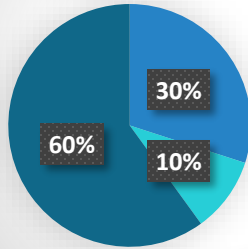




Covering Analyst: Ryan Hogan

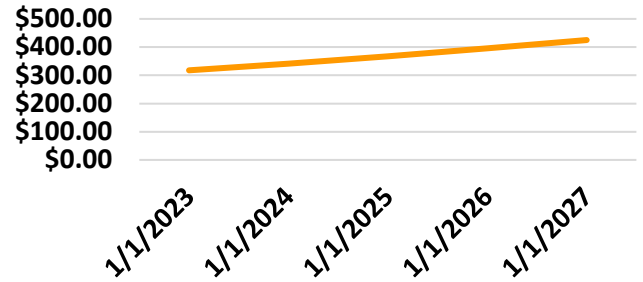
Intrinsic Value: \$295.44

### Valuation



- EV/EBITDA
- EV/Sales
- Relative

### Price Target



#### Capital Structure

Equity	98%
Debt	2%

#### CAPM Presumptions

Beta	1.26
Risk Premium	4.24%
Risk-Free Rate	2.2%
Terminal Growth Rate	3.00%

#### WACC Presumptions

Cost of Equity	7.5%
Cost of Debt	2.2%
Cost of Capital	7.4%

#### Intrinsic Value

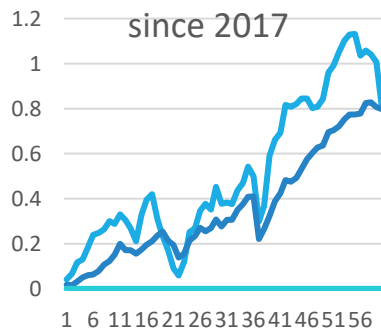
\$295.44

#### Margin of safety

49.2%

Source: Yahoo Finance

### SPY vs FB returns since 2017



#### Executive Summary

This equity report provides an analysis and evaluation of the current and future performance of **Meta** over a future period of five years. My methods of analysis include the **discounted cash flows model (DCF), EV/EBITDA, EV/Sales** as well as various ratios including but not limited to ROA, ROE, ROIC, liquidity ratios, capital structure ratios, and profitability ratios. While the DCF is not heavily weighted in my model it serves as a guide to give readers an idea about the past and projected future financial ratios and position the company is modeled to be in within five years.

Results of the analysis conducted on the business practices, financial position, and management of Meta, reveal a growing company focused on expanding its virtual reality and augmented reality business arm to capitalize and center itself as the dominate player within the new technology industry. The company generates significant free operating cash flow which it uses to invest in, buy, and develop new technologies for its Virtual Reality segment "Reality Labs". Its Family of Apps segment (FOA) is a basket of apps the company owns and operates. Meta is seeing significant revenue and user growth in all of these apps (Instagram, WhatsApp, Messenger), excluding its Facebook Core App. The Facebook core app is experience contractions in its user base decelerating revenue growth.

My report finds that the prospects of the company in its current position are **relatively positive**. The primary catalysts for long-term growth include but are not limited to:

- Oculus Users and Userbase Growth
- Instagram YOY sales and growth rate
- WhatsApp exposure to developing nations E-commerce
- Meta's talent attraction

I conclude that Meta's stock is approximately **undervalued**, resulting in a positive margin of safety of **49.2%**. Reasons that the market has placed this stock at undervalue include:

- Possible government intervention
- IOS 14.5 policy change in regard to Advertiser Tracking Number for devices
- Google's privacy policy change
- Metaverse's huge investments eat into owners equity
- Re-openings set Meta up for sluggish engement

#### Key Stock Statistics:

52-Wk Range (\$)	197.45 – 365.35	Dividend Yield	0%	Book Value/Share (mrq)	44.30
Beta	1.26	Diluted EPS (ttm)	13.77	Operating Margin (ttm)	39.70%
Market Capitalization (\$BN)	592.85	P/E (ttm)	15.17	S&P Credit Rating	AAA
Forward Annual Dividend	0%	P/B (mrq)	4.75	Institutional Ownership	79.96%

Source: Finviz

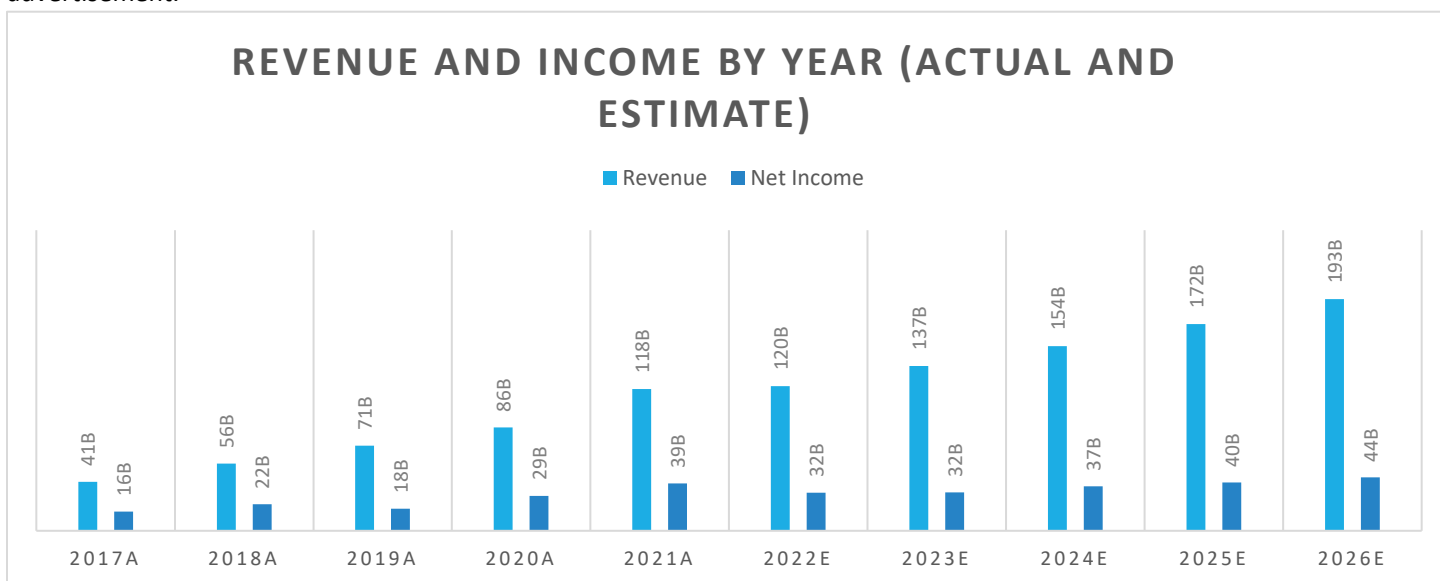
## Business Description

Meta Platforms, Inc. develops products that enable people to connect and share with friends and family through mobile devices, personal computers, virtual reality headsets, and in-home devices worldwide. It operates in two segments, Family of Apps and Facebook Reality Labs. The Family of Apps segment's products include Facebook, which enables people to connect, share, discover, and communicate with each other on mobile devices and personal computers; Instagram, a community for sharing photos, videos, and private messages; Messenger, a messaging application for people to connect with friends, family, groups, and businesses across platforms and devices; and WhatsApp, a messaging application that is used by people and businesses to communicate in a private way, as well as other services. The Facebook Reality Labs segment provides augmented and virtual reality-related consumer hardware, software, and content that help people feel connected, anytime, and anywhere. The company was formerly known as Facebook, Inc. and changed its name to Meta Platforms, Inc. in October 2021. Meta Platforms, Inc. was founded in 2004 (at this time it was known as Facebook) and is headquartered in Menlo Park, California.

