

October 21, 2024

META PLATFORMS, INC. (META)

Communication Services – Internet Content & Information

Meta is at an inflection point in its business as it deals with the rapid growth of artificial intelligence (AI) and looming antitrust litigation. The firm is undervalued compared to peers and its core business of advertising is attractive regardless of hardware success. We believe Meta's innovative nature sets it up to be a winner in AI. For these reasons, we give it a **BUY** rating with a target price of \$653, representing a 13.4% upside from its current price.

Investment Thesis

Drivers of Thesis

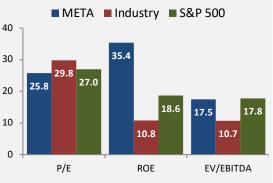
- We forecast Meta's advertising business to grow by a CAGR of 13.4% through 2028, due to increased demand for advertising as global economies stabilize, as well as AI improving profitability in advertising.
- We project Meta's operating cash flows to grow by a CAGR of 15.4%, which provides significant support to their annual AI CapEx of \$40b+.
- Meta's track record in investing and innovation (purchases of Instagram & WhatsApp, Reels feature, etc.) makes us bullish they will be able to develop products and hardware to support them in the AI era.

Risks to Thesis

- The firm is dealing with regulation revolving children's mental health and antitrust litigation¹. If Meta were to lose its antitrust case against the DOJ, it would likely lead to a divestment of one of its top apps (I.e. Instagram).
- Meta falls behind in AI due to a lack of widely adopted self-made hardware to integrate its systems to, unlike peers that produce phones & computers.
- International economies slow down, lowering advertising budgets and weakening Meta's core business.

	Earnings Estimates											
Year	20)21	202	2	20	23	202	4E	202	25E	202	26E
EPS	\$13	3.19	\$8.6	53	\$15	.19	\$21	.36	\$24	.44	\$28	.05
HF est.							\$21	.56	\$24	.70	\$28	.11
Growth	36	.8%	-38.3	3%	75.	9%	42.0	0%	14.	0%	14.	5%
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Stock Rating	BUY
Target Price	\$653
Henry Fund DCF	\$653
Henry Fund DDM	\$708
Relative Multiple	\$728
Price Data	
Current Price	\$576
52wk Range	\$280 - 603
Consensus 1yr Target	\$607
Key Statistics	
Market Cap (T)	\$1.5
Shares Outstanding (M)	2,533
Institutional Ownership	70.1%
Beta	1.2
Dividend Yield	0.4%
Est. 5yr Growth	19.4%
Price/Earnings (TTM)	25.7
Price/Earnings (24E)	27.9
Price/Sales (TTM)	8.8
Price/Sales (24E)	9.1
Profitability	
Operating Margin	40.5%
Profit Margin	81.5%
Return on Assets (TTM)	23.5%
Return on Equity (TTM)	35.4%



Company Description

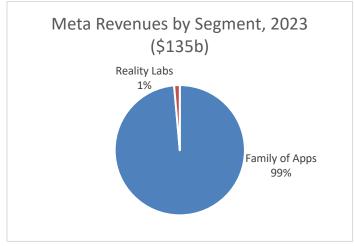
Meta is a collection of businesses revolving around advertising. Most of their business comes from their Family of Apps, which include social media networks such as Facebook, Instagram, WhatsApp, etc. Although nearly all their revenue comes from these apps, the firm also invests in its Reality Labs segment. This area creates virtual and augmented reality hardware, as well as other artificial intelligence related products. The firm's vision is defined and executed by its founder, CEO, and chairman, Mark Zuckerberg.

Important disclosures appear on the last page of this report.



COMPANY DESCRIPTION

Meta is the world's leader in social media, with four of the top seven platforms³. Meta reports in two segments: Family of Apps (FoA), and Reality Labs. Family of Apps is the social media side of their business, with products including Facebook, Instagram, WhatsApp, amongst others. Meta makes virtually all their revenue from advertising placements on these apps. Reality Labs is Meta's other segment, where they research and develop artificial intelligence (AI), virtual reality (VR), augmented reality (AR), and create hardware products. This segment has a long-term focus as the firm is building products that may take decades to fully develop and build market share. Given the high investment costs and lack of products taking off, the segment is highly unprofitable⁴. The firm goes as Mark Zuckerberg (Founder, Chairman, CEO) goes, as he has voting control of the firm. Zuckerberg executes his ideas at the end of the day, which has given mostly ups and few downs. Zuckerberg's vision with Reality Labs is to create the next big piece of computing hardware, which would lead to less fees paid to Apple, Android, and other phone makers for Meta's social media advertising. Reality Labs first bet was on the Metaverse, which was largely a failure. The Metaverse is still alive but is on the back burner and likely to fade out of the picture. Their new pivot to AR glasses provides more promise but is still in early days.



