughts about suicide. And these tools have helped us reach out to first responders to get over 1,000 people the help they need quickly.

On the positive side, AI will help us understand the context of what people are sharing so we can help encourage more connection and conversations between people as well.

And finally, we have some big moments for virtual reality coming up, and I'm excited to get Oculus Go in people's hands soon.

Overall, 2018 is a year of important investment to keep people safe and also to keep building the experiences people expect from us. We are taking a broader view of our responsibility and investing to make sure our tools are used for good.

And we also need to keep moving forward, building new tools to help people connect, build community and bring the world closer together. Thanks to all of you for being a part of this journey. I'm looking forward to making more progress together.

Now, here's Sheryl to talk about our business.

Sheryl Kara Sandberg - Facebook, Inc.

Hi, everyone. Before going through our results, I want to take a minute to talk about ads and privacy. At Facebook, we have always built privacy protections into our ad system. We use the information you provide and that we receive from websites to target ads for advertisers, but we don't tell them who you are. We don't sell your information to advertisers or anyone else.

We also believe that people should control their advertising experience. For every ad we show, there's an option to find out why you're seeing that ad and to turn off ads from that advertiser entirely. And you can opt out of being targeted based on certain information, like the websites you visit or your relationship status.

Advertising and protecting people's information are not at odds. We do both. Targeted ads that respect people's privacy are better ads. They show people things that they're more likely to be interested in. We regularly hear from people who use Facebook that they prefer to see ads that are relevant to them and their lives.

Effective advertising is also critical to helping businesses grow. This is especially important for small businesses who wouldn't otherwise be able to afford to buy broad reach media. As Mark shared, we now have more than 80 million small businesses around the world using Facebook pages and many of them are building their businesses on Facebook.

Small businesses are the backbone of local communities and create the majority of jobs around the world and their growth creates millions of new jobs. We surveyed small businesses in 18 countries, and more than half of SMBs on Facebook say they've been able to hire more people due to growth in demand since joining our platform.

Last month, I was in Houston for Facebook's Community Boost event. I met Patrice Farooq, who runs a small business called Cupcake Kitchen. After Hurricane Harvey damaged her business last year, she used Facebook to find new customers. Now more than half her business come from Facebook and she's getting ready to open a second store.

We're proud of the ad model we've built. It ensures that people see more useful ads, allows millions of businesses to grow and enables us to provide a global service that's free for all to use. The fastest way to bridge the digital divide in the United States or around the world is by offering services free to any consumer regardless of their circumstance. Advertising supported businesses like Facebook equalize access and improve opportunity.

At the same time, we know that people want control over how their information is used, and we want them to feel confident that the ads they're seeing are authentic. That's why we're building industry-leading transparency tools. This includes a way to see ads an advertiser is running, even if they aren't targeted to you. This new feature is live in Canada and will roll out in Ireland and the U.S. soon.

In the coming months, GDPR will give us another opportunity to make sure people fully understand how their information is used by our services. It's an

EU regulation, but as Mark said a few weeks ago, we're going to extend these controls to everyone who uses Facebook regardless of where in the world they live. Our commitment to you is that we will continue to improve our ads model by strengthening privacy and choice, while giving businesses of all sizes new and better tools to help them grow.

With that, I'd like to turn to our results. It was a great quarter for our business. Q1 ad revenue grew 50% year-over-year. Mobile ad revenue was \$10.7 billion, up 60% from last year and contributed approximately 91% of total ad revenue. Revenue growth was broad-based across regions, marketer segments and verticals.

We continue to make progress on our three priorities: helping businesses leverage the power of mobile; developing new ad products; and making our ads more relevant and effective.

First, leveraging the power of mobile. Advertisers recognize the importance of reaching their audience on mobile. During the Super Bowl this year, over 90% of national TV advertisers were also advertising on Facebook. This shows that the largest advertisers understand the value of broad-based campaigns with us.

Take Tourism Australia. To get more Americans interested in visiting Australia, they ran ads on Facebook and Instagram in the week leading up to the game. On Super Bowl Sunday, they ran short video ads on Facebook before their big TV spot at halftime. This drove 22% incremental reach on top of TV and a 35 point lift in awareness. During the campaign, 50% of leads on the Tourism Australia site came from Facebook.

Second, developing new ad products. Instagram Stories is changing how people share and express themselves. Advertisers are also finding creative ways to use the format. This quarter, we made carousel ads available in Stories so advertisers can share up to three images or videos per ad instead of just one. People can swipe up on the ads to visit the advertiser's website.

We also announced a number of innovations to help retailers reach customers. We rolled out a more personalized shopping experience in News Feed. Now when people click on a collection ad, they'll see a full-screen catalog organized according to their interests.

We also introduced a new way to reach people before they've shown interest in making a specific purchase. If someone is generally interested in furniture, a business can now run ads focused on different categories of their products, such as couches or tables, to inspire them to shop.

And last, making our ads more relevant and effective. Our investments in measurement are helping advertisers of all sizes understand their results and make good investment decisions.