### Revenue Drivers

Meta has two main sources of revenue according to their most recent 10-K. They are the 'Family of Apps' and 'Reality Labs'. Through these two sources of revenue, they have managed to generate total revenues for the most recent fiscal year of \$118 billion and a net income of \$39 billion resulting in a profit margin of 33%. The family of Apps segment dominates the revenue distribution for Meta, accounting for approximately 98% of the company's revenue. Meta is an advertising company that owns and operates the platforms in which advertisements are placed.

Meta's advertisement revenues are generated from advertising "impressions", where are user views and advertisements but down NOT take action, and from "User actions on an ad", where a user sees the ad and clicks on it allowing the user to see more information about the advertisement or visits an external link provided by the 3<sup>rd</sup> party client paying for the advertisement.



While revenues for Meta are primarily driven by advertising, only 2% of the most recent fiscal year's revenue are attributed to Reality Labs. Although Reality Labs has a high growth rate of YOY revenues it incurred significant losses due to investments and talent acquisition primarily.



## Meta Business Breakdown

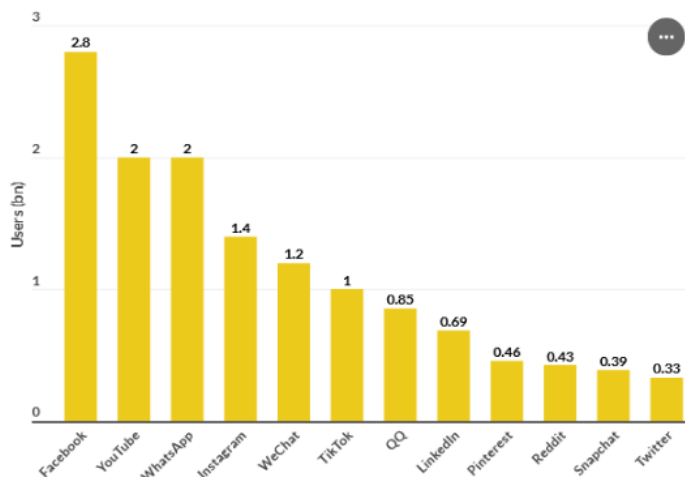
Meta is the parent company of its 'Family of Apps' (FOA) : Facebook, WhatsApp, Instagram, Messenger, and Reality Labs (RL) which is comprised of research and development for the Oculus VR platform. Revenues for the Family of Apps for FY2021 were 115.6 billion. Revenues for Reality Labs was \$2.27 billion. Income (Loss) for the same year were: \$57B for FOA and (-\$10.1B) for RL. Despite the massive loss inside its RL segment, year over year growth for RL revenue was 99.6%, a near double from revenues in 2021.

## Family of Apps Breakdown

### Users & Revenue Overview

Meta owns and operates multiple social media platforms that are included in their FOA segment. These are the core revenue drivers for the business. Revenue is derived from ads that are placed on the platforms from clients looking for advertisements and marketing reach. To measure success for these apps in Meta's FOA, I measured active users across all social media platforms. These figures represent the total DAILY ACTIVE USERS for each platform. Out of entities shown on this chart Meta owns four of the top five spots, and retains first place for app with the most Daily Active Users (DAU). Revenue growth since 2017 until 2021 has been 28.5% year-over-year on average. Despite the major issue in the most recent quarter in the core Facebook app (negative growth), Instagram (acquired for \$1 billion in 2012) is now the 'star' asset in the FOA. This growth delivered the 13% increase in Ad impressions year over year, as of this most recent quarter.

Instagram vs social apps: users

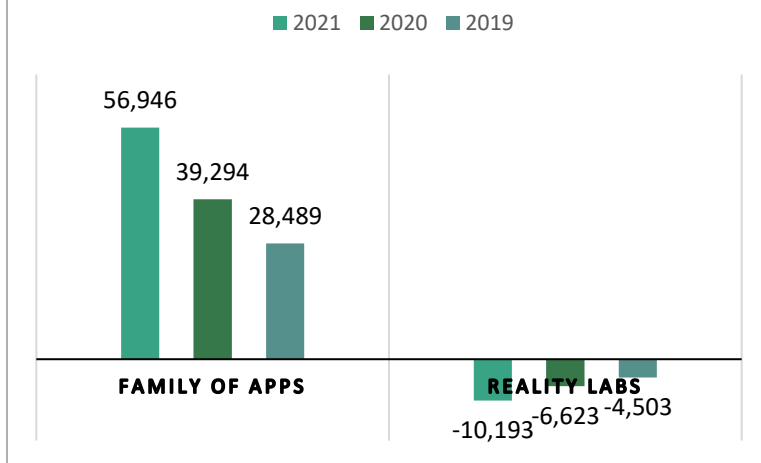


## Reality Labs Breakdown

### Users & Revenue Overviews

Reality Labs is the segment of Meta focused on developing, producing, and growing, virtual reality headsets, software, and experiences. This is Meta's financial and technological experiment. Currently the company is growing revenue at 113% on average over the past three years. Despite the growth, this segment is responsible for billions in losses over the recent years with a \$10.2B loss accounted for this most recent fiscal year. The revenue recorded for the RL segment is derived exclusively through their business to consumer headset retail market. Currently the company is not displaying advertisements on any of its VR content in the headset. Meta has recently filed patents which will allow it to place ads in the headset, see section regarding patent usage by Meta below.

## NET INCOME (LOSS) BY SEGMENT



## Products and Services

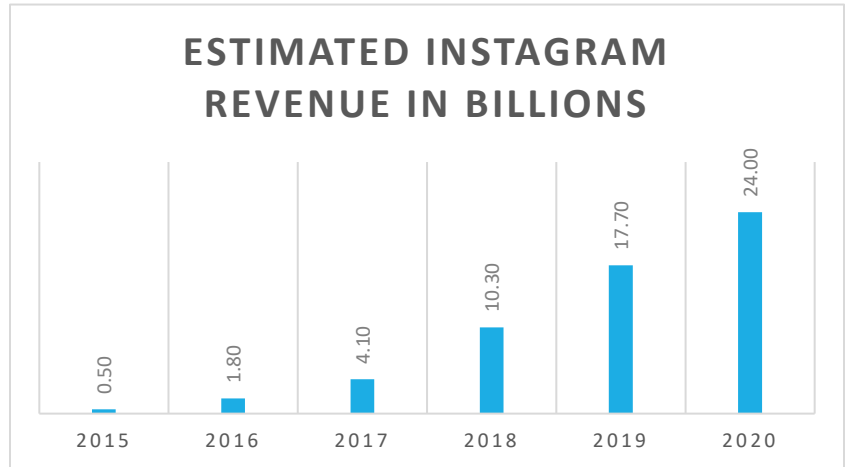
Meta offers social media experiences and services through its FOA, and offers VR experiences and hardware through its RL segment. These social media services are broken down into their respective platforms. Included is the RL segment. A disclaimer: Meta and its apps have been banned in China, the Oculus Quest VR line is not sold in Germany.