Source: Meta 10-K

Meta is an international company and earns advertising dollars from both foreign and domestic markets. The United States & Canada (UCAN) segment is Meta's best revenue earner, as it has a significantly higher average revenue per user (ARPU) due to the strength of the

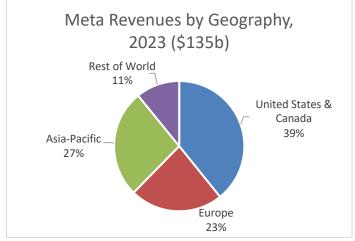


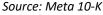
advertising market, UCAN consumers, and less restrictive privacy laws than other regions such as Europe. The firm makes 55% of its money from outside of UCAN though, and has larger user bases in Europe, Asia-Pacific (APAC), and the rest of the world. The table below lists revenue and ARPU for each region. ARPU, monthly active users (MAU), daily active users (DAU) only include users from Facebook and Facebook Messenger. ARPU is a revenueweighted average of quarterly ARPU, and MAU/DAU are Q4 2023 data points.

Region	Revenue (M)	ARPU	MAU	DAU
UCAN	\$52,888	\$57.70	272	205
APAC	36,154	5.04	1,367	914
Europe	31,210	19.29	408	308
Other	14,650	4.01	1,018	683
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Source: Meta 10-K

Notably, China does not allow its citizens to use Meta's social media platforms, including blocking Facebook in 2009. However, China still advertises on Meta's platforms and accounted for 10% (\$13b) of their total revenue in 2023. This highlights the complex relationship between China and Meta/big tech. China maintains strict control over what is allowed within its borders, while actively participating in the global digital economy for their own benefit. Although Meta has a diverse international revenue mix, they do not hedge their currency risk.





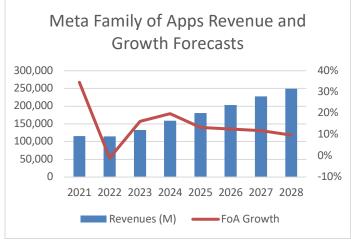
Family of Apps

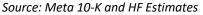
Meta's Family of Apps is the core of their business. These apps include Facebook, Instagram, Messenger, Threads, and WhatsApp. Facebook was the original business, and the firm expanded over the years by adding Instagram and



WhatsApp to their offerings. Meta has a firm grasp on the social media market and can roll out new products and features to keep users in their ecosystem. Recent examples of this include creating Threads to compete with X (Twitter), as well as the Reels feature on Instagram and Facebook to compete with TikTok.

Approximately 99% of Meta's revenue comes from Family of Apps, and we forecast this to remain largely the same over the next five years. We project revenues in the FoA segment to grow at a CAGR of 13.4% through 2028 as the company continues to expand advertising revenues in international regions and improve advertising techniques with AI. Our estimates for the segment are roughly in line with consensus. We expect the firm to utilize AI capabilities to drive revenue growth, but do not anticipate any events that would change segment expectations drastically from consensus estimates.





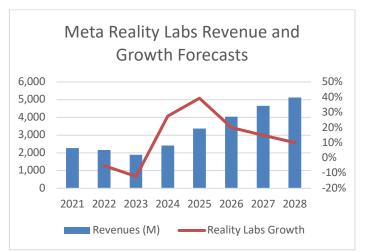
Reality Labs

Reality Labs is where most of the growth focus lies on Meta, despite being such a small percentage of their overall earnings. The firm has committed serious capital into research and development for VR and AR products, such as the Oculus gaming headset, Metaverse, Ray-Ban smart glasses, and Orion, their first true AR glasses. There has been varying success to these efforts. Investors were very skeptical that the Metaverse innovation had staying power. We align with that sentiment, and do not believe the firm should continue to pursue the Metaverse. The Oculus Quest (now Meta Quest) headsets are better designed for immersive gaming. We do not anticipate society to wear those in everyday life anytime soon. On the other hand, their recent product developments with Ray-



Ban smart glasses and Orion glasses are more promising. Zuckerberg's vision is that the future of computing will happen with eyesight. While the technological developments Meta has made are impressive, it is hard for us to picture consumers ditching their phones and computers for sunglasses anytime soon.