We've heard from many of our advertisers that they want third-party verification to prove that we're helping them achieve their marketing goals. We were recently accredited by the Media Ratings Council for News Feed served ad impressions on desktop and mobile. We're working with them on accreditation in other areas as well.

Going forward, we will continue to focus on these three priorities and ensure that people's privacy is protected on Facebook.

I want to close by thanking our teams around the world for the work they do each and every day and each and every quarter to make our company and our services better. I'm also truly grateful to our partners who work with us to grow their businesses.

Thanks, and now here's Dave.

David M. Wehner - Facebook, Inc.

Thanks, Sheryl, and good afternoon, everyone. Our community and business both showed solid growth in the first quarter. Let's start with our community metrics. Daily active users on Facebook reached 1.45 billion, up 13% compared to last year, led by user growth in India, Indonesia and Vietnam. This number represents approximately 66% of our 2.2 billion monthly active users in Q1. MAUs were up 260 million or 13% compared to last year.

Turning now to the financials. All comparisons are on a year-over-year basis unless otherwise noted. Q1 total revenue was \$12 billion, up 49% or 42% on a constant currency basis. Foreign exchange tailwinds contributed \$536 million of revenue in Q1. Additionally, the adoption of ASC 606, the new revenue standard, resulted in approximately \$130 million of incremental revenue in Q1 due to a change from net to gross accounting for our Instant Articles product.

Q1 total ad revenue was \$11.8 billion, up 50% or 43% on a constant currency basis. Mobile ad revenue was \$10.7 billion, up 60%. In Q1, the average price per ad increased 39%, and the number of ad impressions served increased 8%, driven primarily by feed ads on Facebook and Instagram. Payments and other fees revenue was \$171 million, down 2%.

Turning to expenses, total expenses were \$6.5 billion, up 39%. In Q1, we added over 2,600 employees, which was a record level of net new hires. We ended Q1 with over 27,700 full-time employees, up 48% compared to last

year. We are focused on growing technical head count as well as a variety of other groups that support the business.

Operating income was \$5.4 billion, representing a 46% operating margin. Our effective tax rate was 11%. Net income was \$5 billion or \$1.69 per share. Capital expenditures were \$2.8 billion, driven by investments in data centers, servers, network infrastructure and office facilities. In Q1, we generated \$5 billion in free cash flow and ended the quarter with approximately \$44 billion in cash and investments.

In Q1, we bought back approximately \$1.9 billion of our Class A common stock. Given our existing repurchase program is nearly fully executed, our Board of Directors has authorized the repurchase of up to an additional \$9 billion of stock.

Turning to our outlook, the changes that Mark and Sheryl described will, we believe, benefit our community and our business and will serve to strengthen Facebook overall. At the highest level, we believe that we can continue to build the great ads business while protecting people's privacy. That said, with regard to GDPR and other initiatives around data usage, while it's early and difficult to know the business implications in advance, we anticipate a couple of impacts.

First, as you might expect, we believe that European MAU and DAU may be flat to slightly down sequentially in Q2 as a result of the GDPR rollout. Second, while we do not anticipate these changes will significantly impact advertising revenue, there is certainly the potential for some impact and we will be monitoring this closely.

Importantly, GDPR affects the entire online advertising industry, so the Facebook specific impact is difficult to model in advance. In terms of our overall 2018 revenue outlook, we continue to anticipate revenue growth rates will decelerate on a constant currency basis throughout the year.

On the expense side, we are tightening our initial expense guidance range. We now expect that full year 2018 total expenses will grow 50% to 60% compared to our prior range of 45% to 60%. This narrowed range reflects the significant investments we're making in areas like safety and security, content acquisition and our long-term innovation efforts.

Turning to capital expenditures, we expect that our full year 2018 capital expenditures will be around \$15 billion, at the high end of our prior range of \$14 billion to \$15 billion, driven by investments in data centers, servers, network infrastructure and office facilities. We also expect continued growth in capital expenditures beyond 2018 to support global growth and ongoing product improvements.

Turning now to tax, at current stock prices, we expect that our Q2 and full year 2018 tax rate will be in the mid-teens. As a reminder, fluctuations in our stock price will impact our tax rate.

In summary, our first quarter results demonstrated the growth in our business and global community remains strong. We have a lot of work ahead and are investing aggressively to enhance safety, security and privacy, while also focusing on our mission of giving people the power to build community and bring the world closer together.

With that, operator, let's open up the call for questions.

Question-and-Answer Session

Operator

We will now open the lines for a question-and-answer session. Your first question comes from the line of Doug Anmuth with JPMorgan.

Douglas T. Anmuth - JPMorgan Securities LLC

Great. Thanks for taking the question. One for Mark and one for Dave. Mark, so you focused on bringing people together and clearly have this massive platform with strong engagement, but can you talk about some of the business opportunities for Facebook on the platform away from advertising, and where you're most focused there?