- Facebook Core
  - News feed, stories, groups, market place, reels, etc.
- Instagram
  - Photos, videos, IGTV, influencer market
- WhatsApp
  - Reliable, secure, private messaging service for people to communicate and transact
- Reality Labs
  - Augmented and virtual reality products and devices. Oculus Quest, Facebook Portal

### A Note On Instagram

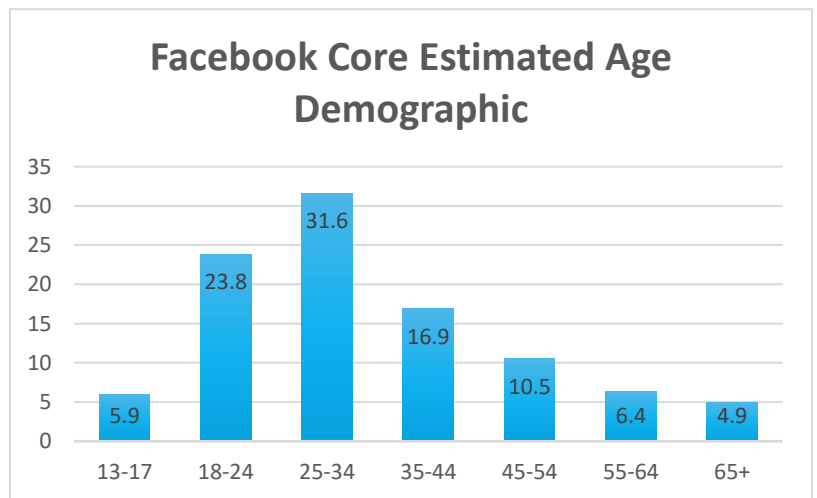
Instagram will probably go down as one of the best acquisitions ever. The platform could be valued at \$300-\$400 billion based on current valuations for its industry when looking at Instagram’s ESTIMATED sales, sales growth, and forward P/S. Holding these estimates true, revenues of in 2020 of \$24 billion while expanding 36% YOY is \$32.6 billion for 2021 expanded again at 36% gives us our forward sales for 2022 of \$44.39 billion.  $44.9 * 7.8$  (Google’s P/S multiple) is equal to \$350.2 billion. If you use the current multiple that Meta is receiving from the market (5.8x) you return a value of \$253 billion for the Instagram app. Meta does not disclose individual app revenue from the FOA. Understand these



valuations are from the perspective of looking at the platform independently. Instagram expanded 14% last quarter compared with Facebook’s core app staying flat. Instagram is benefiting from the following trends: on-demand media, visual content > text content, optimization for mobile use (cameras on phones), and a general rise in the demand for virtual platforms to do everything on.

### Facebook Core

Facebook’s Daily Active Users (DAU) shrank for the first time in the most recent quarter. The core app had a decrease of 500,000 users. This 500,000 decrease represents a 0.000518% drop in DAUs. The average age of the user base is higher than Instagram’s, while it would be prudent to think that Facebook, because of its stalwart and most recently negative growth, is a lag on the bigger company Meta, it is vital to the company’s multi-year transition because of the cash it provides. It is Meta’s cash cow and it will continue to provide capital until the app falls out of favor of the aging demographics.



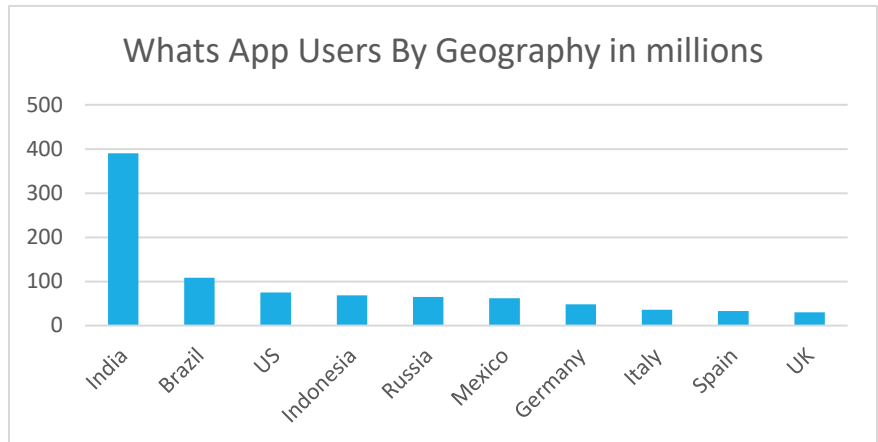
### WhatsApp

WhatsApp offers reliable, secure, messaging platform for users to communicate and transact privately on.



From a business standpoint it is the quintessential app for a large majority of the developing world to communicate with. Businesses in the developing world use it to communicate with their customers, clients, suppliers, and other businesses. India is the biggest adopter of the app. The app is ranked as the most used mobile messenger app in the world. WhatsApp monetizes at a lower level and has struggled to grow its revenue inline with the growth of its user base. This is due to a few reasons, but the most prominent issue is that they do NOT sell ads on the platform. Instead, they have launched a storefront feature where users can see a business's offerings. Sales and transactions take place, and Facebook takes a percentage. The WhatsApp company was bought by Facebook in 2014 for \$19 billion.

From a portfolio point of view (FOA), WhatsApp offers great diversification to developing nations overall economy. If in developing nations where WhatsApp is present and used by the population to do business, revenues derived from WhatsApp should reflect that. Vice-versa as well. WhatsApp's addition also brings down the volatility of the portfolios cashflows since the majority of users are based outside the United States.



### A Quick Note on Messenger

Messenger is one of the most popular social media apps worldwide with more than a billion active users, it is 5.5 years old. Messenger is simply an app for messaging people. Messenger will likely follow WhatsApp and vice-versa. The most interesting development recently with Messenger came from the F8 keynote where it was revealed that open APIs will be provided so that developers for businesses can develop and train AI to automate customer service through chat bots on messenger. Meta's bet for this space is to leverage its user base to entice businesses to join the network, and allows these businesses to build virtual storefronts, much like WhatsApp. Meta is predicting users will interact with businesses through its messenger app, thus allowing businesses to provide better virtual customer service. Meta wants to be the platform in which you can send a quick message to a business to get information, make a reservation, etc. Through this they will derive revenue, again, consistent with the theme of moving away from ads supported revenue.

### Virtual Reality on Meta's Oculus Platform

Oculus was acquired by Facebook (now Meta) in 2014 for around \$2-3 billion. Meta has taken the company, and grown its sales over that period by making heavy investments in the technology, online store, community environment, hardware, and software that come with the headset. Users of the headset are REQUIRED to login with an existing Facebook Account to connect and use the headset. In the headset, users will find around 70 games they can purchase to play with friends and communicate using the built in spacial audio and microphone. Games on the platform are developed and maintained by 3<sup>rd</sup> party developers and companies looking to provide users with a virtual experience. Apps that were traditionally used on the phone have been ported over to Oculus where users can get the full VR experience using apps that were originally designed to be 2D only. A perfect example of this is Youtube.

A web browser is also included in the headset for web browsing purposes. The Wall Street Journal can even be accessed if you want to read in VR while you have your morning coffee.

The Oculus Quest 2 headset comes in two different sizes: 128 GB retailing for \$299, and 256GB retailing for \$399. Multiple accessories are available for the headset on all major retail platforms.

According to Meta's direct to consumer website, the headset boasts 4.5 stars out of 5 after 5,638 reviews.



It should be noted that the hardware and software is all developed in house by Meta. This offers a decrease in risk for the platform as a whole since Meta has proprietary control over ALL aspects of the device.

A slow and gradual phase out of the 'Oculus' name and previous models of the headset has been stated as a general goal for Meta by late 2022. "Horizon" will be used for immersive social experiences operated by Meta (including those previously operated under the Oculus brand).

The chart below shows indirectly, that the Oculus Quest 2 (the only model they currently sell), is supposed to be the standard, go-to model for the Virtual Reality segment of Meta. Meta is probably trying to standardize their product offering so they can offer better service and experiences for its users.

Model	Oculus Rift	Oculus Go	Oculus Rift S	Oculus Quest	Meta Quest 2
Price	\$399	\$199   \$249	\$399	\$399   \$499	\$299   \$399
Display Size	2 * 1080x1200	1 * 1440x2560	1 * 1440x2560	2 * 1440x1660	1 * 1832x3800 (1832x1920 per eye)
Display Type	OLED	LCD	LCD	OLED	LCD
Refresh rate	90hz	60-72hz	80hz	72hz	72-90hz and 120 Hz (experimental) <sup>[88]</sup>
Store	Oculus Rift Store	Oculus Go Store	Oculus Rift Store	Oculus Quest Store	Oculus Quest Store
Processor	-	Snapdragon 821	-	Snapdragon 835	Snapdragon XR2
RAM	-	3 GB	-	4GB	6GB
Storage	-	32GB   64GB	-	64GB   128GB	64GB (Discontinued)   128GB   256GB
Weight	470g	470g	570g	570g	503g
Controllers	2 * Oculus Touch Controller (V1)	1 * Oculus Go Controller	2 * Oculus Touch Controller (V2)	2 * Oculus Touch Controller (V2)	2 * Oculus Touch Controller (V3)
Battery Life	-	2-3 hours	-	2-5 hours	2-3 hours
Availability	Discontinued	Discontinued	Discontinued	Discontinued	Available
Release date	March 28, 2016	May 1, 2018	May 21, 2019	May 21, 2019	October 13, 2020

The headset receives asynchronous updates to its software that is pushed out whenever a new update becomes available.