From a financial standpoint, Reality Labs has burned a serious amount of cash in recent years. Reality Labs generated operating losses of \$16 billion in 2023 and \$14b in 2022. The operating margin in 2023 was approximately -850%⁴. Given the scale of Meta and their cash flows from advertising, the losses become an easier pill to swallow. The segment is still in an innovation phase, so profitability is not our expectation. We project a leap in revenues in 2024 and 2025 due to the new product releases and anticipate the segment to grow by a CAGR of 22.0% through 2028. These projections slightly outpace consensus estimates, as we believe a hit product development would make Meta easily outpace consensus estimates. We think that chance is likelier than what Wall Street is expecting, largely due to our anticipation that Meta's innovation will win out and a new product will start to develop market share. We project Reality Labs to take up 2.0% of total revenue in 2028. We anticipate a major change in revenue mix to take a decade-plus.



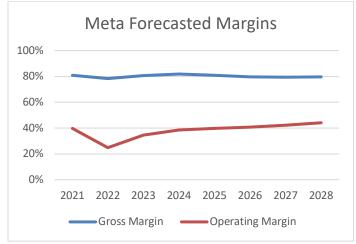
Source: Meta 10-K and HF Estimates

Cost Structure Analysis

Meta maintains an excellent gross margin around 80%. This is largely due to their apps being a low maintenance business. They spend on network infrastructure, buildings, servers, etc. The costs of revenue are relatively predictable and give Meta a very profitable core business. We forecast gross margins to stay at status quo. Operating margins



fluctuate more for than gross margins for Meta, but the firm still maintains healthy profitability. Currently the largest operating expense account is Research and Development (R&D), as Meta invests a high amount of CapEx into AI and Reality Labs innovation. We project Meta to maintain high R&D costs for AI and hardware development for the next couple years and envision those costs dipping towards the end of the forecasted period. We also project Meta to realize synergies from AI innovations with its advertising business and forecast Marketing and Sales expenses to go down as a result. We also expect General and Administrative expenses to decrease over the next five years as Meta trims its employee count after overstaffing during the COVID-19 pandemic. Given these changes in operating expenses, we forecast Meta's operating margin to grow to around 44% by 2028.



Source: Meta 10-K & HF Estimates

How Meta Makes Money

Almost all of Meta's revenue comes from advertising. They improve their revenue earning capabilities in a few ways. One is growing their user base, which becomes harder and harder as they mature. Roughly 75% of all active internet users use at least one Meta platform, and approximately half of the world's population uses Meta platforms. This puts Meta's daily active people (DAP) at about 3.2 billion as of 2023. Meta's DAP considers all their platforms and utilizes machine learning techniques to attempt to remove overlap of people who do not have their accounts linked to one another. After 2023, Meta will only report DAP instead of monthly active users for Facebook, etc. Over the course of the forecasted period, we project Meta's DAP to grow by a CAGR of 4.05%. In 2023, Meta made



approximately \$42 per person based on DAP, and we project this to grow by a CAGR of 9.2% to \$66 a person in 2028.

Year	2023	2024E	2025E	2026E	2027E	2028E
DAP						
(M)	3,190	3,349	3,508	3,666	3,812	3,892
ARPP	42.29	49.08	54.15	57.13	61.34	65.88

Source: Meta 10-K and HF Estimates

Firm Differentiation

Meta's firm is differentiated from peers due to the moat they built in social media (which is also why they are under antitrust scrutiny). The firm owns many of the top social media companies, which give it plenty of advantages. Its scale is difficult to replicate, and the firm can collect vast amounts of user data, which helps with precise ad targeting, personalized experiences, etc. The scale of Meta's platforms and its data capabilities create a user experience that is hard to replicate elsewhere. Like Apple's ecosystem of devices, Meta has an ecosystem of social media platforms. You can link your Instagram to your Facebook, which also has messenger, etc. The expansion of Meta's platforms over the years has contributed to their overall brand strength and built consumer habits. Facebook and Instagram profiles have built for many years, so it is difficult to see a competitor coming in to take market share with a similar product. With TikTok's emergence, the firm has counteracted with Reels on Facebook and Instagram, which has seen a great deal of success.