And then Dave, just on the OpEx, can you talk about kind of more specifically where some of the incremental costs would fall that take the previous low end of the range here off the table, given what you've seen over the last couple months? Thanks.

Mark Elliot Zuckerberg - Facebook, Inc.

I could take the first question. So we think that ads is a great business model that is aligned with our mission. We want to build a service that can help connect everyone around the world, so we want to offer that service for free and have it be affordable, and that's completely aligned with what we're trying to do.

So even when we do other things, like we're running tests of payments, we have Marketplace which is growing and doing well, there may be other ways that we could think about making money from those, but in general our strategy is to offer those services at cost and make it so that businesses can bid what it is worth to them to run ads in the system. We think that that is both the most efficient way to run the business, it offers every business in

the world the lowest prices that we can potentially offer, and it provides a great free service to people around the world.

I know that a lot of people have had questions about the business model, and this is something that I just think we at Facebook are very proud of. And we think that it is the right way to build a service that connects everyone around the world.

David M. Wehner - Facebook, Inc.

Hey, Doug. It's Dave. So if you recall, it's very consistent with what we've been talking about the last couple of quarters which is the acceleration of expense growth is really driven by three factors. So it's the investments that we're making in safety and security, it's the content investments we're making to support Watch, and then finally it's the innovation initiatives around our longer term bets like AI, AR, VR and connectivity.

So it's those three factors. If I had to point to what's really leading us to tighten the range, it's really the first factor which is the safety and security investments. Specifically, we're putting more behind that more quickly than we anticipated, and so that's where you're going to see it come up.

If you look at the current results from this quarter, you'll see that our sales and marketing expense grew 51% in the quarter – one of the – year-over-year. One of the factors driving that is that's where we're categorizing our community operations investment and other operations teams that support the quality initiatives and the safety initiatives. So you're already seeing some of that getting picked up in the quarter and you'll see that carry through in the year.

Operator

Your next question comes from the line of Mark May with Citi.

Mark A. May - Citi Investment Research

Thank you. This question's probably aimed at Dave. You commented that you do not expect any significant, maybe some impact from the implementation of GDPR, yet you also voiced some uncertainty there. I guess the question is what gives you confidence in coming out now and saying that you expect no significant impact on the ad business, maybe some?

And then maybe more for Mark, there have been some recent reports that imply that even some seemingly simple things that Facebook may not be proactively identifying or addressing have come up and I guess the question

is, is it that it's not as simple as it may seem, or is it that these reports aren't accurate, this just has to do with some of the sensitive data like social security information being showing up online? Thank you.

David M. Wehner - Facebook, Inc.

Hey, Mark. It's Dave. So on GDPR, I think fundamentally we believe we can continue to build a great ads business while protecting the privacy of the people who use Facebook. As part of the rollout of GDPR, we're providing a lot of control to people around their ad settings and we're committed, as Sheryl and Mark mentioned, to providing those same controls worldwide.

And while we don't expect these changes will significantly impact advertising revenue, there's certainly potential for some impact. Any change of the ability for us and our advertisers to use data can impact our optimization potential at the margin, which could impact our ability to drive price improvements in the long run. So we'll just have to watch how that plays out over time.

I think it's important to note that GDPR is affecting the entire online advertising industry. And so what's really most important in winning budgets is our relative performance versus other opportunities presented to marketers. And that's why it will be important to watch kind of how this plays out at the industry level.

Sheryl Kara Sandberg - Facebook, Inc.

On the social security information, social security is not an input people put into Facebook and posts containing information like social security numbers or credit cards are not allowed on our site and we remove them as soon as we become aware of it. So we're continually working to improve these efforts and we encourage our community to report anything like this that they see, but that's not data that Facebook is collecting in any way.

Operator

Your next question comes from the line of Eric Sheridan with UBS.

Eric J. Sheridan - UBS Securities LLC

Thanks for taking the question, maybe two if I can. Mark, in the changes you talked about at the product level at the beginning part of the year, as you've started to make those changes and some of the content people see on the platform has evolved, what does that mean for engagement? What are you seeing in terms of the way people are using Facebook? I know it's early days, but curious if you've seen anything in terms of change of behavior.

And then, Sheryl, we're starting to pick up from advertisers a lot of momentum and positive commentary on messaging platforms, especially Facebook Messenger. Wanted to know if you'd give us any color about your own conversations on the business side, on the messaging apps, WhatsApp, Facebook Messenger, and how investors should think about the opportunity there. Thanks.

Mark Elliot Zuckerberg - Facebook, Inc.

I can speak to the first point. So we made a number of changes and are still making changes to prioritize meaningful interactions between people over passive consumption of content. And that follows a lot of feedback directly from our community that people want Facebook to be more about friends and family and less about just content consumption. And it also follows the well-being research that we've done that suggests that when people use the Internet for interacting with people and building relationships, that is correlated with all of the positive measures of well-being that you just expect like longer term health and happiness, feeling more connected and less lonely, whereas just passively consuming content is not necessarily positive on those dimensions.