By having a standard model to push these updates out to, Meta is removing the margin for error that software will work on one headset model but not another. This will save time, money and resources for the company in the future.

Note: the processor used in these headsets is the Snapdragon XR2, developed by Qualcomm.

## Ad Price Structure

As mentioned before, Meta derives its revenue from selling ads primarily. These ad placements have a supply and demand equilibrium as does everything else that is bought and sold. 3<sup>rd</sup> party companies are constantly bidding on ad placements for apps within the FOA. This is called "Ad Auction". Companies with the highest bids for ad placements are granted placements given conditions that the 3<sup>rd</sup> party can specify. If you want ads to be shown from 7pm-10pm on Instagram in a specific geo-location on the weekends only, you can specify those conditions on the auction platform. According to Facebook's website the ad auction system is a deep, and complex algorithm used for ensuring quality ads, at fair prices, thus ensuring true competition for these ad placements amongst bidders. "ad sales growth was driven by a 30% year-over-year increase in the average price per ad and a 12% increase in the number of ads delivered," according to CFO David Wehner on the latest earnings call. Everything has a price, and the ad auction system is a perfect example of how Facebook has turned clicks into dollars and why twitter and pinterest are struggling.

## Business Strategy

Meta's roots are in advertising. Currently 98% of its revenue is derived from advertising on its platforms, but the time was yesterday to make the transition to a no-ad platform company. To be clear, the transition should be gradual, and the focus of current efforts should be on developing useful pieces of technology that users and businesses can use to connect and transact. Through fees and subscriptions, Meta must make their revenue to avoid the stigma, and negative public sentiment it receives due to data handling practices. The reason they must shift is due to the IOS policy change included in the 14.5 release. The IOS policy change put a stop sign to one of the most fundamental algorithms Meta has for delivering ads. Without being able to track users across apps using the Identifier for Advertisers number (an internal Apple software ID), ads were going to become less accurate. Algorithms that were delivering newsfeeds on Instagram to users based on what they were looking at on websites, and YouTube would now be in the dark as to the users previous searches.





The IOS changes were a blow to Facebook, and the company must continue making its push into virtual storefronts and platforms and gradually move away from ads.

For its Reality Labs segment, the strategy is to bring in as many users as possible and have them create, build, and transact within the VR 'metaverse'. Currently it is believed to be selling the Oculus Quest 2 at a loss to drive user growth. Before any real profit can be taken from the segment, Oculus must first reach its critical point, until then, it is financially full steam ahead with investments.

## Cost Drivers

Key costs for Meta include sales & marketing, R&D, general and administrative (G&A) expense and other operating expenses. These expenses account for approx. 60.4% of revenues for FY 2021, an increase of 33.6% from FY 2020. Meta's Research and development spend made up the largest deduction from gross profit at approximately 20.9% of revenue. Note the average YOY increase for R&D is 33.9% over the last 5 years.

## Research and Development

Meta spent \$24.6 billion on R&D last year. The high R&D spend is not new to Meta. In 2013 investors were wondering why Facebook would spend \$1.06 billion on research. Now 24x that, the current R&D spending goes towards new technology, inventing new systems, and patents. The buildup of intellectual property by Facebook is astounding. In 2021 Facebook was granted 1317 patents. 3.6 a day on average. I have provided a link to the webpage where these patents can be viewed in the resources page of the report.

Pupil movements, body poses, nose scrunching, are all facial expressions that Meta finds as valuable data it wants to collect on its quest to deliver a personalized experience, and most importantly, personalized ads.

Here is a patent for a System and method for facilitating user interactions between 3D VR objects, and users of the Oculus product.

The most shocking revelation is not the ideas behind the overly intrusive data points it will collect but the fact that Meta filed for this patent on May 18, 2016. The corporate strategy here is to have Meta hold the patents that the company's under the parent umbrella, use. In October 2021, then Facebook Inc, revealed they would be changing their name to Meta. This change was planned. Even before the capital riot and a lot of the negative government and consumer sentiment. While it seemed like the perfect reason to change their corporate name to avoid negative sentiment and scrutiny, it is now apparent that the company has been planning on making this switch. Now Meta, the parent company for Reality Labs and the FOA, holds a large portion of patents in the virtual reality space, and it was quietly loading patents into the company for a while now.

### Patents Assigned to Meta Company

System and method for facilitating user interaction with a three-dimensional virtual environment in response to user input into a control device having a graphical interface

**Patent number:** 10303323

**Abstract:** The methods, systems, techniques, and components described herein may facilitate user interactions with virtual objects in a three-dimensional virtual environment using user input into a graphical interface of a control device that is coupled to a display that may display the three-dimensional virtual environment. The control device may be configured to display a 3D representation of a virtual object having a non-virtual reality representation of the virtual object. The graphical interface of the control device may receive selection information that corresponds to a user selection of the 3D representation of the virtual object. Transformation parameters that provide a basis for rendering a three-dimensional representation of a virtual object in the three-dimensional virtual environment may be obtained to define a transformation of the 3D representation of the virtual object.

**Type:** Grant

**Filed:** May 18, 2016

**Date of Patent:** May 28, 2019

**Assignee:** Meta Company

**Inventor:** Yishai Gribetz

## Industry Overview

Communication Services encompasses the Internet Continent and Information industry which comprises Meta. This industry is made up of a few key players: Google (Alphabet), Meta, Twitter, Match Group Inc, and smaller social networks like Snapchat and Pinterest. Companies within this group derive their revenue primarily from selling ad placements on their platforms and apps.

Inside the sector, is entertainment and telecom services which are comprised of companies like Disney, Netflix, Comcast, Verizon, AT&T, and T-Mobile.



Generally, the profitability of companies in the industry depends on their ability serve accurate advertisements to users in mass quantity while keeping users engaged on their platforms. The Internet Content and Information industry has seen a boost in users and revenue recently due to external circumstances like the pandemic forcing people inside and thus online. These platforms like YouTube (operated by Google) and Instagram saw these major benefits during the past year giving a boost to overall industry and sector performance.

## Industry Growth

Fastest expanding market for Meta's platforms: Asia-Pacific Region

Largest Market via Revenue: North America

## Industry Disruptors

Social Media platforms are receiving pressure from regulators and the public, domestically and abroad, on their data handling practices. ByteDance's TikTok has spurred massive engagement and downloads in record time. Having reached a billion daily active users since the app launched in 2016 is incredible. This is a true disruptor for the industry and Meta recognizes it. Since the debut of Tik-Tok Instagram has built out its Reels addition. With Reels users can create video like tik-toks and post them. Essentially Instagram is copying tik-tok.

## Market Share

The Communication Services sector is huge, fourth when you compare sectors by market cap. Inside this sector is the Internet and Content Information industry where the main players have a combined market cap of \$2.828 Trillion. Meta's market cap is 612 billion at the time of writing this, thus representing a 21.6% of the market share for the industry. If you refer to the chart listed in the first section of this report, you can find that currently, Meta owns and operates four of the top five most visited social media platforms. This is further empirical evidence that Meta dominates the social media platform space.

## Competitive Analysis

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I analyzed Meta 's competitive positioning by constructing a SWOT analysis and a Porters' Five Forces model.