Business Model Viability

A key question moving forward is if antitrust regulation will allow Meta to continue its moat in social media. We believe it will take many years to see any resolution in Meta's antitrust case over its potential social media monopoly. If Meta had to divest part of its business, such as Instagram, it is not the worst case. Instagram would do fine on its own and Meta would still have a very large core business.



Debt Maturity Analysis

Five-Year Debt Maturity Schedule

Fiscal Year	Payment (\$mil)
2024	\$0
2025	0
2026	0
2027	2,750
2028	1,500
Thereafter	14,250
Total	\$18,500

Source: FactSet

Meta has a strong credit rating given their ability to pay off debt, as the firm's total debt obligations are a small portion of the revenues they bring in on a small basis. Their total outstanding debt of \$18.5 billion makes up roughly 25% of their operating cash flow from 2023, displaying their ability to service debt without difficulty. With a strong history of cash flows, Meta can issue debt with low credit spreads. This is a big beneficiary to the firm if it has unique goals to achieve with the debt (I.e. AI CapEx projects). If not, most business needs can easily be paid off with cash.

Meta has a slightly worse credit rating compared to peers (except NVIDIA and Oracle), which is likely due to Meta's ESG risk.

Firm	S&P Debt Rating
Meta	AA-
Apple	AA+
Alphabet	AA+
Microsoft	AAA
NVIDIA	A+
Oracle	BBB
Amazon	AA

Source: S&P

ESG Analysis

Firm	ESG Rating
Meta	32.7 (high risk)
Apple	16.8 (low risk)
Alphabet	23.9 (medium risk)
Microsoft	14.2 (low risk)
NVIDIA	13.2 (low risk)
Oracle	14.5 (low risk)
Amazon	29.0 (medium risk)

Tippie College of Business

Source: Morningstar Sustainalytics

Morningstar Sustainalytics gives Meta a high risk ESG rating. This places the firm in the bottom 0.5% of all software and services companies.

There are many reasons that Meta has high risk from an ESG standpoint. From a social point of view, their social media platforms are damaging and addictive, especially to young people. The firm deals with significant challenges related to data privacy and security, which is a core ESG issue for tech companies. Meta's business model relies on collecting and monetizing on user data, which increases its privacy risk. The firm is facing dozens of lawsuits from state attorneys alleging that Meta knowingly contributed to a young person mental health crisis by getting them hooked to their platforms¹⁵.

Meta also faces social risk due to the content on its platforms. It has faced intense criticism for issues such as the spread of misinformation and hate speech, most notably for Russian interference in the 2016 election and Britain's "Brexit" vote¹⁶. After the attack on the US Capitol on January 6, 2021, the firm banned Donald Trump from its platforms, but has since revoked the ban as he runs in the 2024 election. The issue of content moderation is never ending for Meta and other social media companies. We believe management is attempting to be as neutral politically as possible moving forward. It will be key to monitor how the firm deals with political movements moving forward, particularly revolving a potential second Trump presidency. The firm also struggles with moderating its platforms for children. This includes things such as advertising to children and struggling to moderate inappropriate or hateful content on the platform. It will be important to see how Meta's lawsuits revolving children on the platform develop.

Another tenant of Meta's high ESG risk revolves around Mark Zuckerberg. The company has a dual class share structure, which gives Zuckerberg majority voting power. This gives him ultimate power to run Meta however he wants. Meta goes as Zuckerberg goes. As the figurehead and controller of Meta, he is the face of all their social and governmental issues. He has testified in congress multiple



times, including in 2018 about data privacy and election interference, and 2024 for children's safety¹⁵.

The firm has massive social power through its platforms, and there is no shortage of social issues that come along with that. Looking ahead, it is important to keep a watchful eye on Meta's legal and social issue developments. We anticipate Meta to be fined and regulation to follow regarding children's usage of social media, which has proven to be toxic and harmful for healthy development. We also believe that data privacy will continue to be front of mind, especially as Meta utilizes AI for ad targeting and utilizes user data to improve its business.