So we've been rolling out a number of changes, both product changes and ranking the News Feed. As I said in my opening remarks, that has increased or we've observed increases in some types of sharing and interaction between people based on that. We've also observed some continued declines as we've done this and in the passive consumption of video, specifically.

Overall, I'd say that these changes are doing what we expected that they would do and helping people to connect more and have more meaningful interactions. I think that that's the thing that people can uniquely do on Facebook that they can't do on other services that may be more about just consuming content.

So we think that this is going in the direction of building a stronger community and a stronger business over the long term, and we're optimistic about what we're seeing here.

Sheryl Kara Sandberg - Facebook, Inc.

On Messenger, we continue to be primarily focused on consumer growth and engagement, and we're being slow and deliberate with monetization. It's worth noting this isn't a feed product, so there are some more unknowns here.

But I think the potential is real and big and growing. We see a lot of organic connections between businesses and consumers, and our experience is that

where are those – where we have those organic connections, that's very promising to turn that into monetization as well.

We have over 18 million businesses now communicating with their customers through Messenger. We have 2 billion messages sent between people and businesses a month, which includes automated messages.

And we're focused on launching new tools that help businesses use Messenger. For this quarter, we launched new quick replies for customers. We're seeing ads in inbox, which are now available to all advertisers.

It's really early, but nice pick up and nice buzz there. And click to Messenger ads on Facebook are actually very promising as well because advertisers want to see a return for the money they spend. And when they have an ad and they can get a direct contact one to one with a customer, that's been something that people are really excited about. So early days, but I think a lot of potential here.

Operator

Your next question comes from the line of Justin Post with Bank of America Merrill Lynch.

Justin Post - Bank of America-Merrill Lynch

Thank you. I'd like to follow-up a little bit on usage just because of the comments last quarter. Any update to the time spent trends on Facebook post your changes?

I guess, a second question is, do you think time spent on Facebook can start to grow again?

And then third, when you look holistically at Instagram, which seems to be doing really well in third-party services, how do you think about the whole platform in total, Facebook plus Instagram? Thank you.

David M. Wehner - Facebook, Inc.

Yeah, so I'll take that. In terms of time spent on Facebook, we're not providing a specific update on that. I would note that Mark talked about some of the changes we're making to focus on connections over consumption. So we're seeing a decrease in certain types of time spent such as passive video consumption as a result of that and an increase in areas like sharing. So, we're not really optimizing the business on time spent, but rather the kind of quality of conversations and connections.

So we're continuing to invest in that work, and we think it's the right thing for the Facebook community in the long run. And I think it's also good for overall engagement.

For Instagram, that continues to perform very well, not providing kind of a separate breakout of that, but Instagram continues to grow nicely, both as a – both from an engagement perspective and a business perspective.

Operator

Your next question comes from the line of Heather Bellini with Goldman Sachs.

Heather Bellini - Goldman Sachs & Co. LLC

Great. Thank you very much. I was wondering if we could talk a little about Watch. I know it's early, but I was wondering if you could share with us your initial thoughts on how it's going versus your expectations? How you see it evolving over the next couple years? And ultimately, how would you define success for it as you look out? Thank you.

Mark Elliot Zuckerberg - Facebook, Inc.

So for Watch, the big thing that we're trying to do is help create new ways that people can connect, right? So it's very different from video and News Feed, the passive consumption that I'm talking about on response to some of the other questions because it's intentional, right? I mean, people go to it to watch specific content.

And we're trying to make a different experience than what you might be able to get on YouTube or any of these other services by making it more about connecting with people in different ways.

So a good example of this is what I talked about with Watch Party, where now people – groups of people can get together and can watch videos at the same time and you can interact around that. And we think that that's the kind of experience that we can uniquely build and that that's going to further our mission and just be a unique thing that we can add to the world.

So what we're seeing so far is that a bunch of the content that has come onto Watch is good and is working and people watch it. We're continuing to treat the product to emphasize that kind of content more while building more of these social features.

I'd say it's still pretty early overall in terms of the growth of this, but it's clearly an area that's important where I think we have something unique that we're going to bring to make this successful.

Operator

Your next question comes from the line of Ross Sandler with Barclays.

Ross Sandler - Barclays Capital, Inc.

Great. Just two questions. Dave, is the impression growth acceleration to 8% a function of easier comps or is it a function of some of the changes that Mark was talking about around the News Feed content that you put in in January?

And then is the North America ad revenue growth acceleration being driven by that, that change on core Facebook? Or is it more coming from Instagram? Any color there on those two accelerating trends would be great.

And then the last one is just a follow-up on the GDPR topic. Dave, you mentioned that MAUs and DAUs might be down a little bit in 2Q in Europe. Is that what you've seen already from these new screens that just came out with the new terms of service? Or is that just a guess of what you might see in the future? Thank you.

David M. Wehner - Facebook, Inc.