### SWOT Analysis

#### Strengths

- Diversified Portfolio of Apps and Products
- Dominate Market Position
- Heaven for R&D (contributing to revenue and asset growth)

#### Weaknesses

- User Privacy and Data Handling Concerns across all platforms
- Overdependent on advertising for revenue
- Target for negative publicity and sentiment for extended period of time

#### Opportunities

- Virtual Reality 'Metaverse' technology and revenue growth
- Proprietary hardware and software (remove risks like IOS changes)
- Enhancing integration with other applications (optimizing for 3<sup>rd</sup> party developers)
- Intellectual Property build up for virtual reality

#### Threats



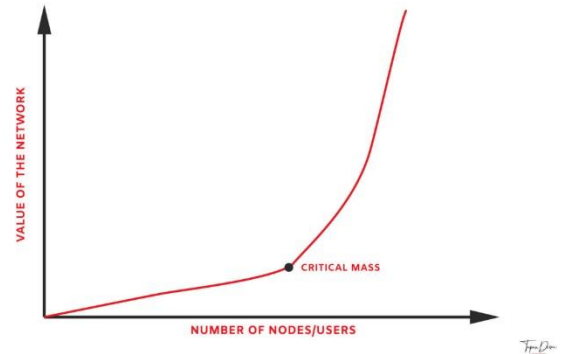
- Platform changes from Apple and Google regarding Advertiser tracking
- Competition causes less screen time and thus less revenue per user
- Bans in several countries (China, N.Korea, Iran, Russia)

## Porter's Five Forces

Porter's five forces, which provide a framework for industry analysis, were formulated by Michael E. Porter of Harvard Business School in 1979. Following are the five parameters on which I analyzed Meta, and their market position in both social media information and virtual reality segments of their business.

### Rivalry Amongst Sellers | Medium

FOA: High. It takes little time to make a CRUD (Create, Read, Update, Delete) application. This makes entry into the space quick and thus, a flood of new social media apps are released every year. The competition between social media companies is huge. They are competing for eyeballs so they can serve ads, thus turning users into revenue machines. The network effect is the model to use when looking at valuing social media networks. While it is not an exact science, the network effect revolved around the idea that after the critical mass is reached (the number of users required for significant network value growth, and network effects), the value of the network increases exponentially with every additional user. This makes social media networks value increase by exponentially growing the number of users. More users after the critical mass? Value increases exponentially because of network effects that are only appear after the critical mass.



Reality Labs: Low. There are few VR headset producers in the world. This makes it easy for Meta to garner market share from new and established businesses. Meta out shipped its nearest competitor for VR headsets nearly 9x in 2020 (further on this in catalysts for long term growth). There is little rivalry in the VR headset market due to improvements in the technology, operating system, store, and cost subsidizing for Oculus that Meta has undertaken in the past year.

### Threat of Substitutes | High

FOA: Threats of other apps being able to be substituted in for facebook, instagram, and whatsapp has never been higher. Most other substitutes in the social media space have already reached, or are nearing, their critical mass point. Some will fail (twitter), others will fall into favor of the populus (tik-tok). Either way, once apps have passed the critical mass point, the probability that they will begin to offer substitutes to the FOA is an exponentially greater probability than the same app before critical mass has been reached.

Reality Labs: Since the segment of the business is a trailblazer in its own industry there is not a great substitute for the VR headset unless you want to pay \$800 for the HTC Vive headset. And that is when its on sale.

### Pressure from Supplier Bargaining Power | Low

FOA: Since the supply of content in the FOA is generated by the user base, there is not a huge concern over pressure from the supplier. The big red flag I see here is how Meta responds to allegations of censorship, and removing posts. If meta continues to censor speech on apps within the FOA, there will be further increases in the political issues Meta is perceived to have, and could lead to a decrease in the overall user base.

Reality Labs: The contraction in supply of gaming consoles has been a boost for Meta. Currently, due to chip shortages, Xbox's and play-station's are in short supply. While Meta sources all its products from external suppliers (does not produce components in house), it has not had the same issues that Microsoft or Sony has had. This could be the catalyst that drives headset sales higher next quarter. For this reason I am ranking pressure from supplier's as low.

## Threat of New Entrants | Medium

I rated the threat of new entrants as medium because, as mentioned previous it is extremely easy to create social media networks. Those who were programmed with user experience in mind tend to do that best and stick around the longest. There will always be threats of new entrants into the social media space, but few hit the critical mass needed to effectively challenge Meta's dominate market position. Same goes for Reality Labs. The technology, patents, and software needed to build a great headset, and app store. Thus, I ranked the threat of new entrants as medium.

## Pressure from Buyer Bargaining Power | High

This is a highly customer-oriented industry. Meta must make sure their platforms are welcoming and engaging. Any complaints from one group of people is probably the start of a problem that will affect many users. Meta must be quick and available to make the necessary changes to the platforms in which users are complaining about. This makes the pressure from the buyer (user) of the app a high priority for Meta.

## Financial Analysis

The financial analysis section involves the use of a DuPont method and other financial ratios. These are especially useful in evaluating a company's ability to deploy, retain, and generate income. Meta has promising fundamentals especially in its operating cashflow that lend the company capacity to expand safely into new markets, make massive software infrastructure changes, and pursue lucrative intellectual property.

### DuPont Analysis

A DuPont analysis involves breaking down ROA, ROE, and ROIC into granular components for detailed analysis.

#### Return on Assets (ROA)

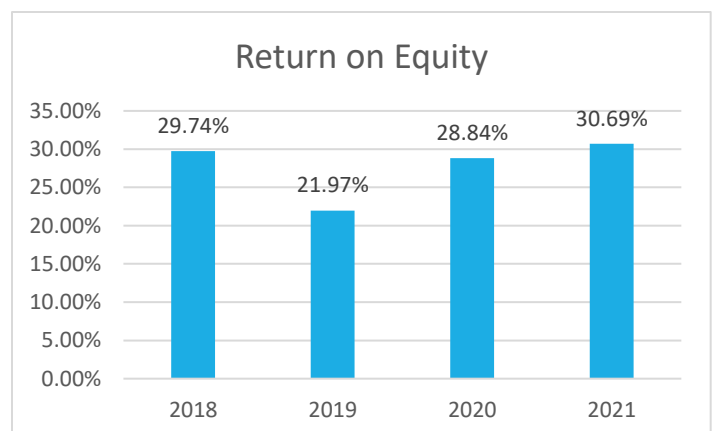
Overall, Meta has a decent return on assets, but this metric is skewed because of the amount of variance in the ratios over the past 5 years. The average over the past 5 years is 20.6% with the most recent FY resulting in a 23.9% ROA.

- Profit Margin

Profit margin is calculated as net income divided by total revenues. This indicates the percent of cash remaining after incurring all expenses. Meta experienced a massive contraction in profit margins for FY2021. This at first glance seems bearish. Despite bringing in 116 billion in revenue the profit margins contracted YOY from 33.4% to 26.4%. The reason for this is clear, the investments into the Reality Labs segment of the company has artificially lowered earnings for this most recent year.

#### Return on Equity (ROE)

Return on equity (ROE) is calculated utilizing the DuPont method, breaking down the calculation into five separate ratios: tax burden, interest burden, operating margin, asset turnover, and leverage ratio—the product of these ratios results in ROE. Meta's ROE was growing steadily and was a healthy 29.74% in 2018. In 2019 this took a dip and went back to its mean in 2020 and 2021. Investors will be watching for any dips in ROE during Meta's next earnings call.



- **Tax Burden and Foreign Risk**

Meta pays a clean tax rate of between 15-19% average for any given year in the past 5 years. The tax rate fluctuations over the past five years have been pretty drastic. Management’s forward looking statements has stated that the tax rate for this year and going forward will be around 16.9%. In my DCF model, I used a rolling average to compute the tax rate going forward. I believe this was the most prudent decision since the averages gave some fluctuation in the data much like in Meta’s passed, but also since it gave me a slightly padded tax rate which I determined to add to the conservativeness of my estimates. Foreign risk is present here in Meta’s portfolio, specifically WhatsApp. Transaction in foreign currencies will always be a head-wind for Meta but some of the currency and derivative hedging the company uses should cause the risk to have less of an affect on Meta’s bottom line.