RECENT DEVELOPMENTS

Recent Earnings Announcement

On July 31st, Meta announced earnings for Q2 2024. They earned \$5.16 per share, beating the street consensus of \$4.73 EPS. The firm brought in \$39.07 billion in revenue, which beat the \$38.31 billion expected¹⁷. Meta provided guidance for Q3 revenue to be between \$38.5-41 billion (we estimate \$40.1 billion in our forecast). These earning beats were largely due to increased adoption of Instagram Reels and a strengthening advertising market. Ad impressions across Meta's FoA increased by 10% yearover-year, and average price per ad also increased by 10% year-over-year. We believe that this is part of Meta's AI investments paying off, as content recommendations and advertising experiences have improved for the consumer.

The firm also provided additional guidance on CapEx. They estimated \$37-40 billion for 2024⁵. We forecasted CapEx at \$40 billion, the high end of the range. They also said they expect a significant increase in CapEx in 2025, which we projected as a 25% increase from \$40 billion in 2024 to \$50 billion in 2025. The firm's CapEx is being spent on AI infrastructure and research and development in its Reality Labs segment.

The firm also launched Llama 3.1, Meta's most capable open source AI model. This is what powers Meta AI, which the firm has integrated into its platforms. Zuckerberg cited that Meta AI is on track to be the most used AI assistant in the world by the end of the year. Some of this might be CEO bluster, as the firm is integrating the assistant into its apps which have a captive audience of over 3 billion people. People may not seek out the Meta AI assistant, but



it will find them. In the coming months and years, it will be key to follow how Meta's advertising interacts with its Al assistant. There are unique opportunities that could increase revenue and profitability. This could include asking Meta's Al assistant to find places to shop for clothes in certain pictures, houses like ones that appear in posts, etc. These types of queries could bring more dollars to Meta at very low additional cost. However, it remains to be seen if Meta Al assistant does anything substantial. While the use is promising, we do not anticipate Meta being able to substantially break into the search market anytime soon.

Product Developments

Meta's large investments in AI has created many projects and products in the pipeline.

Product	Development				
Llama 3.1	Meta's latest open-source AI model, released in July 2024				
Meta Al	Al assistant integrated into Meta's apps (similar to ChatGPT)				
Ray-Ban Meta Al glasses	Can ask general questions & receive audio responses, take images, and receive information about the contents of pictures				
Quest 3/3S	Meta's immersive gaming headset, formerly Oculus. Cheaper price point announced in September (Quest 3S)				
Orion AR	Al-enabled AR glasses, currently a protype.				
glasses Hitting the market 2027 or later.					

Source: Meta, Bloomberg

Meta AI is the firm's entrance into the generative AI market. They inherently have a large user base from their social media users but lack device integration. We imagine it will be difficult to make serious headway in the search market this way, which is why they are investing heavily into wearables. Our expectation is that Meta AI as a search function will perform better on Facebook, where older generations get large amounts of their information. We anticipate Instagram's photo and video nature to expand advertising and e-commerce opportunities but do not see a world where Instagram is used as a major search engine.

In Q2 earnings, Zuckerberg cited that Meta's Ray-Ban Al glasses were "gaining traction," although we do not have financial data for them yet. We anticipate multiple product iterations before they have a material impact on financials. In September, the firm also announced Meta Quest 3S, which provides a cheaper price point for the Quest 3. We



see the Quest experiment to be limited in terms of market share. We see it more as a gaming play than something that could see wide adoption. We do not anticipate people in everyday life to use the Quest goggles for anything past gaming, such as the Metaverse. We anticipate the Metaverse experiment to slow and potentially shut down in the next few years. It is our expectation that a future Meta AR product offers a higher potential to seize market share than virtual reality.

The latest product innovation out of Meta is their Orion Al glasses, which is still a protype in development. The glasses offer advanced display technology suited for AR with a wider field of view and higher resolution than Meta's Ray-Ban glasses. The Ray-Ban glasses have more of a focus on capturing photo and video, while Orion has AR capabilities. As of now, you need to wear a wristband to utilize Orion. The firm expects it to hit the market in 2027 or later. We expect it to be years before this product has substantial impact. However, is the most advanced wearable technology for Meta yet and is encouraging for their pursuit of having a device to be the home of their Al capabilities. In the big picture, this would allow Meta to cut out fees it pays to device manufacturers such as Google and Apple to advertise on their devices.