Sure. So I think I'll take all of those, Ross. So the impression growth acceleration, you've got a couple factors going on there. One of the factors is just that the desktop roll-off is just continuing. So as it gets smaller, it has less of a depressive effect on the overall impression growth number, because if you recall, desktop has quite a number of impressions per DAU, just given it's the right-hand column that has multiple impressions on each screen. So that's one of the reasons. And obviously, Instagram is continuing to grow nicely as well, so that's another contributing factor there.

In terms of the North America revenue growth acceleration, one of the big factors there is really just also that's where you're picking up some of the accounting change from the Instant Articles going from net to gross, so that's contributing to that acceleration. Obviously, I'm very pleased with the strength of North American ad revenue and, overall, all the different regions, but that's a factor there, and IG is, obviously, contributing nicely to growth in North America and worldwide.

Finally, on the GDPR trend, that's just based on what we're expecting given that you're having to bring people through these consent flows, and we have

been modeling it and expect there would be a flat to down impact on MAU and DAU. It's very early in our rollout, but nothing inconsistent with what we've been modeling. So that's why we're giving that indication of what we expect.

Operator

Your next question comes from the line of Anthony DiClemente with Evercore ISI.

Anthony DiClemente - Evercore Group LLC

Thanks very much for taking my questions. I have two; one for Dave and one for Mark. Dave, will the privacy policy or the opt-in process differ in Europe versus other geographies post GDPR? Your prepared remarks suggested that those controls would extend to the rest of the world. And if that is the case, why wouldn't we also potentially see an impact to MAU and/or DAU outside of just Europe? And then Mark, just simple question, having watched most of your testimony on Capitol Hill, I just wonder what did you learn, or what surprised you the most personally from that experience? Thank you.

David M. Wehner - Facebook, Inc.

Do you want to take that, Sheryl?

Sheryl Kara Sandberg - Facebook, Inc.

Yeah. On the GDPR changes, so we just started rolling out the GDPR controls in Europe and we're going to make all the same controls and settings available every way, which gives people the same opportunities to make the same choices. It's not going to be exactly the same format. It's going to be localized instead for different parts of the world. And so we think some of the differences will come from that.

Mark Elliot Zuckerberg - Facebook, Inc.

And on the testimony, these are important issues and I think that that was an important moment to be able to go and hear what people were wondering about and just to have a public hearing of answering all of the questions around Cambridge Analytica and what we knew and all the steps that we're taking on data privacy and developers to make sure that this doesn't happen again and to lay out all the different things that we're doing.

I mean, the hearings didn't just touch on that. They also touched on a number of the other issues that we face, including foreign interference in

elections and that's something that we're incredibly focused on. 2018 is going to be an incredibly important year on this. There are big elections, not just the U.S. midterms, but the major elections upcoming in Mexico, in Brazil, in India, and Pakistan, and a number of other countries around the world. So this is important and it was an important moment for the company to hear the feedback and to show what we're doing. And now I think the important thing is that we execute on all the things that we need to do to make sure that we keep people safe.

Operator

Your next question comes from the line of Brian Nowak with Morgan Stanley. Brian Nowak, your line is open. Your next question comes from the line of John Blackledge with Cowen.

John Blackledge - Cowen & Co. LLC

Great. Thanks. Two questions. First, you posted another strong quarter for ad growth. Just wondering given the recent events, has there been any change in kind of advertisers' views about the platform, or concerns about ROI going forward? And then second on video, was there much investment in video content in the first quarter, or do you expect the bulk of the video content spend to hit kind of through the rest of the year, and what types of content will you be investing in?

Sheryl Kara Sandberg - Facebook, Inc.

To the first, in the immediate days of the concern, we heard from a handful of advertisers who paused spend, one of whom has already come back, and we haven't seen a meaningful trend or anything much since then. Advertisers ask the same questions as people are, that they want to make sure their and their customers' data is protected, and I think we are able to answer those questions in a compelling way.

In terms of ROI on the platform, the ROI is really determined by the ability of advertisers to put the right ad in front of the right person in the right format. And I think we're seeing impressive growth in all of those areas. We have more advertisers using the ability to target their ads to the right person. We have more advertisers experimenting with different formats. Stories on Instagram are a very promising one, and we're seeing some nice experimentation there.

And we have more advertisers really embracing the measurement that helps close the loop and helps make their ads more effective. So I think in terms of the ROI we are able to offer our marketers, the signs are strong, and we also continue to see there's a lot of room for improvement.

David M. Wehner - Facebook, Inc.

Yeah, John, on the video investment in the first quarter, it's clearly going to be more weighted towards the rest of the year, but we're already seeing the impact of some of that. So if you look at just the cost of revenue line where that's getting picked up, we saw cost of revenue grow 66% year-over-year. If you look at the gross margin, it dropped from 86% to 84%.

There's really two kind main – two big factors in that compression there. One of those is the video content investment. The other is the move to gross versus net accounting on the Instant Articles product. So those are the two things that I'd point to as being drivers of that margin compression getting picked up in cost of revenue. So video is having an impact, but we grew expenses 39% year-over-year in the first quarter. We're obviously expecting faster growth in the back half – back three quarters of the year, so that's – video's going to be a component in driving that.