- **Operating Margin**

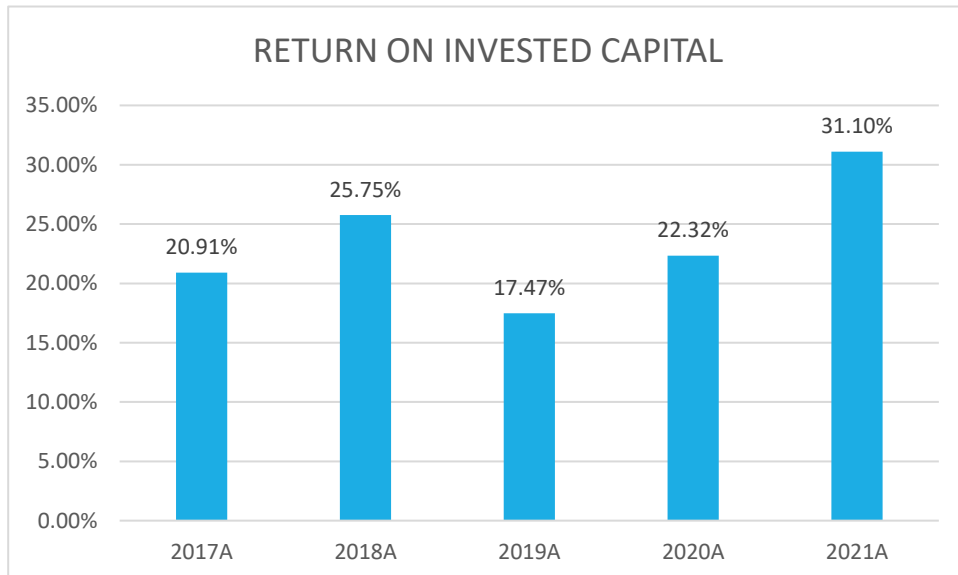
Operating margins at Meta are fantastic. When compared to their peer Google, Meta sits at a 39.6% margin while Google sits at 30.5% margin. Meta operates more efficiently and with less revenue related expenses when compared to Google. This margin has shrank from 2017-2019 when it dropped from 49.7% to 33.9%. Since 2019 when we saw a massive dip in the ROE of Meta, Operating Margins and ROE have climbed higher. Currently, Meta has a 39.6% operating margin.

- **Leverage Ratio**

The leverage ratio is calculated by dividing total assets by shareholders’ equity. This allows investors to interpret the proportion of assets per share dollar of equity raised by the company. A leverage ratio above one indicates that the company is not leveraged, this improves overall ROE. Meta has a healthy leverage ratio of 1.3x, indicating that the company is not leveraged. During the dips in ROE and Operating Margin mentioned above this leverage ratio increased to 1.4x.

### Return on Invested Capital (ROIC)

Return on invested capital (ROIC) is calculated utilizing the DuPont method, breaking down the calculation: NOPAT divided by invested capital. The ratio produces ROIC. ROIC is of particular importance in determining a technology company’s health and ability to use invested capital to generate future cash flows wisely. Meta is using the capital it allocates for investments to pursue R&D, build out Metaverse related assets (intangibles), and hire. Return on capital for the company has increased over the past three years as net income grew and since the company holds almost no debt, besides \$14billion in leases.



## Valuation

The valuation given to Meta is the result of a combination of three methods. These methods offer value-added exposure to multiple levels of analysis. These models included the Relative Mode, and Discounted Cashflow. To come to a final intrinsic



value, each metric within the model was given a weighting based on the analysis of Meta as a company, the Communications sector outlook, and the current low-rate environment. Weightings: EV/EBITDA (30%), EV/Sales (10%), and Relative (60%).

## Discounted Cash Flow (DCF)

I used the discounted cash flow model to model the expected growth rate and discount the future cashflows back to the present. This enabled me to determine how much the company should aim to rake in as well as enabled me to model other attributes such net income

### Revenue

Revenue was projected using historical growth rates and to capture Meta's slow and feeble growth this year. I have given Meta the following assumptions for revenue growth: 2022 = 2%, 2023 = 14% (As they continue transitioning from ads), growing in perpetuity at 12%.

### Cost of Revenue (COGS)

I projected COGS as a % of revenue that was inline with what the company had historical done. The intangible assets are at work here since it costs little to run the business. Meta has historically had fantastic gross margins ranging from a low of 80.6% last year to a high of 86.6% for FY2017. Forwarding looking cost of revenues were placed around 20-21% of revenue.

### Depreciation and Amortization

Meta is a large company with a healthy balance sheet. In FY2021 Meta bought land, servers and equipment (\$25b), buildings (\$22b) and had \$14.8 billion in construction in progress. They are depreciating it all. Every year they depreciate assets again by adding another 1.2 billion onto what they already had. This is one of the reasons Meta is able to keep its taxes so low relative to the corporate and market average.

### Operating Expenses

Operating expenses are projected as a unit of costs associated with the operation of the businesses Meta is involved in. R&D spend is \$24 billion for FY2021. I have forecasted growth in R&D spend and think it will move from around 24% of revenue to 28% in the next five years. The reasoning behind this is due to the amount of growth in employment with the company and the rapid increase in the number of patents per year the company is given. I held marketing and general and administrative costs near their historical average for the next five years forecasted.

### Capital Expenditures

Capital expenditures were projected to from 11.19% of assets to approximately 15%. I have projected this due to the massive amount of spending in data centers and servers the company has done.

### Beta

Beta was estimated by performing a regression of Meta's historical returns against the S&P 500. Three periods were used for the regression: 5-year monthly returns, five-year weekly returns, and five years' daily returns. Of the three-time regressions, I selected the Weekly 5 years data as I believed it to reflect its true beta. The R-Squared value for the 5 years weekly data is 51% leaving us with a healthy market tracking beta of 1.26.

### Terminal Value Calculations

I calculated the terminal value based on two different methods, the Perpetual Growth Method (PGM) and the Exit Multiple Method (EMM). For the PGM, a terminal growth rate of 3% was used to reflect Meta's growth as information and technology sector juggernaut. For the terminal tax rate, I selected 16.9% which is significant because management has provided guidance that this rate will be accurate for year.

### Capital Asset Pricing Model (CAPM) & Weighted Average Cost of Capital (WACC) Presumptions

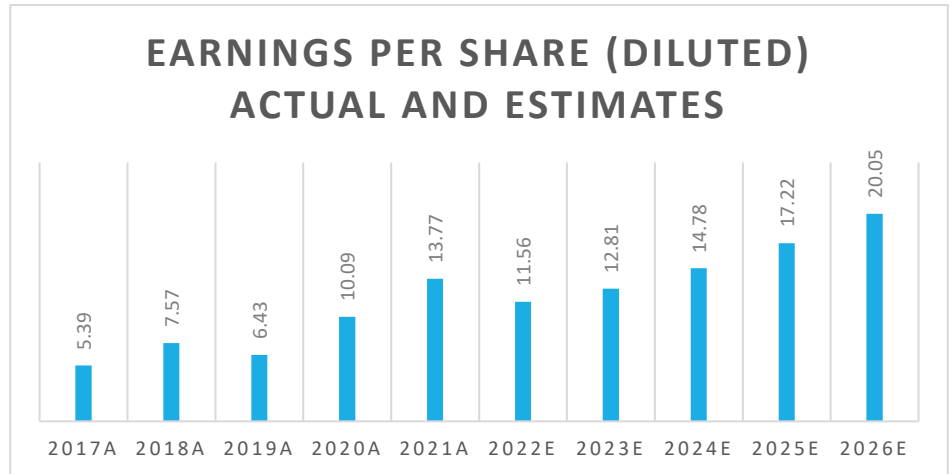
In calculating Meta's cost of equity, I used the capital asset pricing model (CAPM). I used the United States 4.24% for FY2021 equity risk premium provided by NYU stern, along with risk-free rate data from the 30-year United States Treasury Bond;



resulting in an 7.5% cost of equity. Meta carries little to no debt (LT debt is lease obligations) and has a great corporate credit rating resulting in a cost of debt of 2.2%.