INDUSTRY TRENDS

Antitrust in Big Tech

Big Tech Antitrust Litigation						
Firm	Lawsuit(s)	Status				
Meta	Social media (Instagram and WhatsApp)	TBD				
Alphabet	App Store (vs. Epic Games), Search, Ad Tech	2 losses, Ads TBD				
Amazon	E-Commerce	Set for 2026 trial				
Apple	Smartphone market, App Store (vs. Epic Games)	Win against Epic Games, Phones TBD				

Source: New York Times

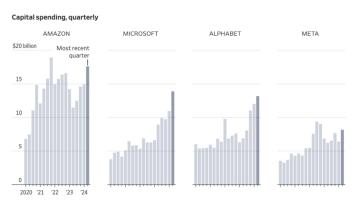
In December 2020, the FTC announced a case against Meta, stating the firm has accumulated monopoly on social media through anti-competitive mergers, particularly its acquisitions of Instagram and WhatsApp. By owning these firms, Meta controls a large amount of the social media market. The lawsuit has been in flux more



than the others in big tech. The case was dismissed in 2021 on the grounds that the FTC did not establish its target market, but he allowed the FTC to refile the following year. The case is still ongoing, and no trial date is set¹⁸.

Meta is not the only firm facing significant antitrust opposition. Their big tech counterparts Alphabet, Amazon, and Apple are also in question for monopolistic practices in their various industries. From a big picture perspective, it feels as though Google's search antitrust lawsuit loss was an inflection point in the history of big tech. Although it is unclear how the cases will go, Google's loss may serve as the beginning of a movement to strip power away from big technology firms. Alphabet is the only one facing a loss right now and is also dealing with an ad-tech lawsuit. However, we do not believe they will be the only one among peers to lose an antitrust lawsuit in the coming years. Although antitrust litigation is a significant threat to the broader tech industry, legal proceedings take a long time to settle out, so it may be multiple years until we see significant impact. Legal developments might be the single biggest threat to big tech's business models and will be key to watch.

Rapid Spending in AI



Source: WSJ

One of the largest areas of focus in the AI market is on CapEx spending. Firms such as Amazon, Microsoft, Alphabet, and Meta are spending upwards of \$10-15 billion per quarter to keep up with the market. So far, Meta's CapEx has trailed peers, but it is expected to continue spending heavily on AI CapEx. We believe this is largely due to their lack of a cloud services business compared to other competitors. These firms have the capacity to spend cash, and are investing a significant amount in data centers, servers, technical infrastructure, etc. The mindset from senior management in the industry,



including Meta's, is that when a new market pops up like AI, underinvesting and losing ground is a bigger risk than spending too much. Microsoft's CEO, Satya Nadella, cited the transition to Cloud was similar in that it was knowledge-intensive and capital-intensive. We expect to see this type of spending continue over the coming years as AI integrates into more and more things. Right now, AI is a flashy new thing that has yet to solve any major issues. Its technology is impressive, but the breakthrough in changing white collar work, the medical field, etc., has not happened yet. We anticipate it will, and like the fact that Meta is making investments to remain a market leader. Over the course of the coming years, we would like to see Meta make a breakthrough in its AI plan. As of now, AI is an arms race, and it remains to be seen what the first domino will be to fall in stabilizing the highly costly industry.

AI Developments

AI Timeline					
Development:	Date:				
OpenAI debuts ChatGPT, a breakthrough in	Nov.				
generative AI	2022				
Microsoft announces a large multi-year investment in OpenAl	Jan. 2023				
Google stumbles out the gates with its first	Feb.				
AI chatbot, Bard	2023				
Microsoft upgrades its chatbot to Copilot,	Late				
Google releases Gemini	2023				
Meta launches Meta Al	Apr. 2024				
NVIDIA passes \$3t mkt cap, as firms rush to get their chips	Jun. 2024				
Apple reports partnership with OpenAl for ChatGPT integration in iPhones	Jun. 2024				

Source: Goldman Sachs Al Report

Since ChatGPT's breakout in late 2022, it has been a whirlwind for the AI market. Developments are happening daily. Meta's AI journey has been a bit up and down. The firm struggled significantly with its big gamble in the Metaverse, as consumers did not find spending time in a virtual world worthwhile. Meta's recent product developments strike us as more promising. Open AI's ChatGPT currently has a first-mover advantage in the generative AI space, but it is a fast-developing market. June's announcement of OpenAI's partnership with Apple to integrate ChatGPT into iPhones is a significant



development. As seen with Google search, being a major exclusive partner with Apple (and others) can contribute to creating strong consumer preferences. Meta lacks a device to integrate its AI with, which creates the risk of falling behind. We believe their social media services have enough of an audience to keep its AI afloat for now. Producing its own hardware (I.e. Orion AR glasses), would be a massive step forward for the firm's AI efforts. We would like to see Meta continue to develop and bring top AI products to the market, which will help the firm stay in the race to be a leader in AI.