Operator

Your next question comes from the line of Peter Stabler with Wells Fargo Securities.

Peter C. Stabler - Wells Fargo Securities LLC

Thanks very much. A couple for Sheryl, if I may. A couple on GDPR. Do you think it's going to have any impact on your measurement capabilities? So that's one. And then secondly, if users elect to take the strictest possible approach to their data management, would their product experience change in any way on Facebook? I mean, we have a sense that their advertising experience might change, but in terms of their use of News Feed or any of your products, would the actual product functionality materially change for them? Thanks very much.

Sheryl Kara Sandberg - Facebook, Inc.

When you think about the way people have the choice to restrict data use, I think it would affect the product. There is lots of ways we use data to make the product better. It really depends what that would be. I don't think we have full visibility into what those changes would be over the long time.

In terms of measurement capabilities, I don't think there's a direct thing we're exactly worried about right now. It's more what happens over the long time. The way we think about it, and Dave said this, is that the amount of uncertainty there is for us and all the other companies in the digital advertising industry is reasonably higher than it's been right now because we're in the process of rolling out GDPR.

We're going to all know a lot more after we roll out, but the thing that won't change is that advertisers are going to look at the highest ROI opportunity. And what's most important in winning budgets is relative performance in the industry. And so we think that certainly we want to provide the best advertising, we certainly want to provide the best measurement, but our ability to do so as long as things happen across the industry, which is what's happening, I think we remain in a very strong position.

Operator

Your next question comes from the line of Brian Nowak with Morgan Stanley.

Brian Nowak - Morgan Stanley & Co. LLC

Thanks for taking my question. Sorry. Technological challenges. There's been a lot of good questions around core Facebook. Can you talk a little bit about Instagram, Mark, and how do you see the product evolving over the next 12 months? What are your visions for how it could continue to drive more engagement and maybe even higher quality connections on Instagram? And then second one on payments. Could you talk a little about philosophically how you think about the importance of enabling more frictionless payments to drive a higher quality advertising experience on Messenger and WhatsApp?

Mark Elliot Zuckerberg - Facebook, Inc.

Sure. So, on Instagram, there are a number of really exciting opportunities. The main focus is on helping people capture and share any moment that they want, and also the whole theme that we have around community plays out a little bit differently on Instagram. So for example, while there is no formal groups product on Instagram, people use Explore. More than 200 million people use Explore in order to see content that's interesting to them and interact with people beyond their friends and the people who are – who they follow directly.

We launched hashtag following in December. That's a product that has done very well. I think now more than 100 million people follow different hashtags, which is a way that people can form ad hoc communities, and that – it all goes towards the overall mission that we have as a company of helping to build community and bring people closer together. Private sharing, both with Stories and direct messaging, are growing incredibly quickly on Instagram, and I think that those are both very exciting areas for development of products as well.

You asked about payments in WhatsApp and Messenger, was that right?

Brian Nowak - Morgan Stanley & Co. LLC

Yes.

Mark Elliot Zuckerberg - Facebook, Inc.

So I think that this is going to be a really big opportunity. And again, like I said earlier, the point here isn't to charge for payments. It's that messaging can be a more transactional medium than feed. So I think what you're going to start to see are people interacting with pages, maybe follow a page on Facebook or Instagram. You see content from that page. You can click through or tap through to a message thread, and then you can either get customer support or complete a transaction or do a follow-on transaction. And that will be very valuable for businesses.

So we view the payment in that context not as the goal, but as something that's helping the business and the person succeed at having the transaction or doing what they're trying to do. And that's going to make people's experience better, somebody can just do that online, and it's going to make businesses – it's going to make the experience of being on Facebook as a business more valuable because you can complete the transactions there.

I'll add one more thing that I think is interesting on payments. I think this is probably different from what you're asking about, but I think it's cool. We've been running an experiment with mobile financial services in Messenger, and one of the things that we found in the Philippines, for example, is that people can buy access to data plans through Messenger.

And because it allows the mobile carriers to not have to have the whole supply chain and sales and retail that they have otherwise, they're able to sell the data plans for on average about 10% less than they would be able to otherwise, which actually is allowing more people to get on the internet in the first place because they can now afford data plans.

So it's an interesting example of how having payments in messaging can increase efficiency for businesses and how in this case that's contributing to our Internet.org and connectivity goals of helping more people access the internet who wouldn't have otherwise been able to. In other cases, it will be able to help people accomplish their goals with different businesses more easily.

Operator

Your next question comes from the line of Colin Sebastian with Robert Baird.

Colin Alan Sebastian - Robert W. Baird & Co., Inc.

Great. Thanks, and good afternoon. First off, related to the machine learning capabilities and more specifically how that's deployed into content filtering, I wonder if you can compare the ability of the machines to analyze content today versus six months or even a year ago? Meaning, is that ability improving at a rate where you have a higher degree of confidence in that reliability?