### EV/EBITDA – 30%

The EV/EBITDA ratio allows investors to gauge a company’s enterprise value compared to its earnings before interest expense, taxes, depreciation, and amortization. In essence it answers the question of: “How is the company valued compared to its ability to generate income from its business operations before using accounting tools like depreciation to lower the tax bill?” I chose to weight this model heavily because Meta is a company that is using assets that list depreciation and



amortization to build out infrastructure for future growth opportunities in both its Family of Apps and Reality Labs segments. I have given Facebook the following assumptions for revenue growth: 2022 = 2%, 2023 = 14% (As they continue transitioning from ads), growing in perpetuity at 12%.

### EV/Sales – 10%

The EV/Sales ratio allows investors to gauge how well the company can generate sales compared to its enterprise valuation. Meta’s ability to generate revenue growth from its family of apps is funding its metaverse and reality labs segments of its business. Revenue growth has been projected at 12-15% for the next few years from executive management. EV/Sales ratio returns an intrinsic value \$442.53.

### Relative – 60%

The relative model compares companies across a wide range of financial metrics to their peers who operate and are in the same sector, though not always. For the companies within the matrix, I selected Google, Amazon, Snapchat, Tencent, Twitter, and Pinterest. The heaviest company in my selection was google at 65% since they are the main competitor to Meta. Amazon was weighted at 12%, and while not being a social media company, they have a \$30 billion a year advertising business that is used to advertise products on their core Amazon website. Snapchat was weighted at 12% because they are a main competitor to Meta, despite not being in a favorable financial position, the company operates the social media app Snapchat which is one of the most downloaded apps on the app store. This model produced an intrinsic value of \$285.31.

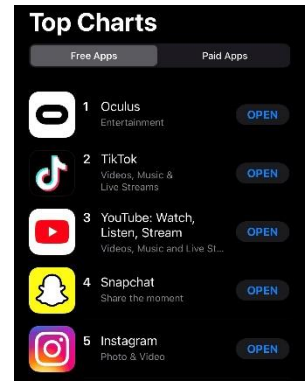
## Catalysts for Long-Term Growth

In my research, I have identified several catalysts for long-term growth:

- Oculus Userbase growth



- 5.6 million users currently. Phase out of the older generations as the quest 2 becomes the standard headset for the market. Meta’s next generation of headsets will sport 5G connectivity which could draw more people into purchasing the device. Oculus became the most downloaded app over this past Christmas season (2021). With an estimated two million downloads (over the holiday season) multiplied by the three hundred dollars for the base model, gives us an estimated revenue of six hundred million. Coupled with the fact that revenues for the segment have increased 99.64% to 2.27 billion for FY2021. According to the NYU stern data linked in references, the Software (Entertainment) Industry has an average P/S of 8.10. 2.27 billion multiplied by the average listed above gave me a valuation of 18.38 billion. At Palantir’s P/S multiple of 17x, this Reality Labs would receive a valuation of around \$40 billion.



I chose Palantir because of the similar revenue growth rates (30%) and because it is a net loss company too.

- SOTP separation LOW: \$18 billion valuation
- SOTP separation High: \$40 billion valuation
- Oculus will be the Leader in VR
  - The Oculus VR headsets are no doubt a lower margin contributor to Meta’s top line than its core ad-business. Despite the difference in margins, the metaverse offers an investment avenue that has the potential to become a huge revenue source with high margins in the long-term. With high engagement on its VR devices its apparent that the company has the huge opportunity to generate this revenue from ad placements and e-commerce within the ecosystem of the metaverse. The Oculus quest 2 headset has become a leader in the industry with its rapid adoption in gaming, and entertainment with a user base that is likely to see exponential growth over the next 3 years. Meta out shipped its closest VR headset competitor by nearly 9x in 2020, according to IDC data. Since Meta controls the hardware, operating system and software on its VR headset which helps to reduce the risk of a rug pull much like Apple’s IOS policy changes which do have the potential to hurt future sales. The CFO stated that sales could fall as much as \$10 billion.
- Content is King + Influencers
  - Meta is making a push to a creator management system much like YouTube. YouTube is a platform where videos are uploaded by creators, ads are served to viewers, and the platform and the creator each take a piece of the ad revenue. This model has done extremely well for YouTube (looking at engagement metrics, and subscriber growth for top channels). Meta is pushing towards this model in an aim to attract content creators to Facebook, Instagram, and WhatsApp. Meta understands that CONTENT IS KING. Platforms lacking in content will soon lack in everything, quickly losing their user base, and then revenue. Meta does not want to create the content, but rather have users create much like YouTube. Instagram specifically, has traction with celebrities and influencers which, if choreographed properly could be the formula for better and more engineering content creation which will usher in even higher user growth and monetization rates.
- Meta is attracting Talent
  - Apple announced they are going to be handing out sizeable bonuses up to \$180,000 to retain top talent and fight off competing offers from Meta. Meta is poaching people and the headcount growth is no joke. The number of employees jumped 22% from 58,604 full time employees to 71,970.
    - According to Ananya Bhattacharya a QZ tech reporter ““It’s like an attempt to ward off poaching— especially by Meta (formerly Facebook), which has pinched more than a hundred Apple engineers in the last few months. This surprise payout (\$180K) could help Apple match the fat packages Meta has been doling out.”





- The growth is made up of engineers, technicians, and others with the focus for these employees being its Reality Labs segment. The median tenure at Meta according to LinkedIn is 3.4 years, and median salary according to glass door is \$240,000.

## Risks to Projections and Expectations

While I have identified catalysts for growth, there are risks to my assumptions that could affect Meta's ability to provide returns in line with my projections and market expectations.

- Metaverse concerns
  - The metaverse may take 3-5 years to gain traction. Currently, the lack of content and a high price point (\$300 base) will slow the adoption rate of the company's VR platform, gear, and environment. A user base of about 15-20 million will be needed for the ecosystem to reach its critical point and attain "ecosystem" affects (2021 userbase ~5.6 million). (Again, nobody wants to be the only one on a social network. Networks gain exponential value for every one user added.) Partnerships are paramount for the company to gain traction with its Metaverse strategy, and currently the company only hosts indie developed games. (This is likely due to computational constraints, but still the lack of partnerships is bewildering.)
- Re-openings cause sluggish engagement patterns for Meta
  - Average time spent on Meta's portfolio of apps will probably come under pressure as the economy re-opens and users spend less time online which will put downward pressure on ad prices. Monetization of WhatsApp presents a new challenge for Meta despite the platform boasting about 2 billion monthly users.
- Metaverse investments will contract margins across the board
  - \$10 billion a year. That's the amount Zuckerberg has pledged to build out the Metaverse. This pivot of business and cash will hinder their operating margin in the short term. In addition to this, Meta will and most likely is already subsidizing the costs of its Oculus headsets to spur mainstream adoption of the VR headset and the Metaverse itself.
- Discounting Valuation Multiple vs. Peers
  - Meta dominates the messaging and social media services in North America and Europe. Its dominant market position continues to draw scrutiny from regulators domestic and abroad. The sudden shift in ad budgets distributed across other platforms like Twitter, Snap, and Pinterest have reduced the breakup risk of Meta but still the anti-trust concerns will linger in the short and medium term. Meta trades at a significant discount compared to other pure-play social media companies such as Twitter, Snap, and Pinterest. To close this valuation gap Meta needs to diversify its revenue beyond advertising, similar to other large tech companies like Amazon, Microsoft, and Google. When the diversification of its revenue sources has been complete and is sustainable, both the anti-trust concerns, and the valuation differences will subside. Until then, expect for investors to demand revenue diversification, and punish the stock when it falls short.
- Sales Growth to Diverge vs. Alphabet
  - Meta's sales growth could sharply decelerate due to re-openings that will cause its users growth to flatline and put downward pressure on its ad pricing. Changes in apples opt-in feature for ad-identifier has hurt Meta and will continue to do so since the ad platform is reliant on device tracking to serve relevant ads. Platforms like YouTube who are less reliant on device tracking to serve relevant ads are already positioned properly to benefit from the shift to 'privacy-focused' app use by consumers.