MARKETS AND COMPETITION

Firm	Mkt. Cap	P/E (TTM)	Revenue (TTM)
Meta (META)	1.42T	28.74	\$156.2B
Alphabet (GOOGL)	\$2.02T	23.47	339.5B
Apple (AAPL)	3.47T	34.73	391.0B
Microsoft (MSFT)	3.24T	36.92	254.2B
NVIDIA (NVDA)	2.85T	54.46	96.3B
Oracle (ORCL)	466B	43.30	53.8B
Amazon (AMZN)	2.01T	45.62	620.1B
Source: FactSet			

Major Players

All these firms have some overlap, including AI, Cloud, digital advertising, etc. These companies were the ones to rise to power in the internet era and make up a large chunk of the overall S&P 500. Because they gained such a large scale, they have many businesses within their business. For example, Google, Apple, and Amazon all dabble in the streaming service sector as a side hobby. Microsoft owns Xbox, etc.

Right now, all focus lies on artificial intelligence and cloud services. The firms are competing for innovation and market lead in these newer markets. There has been no clear winner or loser from the AI era so far, and we expect to see most resources and focus from these firms be on winning artificial intelligence. The business model of most is also being challenged due to antitrust litigation, and we expect this to also play a key role in the upcoming years.

Structure and Stability

The firms all have massive businesses that each serve a certain market, but they also compete to be the most innovative/first to the next big thing. This has allowed

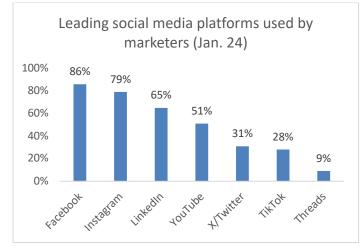


firms and the tech industry to grow, as companies are always fighting to be the best of the "next big thing." Right now, the industry is not in equilibrium as antitrust litigation and AI have shaken up the system. Each big tech competitor is fighting for market share in the AI, data, and cloud landscapes.

Risk of Disruption & Substitution

The tech industry is naturally vulnerable to disruption, as the sector focuses on new markets and innovation constantly. AI was the most recent example of this. It continues to disrupt, and the full story has yet to play out. As for substitution, many tech firms built strong moats due to their massive cash flows and ability to dominate markets (see: Meta's social media platforms). As the industry enters an AI wave and antitrust environment, the risk of substitution is higher than usual as an AI system could be trained quickly and develop into an industry leading platform quickly. For Meta specifically, the risk of substitution is best seen through TikTok and other emerging social medias.

Peer Comparisons

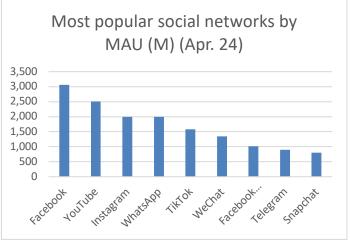


Source: Statista

The chart displays how dominant Meta is in the social media advertising space. In a 2024 survey among marketers worldwide, around 86% reported using Facebook, while 79% reported using Instagram. Meta clearly runs ahead of the market, and we are impressed by Facebook and Instagram's usage rate compared to YouTube. Both TikTok (owned by ByteDance) and X/Twitter (owned by Elon Musk) have struggled with social issues, which contributes to Meta's continued dominance. Threads (owned by Meta) is relatively new to the market

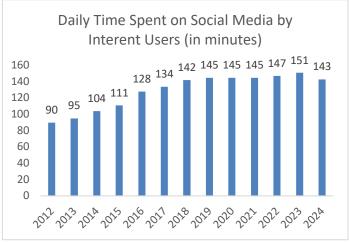


and has not performed well by most standards. Despite this, it shows Meta's ability to easily launch new products within their ecosystem. We will continue to monitor Threads' growth as the quality of X/Twitter degrades.