And then secondly, wonder if you've been able to discern any impact to date on content publishers or apps that are utilizing Facebook for reach and engagement following the rollout of changes in access to APIs, login and other developer resources. Thank you.

Mark Elliot Zuckerberg - Facebook, Inc.

I could take the first one. So on AI, I think that there's a very big shift in how we're going to think about content moderation on the platform.

And I mean, this goes back to the beginning of the service, right? So in 2004, when I was starting in my dorm room, for a number of reasons, it was just me, so we didn't have a lot of capacity to have thousands of people reviewing content. AI technology was not developed at the time.

The only real logical way to run the service was to enable people to share what they wanted and then reactively, if people in the community saw something that was offensive or they thought was against the rules, they'd flag it for us. And we'd look at it and take things down that didn't belong.

Now it is becoming increasingly possible, both because we can build the AI tools, but couple that with being able to hire thousands and thousands of people to do faster review of the content and look at something proactively. We're shifting over the next few years to a much more proactive model of moderation.

Now, one of the things that I think is going to be interesting, and in some cases a little frustrating, is that AI tools lend themselves towards identifying certain content a lot more easily than others.

So one area where I'm very proud that we're doing great work is around identifying terrorist content. And I mentioned this before that 99% of the ISIS and Al Qaeda related content that we take down, we're removing before any person flags it to us. And that's great, right? That's doing a good job.

But if you look at areas like hate speech, which are just much more nuanced linguistically, it really depends on the local language, that's an area where I think it's going to take more years to be able to do something reasonably.

So one of the pieces of criticism that I think we get that I think is fair is we're much better able to enforce our nudity policies, for example, than we are hate speech. And the reason for that is it's much easier to build an AI system that can detect a nipple than it is to determine what is linguistically hate speech.

So this is something that I think we will make progress on and will get better on over time. These are not unsolvable problems, although it's worth calling out that our adversaries have all the same AI tools – or some of them, I think. I'd like to think that we're a little bit ahead. But we'll have a lot of the same tools as the field develops.

But the combination of building AI and hiring what is going to be tens of thousands of people to work on these problems, I think will see us make very meaningful progress going forward.

Sheryl Kara Sandberg - Facebook, Inc.

To your second question, when we think about what's happening with developers, we are doing an audit of large developers and doing some investigation. We don't break out marketer segments, but mobile app install ads, which is where the revenue would come from developers, is a relatively small part of our advertising revenue. And our mobile app install ads help apps of all kinds, not those running on our platform.

So we think the investigatory work we're doing into APIs, into the use, is very important, and we don't expect it to have an impact on revenue.

Operator

Your next question comes from the line of Mark Mahaney with RBC Capital Markets.

Mark Mahaney - RBC Capital Markets LLC

Okay. Two questions, please. David, could you just try to spell out a little bit more how GDPR could actually impact advertising revenue growth in the future, like, what's the doomsday scenario here? Is it just that it's clipped down because there would be a hit maybe near term to MAUs and DAUs? Or is there a reasonable scenario under which tracking or targeting would be impaired? Just spell out what the worst case scenario is. I'm kind of skeptical that there is one. But if there is one, please spell it out.

And then, Mark, on Oculus, could you just give us a little bit of an update on your kind of long-term thinking about Oculus? There hasn't been a lot of focus on it. But Oculus Go is coming out. So maybe we all should take

another – have another thought on it, like the opportunity you see there, where you think the product development is at this point? Are we years away from something mass marketable? Any commentary like that would be really helpful. Thank you.

David M. Wehner - Facebook, Inc.

So, Mark, on the first question, I don't know that we really see a doomsday scenario here. I think what we think is that depending on how people react to the controls and the ad settings, there could be some limitations to data usage. We believe that those will be relatively minor. But depending on how broadly the controls are adopted and set, there is a potential to impact targeting for our advertisers.

Obviously, if they are less able to target effectively, they'll get a lower ROI on their advertising campaigns. They'll then bid differently into the auction. That ultimately will flow through into how we can realize price on the impressions that we're selling.

So I think that's the mitigating issue that we could see, depending on how GDPR and our broader commitment to providing these same controls worldwide could play out.

We think that there is a great case for not just our business, but also for the user experience on Facebook to have targeting because we think it's a better experience for the people who use Facebook to have targeted ads. We think we can do that in a privacy-protected way, and it's just a better experience. You get more relevant ads. And I think overall benefits not only the advertisers, but also the people who use Facebook.

So I don't think we see a real doomsday scenario here. We see an opportunity to really make the case.

Operator

Your next question...

Mark Elliot Zuckerberg - Facebook, Inc.

And on virtual reality...

David M. Wehner - Facebook, Inc.

Mark has a second part of that question.

Mark Elliot Zuckerberg - Facebook, Inc.

So on virtual reality here, I think the big picture is that every 10 to 15 years or so there is a major new computing paradigm, right, whether that's DOS and then Windows and kind of desktop UI and then web browsers and now mobile phones and apps. So it strikes me as inevitable that that progression will continue. And each one gets to be more natural to interact with, more natural gestures for controlling, more immersive, more portable.