## Corporate Governance

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The Board of Directors of Meta currently consists of 10 board members. The only member of the board that serves as an executive to the company is Julie Sweet who serves as the Chief Executive Officer. There is one independent lead director for Meta.

### Executive Members

- Mark Zuckerberg, Chief Executive Officer
- Sheryl Sandberg, Chief Operating Officer
- Nick Clegg, Head of Global Affairs and Communications
- David Wehner, Chief Financial Officer

The CEO Mark Zuckerberg received a salary of \$1.00, received \$0 in bonuses, and stock compensation but Meta spent \$25 million for security for Zuckerberg and his family.

Meta currently has two types of shares: Class A, and Class B. The Class A shares are entitled to one vote per share while Class B shares are entitled to 10 votes per share. Meta's voting governance is currently distributed so that executives hold the majority of Class B stock and are entitled to the overall voting majority at Meta. Zuckerberg, the company's majority shareholder, holds 75% of Meta's class B stock, which gives him control of 58% of the company.

### Independent Members

- Peggy Alford
- Marc Andreessen – Founder of Andreessen Horowitz
- Andrew Houston
- Tracey T. Travis
- Nancy Killefer
- Robert M. Kimmitt
- Tony Xu – CEO of DoorDash

## Environmental, Social, and Governance (ESG) Observations

Meta is one of the lowest scoring company's in the S&P500 for ESG and the ISS Governance Quality Score. The company is a repeated target for allegations of mishandling of data, mismanagement of oversight boards, and numerous other negative sentiment remarks. This poses a significant threat to the average shareholder, in fact Meta, because of how the voting shares are distributed, received a 10 (significant risk) in their shareholder rights category.

## Investment Summary

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My analysis concludes that Meta is a company in a transitional phase, has solid historical cashflows, uncertain future cashflows, yet has great margins overall, with a rapidly expanding Reality Labs segment. Meta is in a difficult position. They are facing contracting growth rates on its Facebook Core app yet are enjoying a five-year average revenue growth rate of 129% for its Instagram (estimated +98% revenue growth for FY2021) app. Instagram is the star app of the Family of Apps segment and will be the growth and cash cow vehicle Meta needs to fuel investment and growth in its RL segment. Despite contracting growth in its Facebook Core App which has been a large revenue driver (soon to be second to Instagram), Reality Labs has grown YOY revenue 99.6%, but has consumed \$10.2 billion through investments, thus reporting huge losses. Most of these losses are associated with infrastructure, technology, and hiring Meta has done for its Metaverse project. The growth



prospects for Oculus and the metaverse are bullish and rosy. Instagram will continue to provide excellent margins and free cash flow to Meta, and while the growth of the app is decelerating, it still grew estimated app revenues at 98%. Coincided with the negative growth rate for Facebook users and slowing revenue per user growth, makes Meta a difficult and seemingly scary investment. WhatsApp revenues are worth more since they are not reliant on advertising, a move that will prove vital to their diversification of revenue goal, and the platform within the FOA offers excellent exposure to e-commerce in foreign developing countries. For the reasons above, I am giving Meta a HOLD rating for now.

Decision not to sell: We are going to want exposure to social media companies and VR technology that is growing. Meta offers this through their stock. I am predicting Meta will have slow to no growth of overall revenue in 2022, but investments and technology platforms the company improves and rebuilds during this year to circumvent the IOS changes will begin to pay off mid 2023. Despite the negative press and sentiment surrounding the company, it is still a cash-rich, growing company.

Decision not to buy: The Global Portfolio where the position is held is already over-exposed to technology. Despite not trading at a high multiple and not having any traditional LT debt (despite leases), I do not think the portfolio as a whole, needs more exposure to the technology sector, especially from a company that does not pay a dividend.

**Disclosure:** *I have a position in the stock mentioned.*

Signed:

Ryan Hogan [2/18/2021]



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## Appendix

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### # of Years Discounted

Period Ending:	2017A	2018A	2019A
<b>Income Statement:</b>			
Revenue	40653	55838	70697
Costs and expenses:	0	0	0
Cost of revenue	5454	9355	12770
<b>GROSS PROFIT</b>	35199	46483	57927
Research and development	7754	10273	13600
Marketing and sales	4725	7846	9876
General and administrative	2517	3451	10465
Total costs and expenses	20450	30925	46711
Income from operations	20203	24913	23986
<b>Earnings Before Interest, Taxes (EBIT)</b>	<b>20203</b>	<b>24913</b>	<b>23986</b>
Interest and other income, net	391	448	826
Income before provision for income taxes	20594	25361	24812



Provision for income taxes	4660	3249	6327
Tax Rate	23.1 %	13.0 %	26.4 %
Net income	15934	22112	18485
Less: Net income attributable to participating securities	14	1	0
Net income attributable to Class A and Class B common stockholders	15920	22111	18485
Earnings per share attributable to Class A and Class B common stockholders:	0	0	0
Basic (in dollars per share)	5.49	7.65	6.48
Diluted (in dollars per share)	5.39	7.57	6.43
Weighted-average shares used to compute earnings per share attributable to Class A and Class B common stockholders:	0	0	0
Basic (in shares)	2901	2890	2854
Diluted (in shares)	2956	2921	2876

Relative

Relative Model Inputs		Relative Model															
		Ticker	FB	GOOG	AMZN	SNAP	TCEHY	TWTR	PINS				Multiple	Value	Discounted	MoS	Weight
Discount Period	1.00	P/E (ttm)	17.3 x	25.4 x	54.3 x	63.69 FWD	19.4 x	21.9 x	44.6 x				26.0 x	303.78	282.46	28.29 %	50.0 %
Sales (ntm)	120,287.58	P/S (ttm)	5.8 x	7.5 x	3.1 x	11.7 x	6.7 x	5.7 x	6.8 x				7.4 x	309.92	288.16	30.88 %	50.0 %
EPS (ntm)	11.68	P/BV (mrq)	5.3 x	7.5 x	11.7 x	13.4 x	4.2 x	3.8 x	5.9 x				8.4 x	115.54	107.43	(51.21)%	
Book Value (ntm)	39,413.68	PEG (5 yr expected)	0.67	1.02	1.65	-	1.71	-	-				0.9 x	86.32	80.26	(63.55)%	
EPS Growth (5 yr exp.)	7,808 %	EV/EBITDA (ttm)	11.2 x	17.2 x	22.3 x	-	2.7 x	-	36.0 x				15.0 x	227.55	212.65	(3.42)%	0.0 %
EBITDA (ntm)	40,898	EV/Sales (ttm)	5.2 x	6.9 x	3.2 x	12.1 x	1.1 x	5.3 x	5.7 x				6.7 x	294.28	274.76	24.79 %	0.0 %
Cost of Equity	7.5 %	Custom Ratio											0.0 x	-	-	(100.00)%	
Cost of Capital	7.4 %	Weight															
Custom Ratio			65.0 %	12.0 %	12.0 %	5.0 %	3.0 %	3.0 %					Intrinsic Value Per Share	285.31	29.58 %	100.0 %	
C&CE (mrq)	16,601	Additional Information															
Investments & Other (mrq)	31,397	Ticker	FB	GOOG	AMZN	SNAP	TCEHY	TWTR	PINS	0	0	0					
LT Debt (mrq)	12,746	Beta	1.26	1.07	1.13	1.21	0.49	0.75	1.19								
Minority Interest (mrq)	-	Debt/Equity (mrq)	16.0 %	11.3 %	100.9 %	69.4 %	35.6 %	76.0 %	8.3 %								
Preferred shares (mrq)	-	Return on Equity	30.7 %	32.0 %	28.8 %	(16.0)%	24.3 %	(2.4)%	12.0 %								
Diluted Shares (mrq)	2,859	Return on Assets	23.9 %	14.5 %	4.2 %	(7.0)%	6.0 %	1.6 %	7.6 %								
		Market Cap (SBN):	629.49	1830.9	1,620.90	65.90	580.20	30.00	16.82								