So I think it strikes me as very likely that the next one is going to be around virtual and augmented reality. So we're investing a lot in this because, frankly, we haven't to date been a hardware company or an operating system company. And we think that we need to build up a lot of different muscles in order to be competitive and be able to succeed in that space and to be able to shape that space.

One of my great regrets in how we've run the company so far is I feel like we didn't get to shape the way that mobile platforms developed as much as would be good because they were developed contemporaneously with Facebook early on, right. I mean, iOS and Android came out around 2007. We were really small company at that point. So that just wasn't a thing that we were working on.

But now I think we're living in a world where – the way that I think about this is that people should really be at the center of how we design technology. It shouldn't be designed around apps. It should be designed around our relationships because that's what matters to people. And that's not the world we're on on mobile. So I really am very committed to this idea of making sure that the next platform reflects those values that Facebook stands for.

I think this is going to be an exciting year. As you mentioned, Oculus Go is coming out. We have the prototype and the developer kit around the higher-end stand-alone coming out as well, and we're doing a number of other things that I think are going to be quite exciting over time as well. But that's how I think about the whole space.

I don't know exactly when it's going to be a big deal. When we started talking about this, I said that I thought that this was going to be a 10-year journey before this was really a very mainstream, major platform. And I think the reality is Facebook needs to be investing before it is a big thing in order to build some of the muscles to be competitive. We're committed to doing that because I think that this is important for our mission.

Operator

Your next question comes from the line of Rich Greenfield with BTIG.

Richard Greenfield - BTIG LLC

Hi. Thanks for taking the question. When you think about the opportunities for the business broadly, you obviously are crushing it from an advertising standpoint when you look at any measure of growth. But wondering as you think about how you take this massive platform of users and engagement that you have across all your platforms, I'm thinking about if you look at like what Spotify has been able to achieve in music subscriptions, what Apple even has done in music subscriptions, what Netflix is doing in video, Amazon obviously now crossing 100 million subscribers. Like, is there other lines of business, other revenue streams that people should be thinking about that create substantial opportunities, and specifically subscription, and then maybe if you could just touch on from a commerce standpoint now that Instagram's starting to be such a big driver of commerce, how do you think about diversifying revenues versus essentially being almost pure advertising? Thanks so much.

Sheryl Kara Sandberg - Facebook, Inc.

We've certainly thought about lots of other forms of monetization, including subscriptions, and we'll always continue to consider everything. Ads for us is a very natural fit for our business, and we have a lot of runway ahead of us. We've done – obviously, we have 80 million now pages, so we have 80 million businesses using Facebook on a monthly basis, of which 6 million are advertisers. On Instagram, we have 25 million Instagram business profiles, of which 2 million are advertisers. So even if we just convert people who are advertising on Facebook into Instagram, that's a lot of a growth opportunity. Then you can start thinking about Messenger and some of the other platforms we have.

What's I think interesting and strong about our potential business growth is that we're able to do this across these services. So as I mentioned before, running an ad that has a click to Messenger ad that goes into Messenger is just an early example of what's possible. And I think if you look at a large base of businesses who use us without paying, the growing base of businesses who do pay us and then the runway we have in services that are 1 billion plus (59:48) that we're really not monetizing, I think a strong focus on ads continues to be the best investment we can make. It's also very core to our mission. Ads gives us the ability to provide a free service to the world. And if your goal is to connect to everyone and make sure that people can all participate, that ads-based model makes a lot of sense and we're going to continue to invest very heavily there.

Deborah Crawford - Facebook, Inc.

Operator, we have time for one last question.

Operator

The last question comes from the line of Youssef Squali with SunTrust.

Youssef Squali - SunTrust Robinson Humphrey, Inc.

Thank you very much. I guess two quick questions for David. Growth in MAUs in rest of world was up about 11%; I think last year, it was up almost double that, 19% or so. Anything changed there that maybe could explain the slowdown? And I think we saw also a slighter – slightly lower growth in pricing as well. And then lastly, on the buyback, how much do you still have left on the old authorization to which we need to add the new \$9 billion? And how do you look at it? Is it being (01:00:54) opportunistic, or do you have a timeline by which you guys are planning to complete the repurchase? Thank you.

David M. Wehner - Facebook, Inc.

Sure, Youssef. On the growth in MAUs in rest of world, we've had certain slowdowns. There was an internet shutdown in Ethiopia that contributed a little bit to that. So you've got some kind of one-time factors that do come into play there. So I think that's probably what I would point to. Nothing that notable to call out there.

In terms of the share repurchase authorization, I would just say that we've just about gotten our way through that. We had about \$2 billion left as of the end of the quarter. But we think it's – we asked the board and the board approved a \$9 billion additional authorization. We look at it on two fronts: just offsetting the dilution from the share issuances that we have and then secondarily, to be opportunistic. And we think with the cash flow that we're generating, we have a strong financial position with which to fund that.