Source: Statista

Meta boasts the largest social media platform in the world with Facebook, that sits at a little over 3 billion monthly active users. Instagram and WhatsApp rank 3rd and 4th, giving Meta an extremely large number of consumers. There is overlap between platforms, but each offers significant advertising capabilities. On top of this, Facebook Messenger ranks 7th, and it is merely a companion app to Facebook. We are impressed at Meta's ability to continue growing its userbase, even as its services mature.





Time on social media has grown substantially since 2012. It has plateaued in recent years but remains close to two and a half hours per day for internet users. That is a lot of

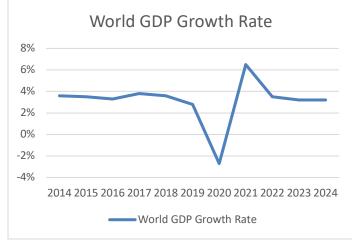


time to sell ads to consumers. Given the rise of addictive short-form video, we do not anticipate consumption habits to dip dramatically further. As Meta owns four of the top seven social media sites, they are set up to be a cash cow in advertising. Even if advertisers pull back in recessionary times, consumers will still be active on platforms regardless. This bodes well for the long-term health of Meta's advertising business.

ECONOMIC OUTLOOK

Global Economic Growth

Strong global economies are a boost to Meta's business. Given approximately 55% of their revenues come from foreign advertisers, Meta relies on a strong international economy to keep advertising spending high. Studies have shown the elasticity of advertising with respect to GDP to have increased to 1.9, which means the demand for advertising nearly doubles GDP growth, whether it is positive or negative¹¹. This exemplifies how important it is for advertisers to operate in a healthy economy. Downturns or recessions lend themselves to businesses cutting advertising budgets, which hurts Meta's ability to bring in revenue. After the massive COVID related spikes in 2020 and 2021, the World GDP Growth Rate has leveled out to around the level it was maintained from 2014-2019. If most economies across the world can get through ratehiking cycles with soft landings, it should bode well for Meta.



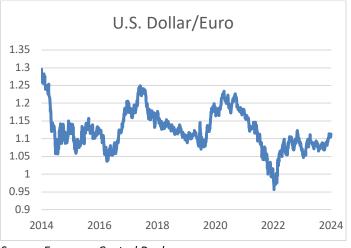
Source: International Monetary Fund

Currency Exchange Rates

The strength of the U.S. dollar also plays a large role in the success of Meta. Given their international operations,



fluctuations in currency exchange rates can affect earnings. For example, if the Euro were to weaken against the U.S. dollar, Meta's revenue in Europe would become more valuable when converted back into U.S. dollars. The Henry Fund team expects the U.S. dollar/Euro to main its current exchange rate around \$1.10 per Euro in both the short-term and long-term, which would be a good outcome for Meta given where the rate has been in the past. A stronger dollar would hurt Meta's bottom line. The firm does not hedge its currency risk, which creates the possibility of losses if something were to drastically change in foreign markets. Meta's operations are truly global, so monitoring exchange rates is key moving forward.



Source: European Central Bank

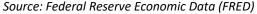
Inflation

Rising inflation impacts Meta on a couple fronts. Internally, it raises costs such as wages and other operating expenses. It also affects Meta's core business of advertising, by lowering consumer spending which in turn may lead to a pullback from advertisers. Prior to inflation and the ratehiking cycle, Meta's advertising business was growing by double digit percentages consistently. In 2022, that growth turned negative. Since inflation hit Meta hard in 2022, it bounced back in 2023 with double digit growth. With the Fed announcing a 50bps cut in September, we believe inflation should continue to tick downwards towards target levels as their belief is that their slowing measures have worked. We believe inflation will continue moving downward but will remain above the 2% Fed target. Moving forward, advertising revenue should be strong through the end of the year with the U.S. election and holiday season. The inflation rate will be something to



monitor at the start of 2025 and will be telling for Meta's first half of 2025 performance.

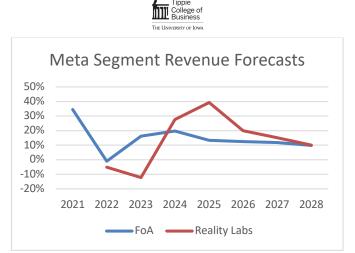




VALUATION

Revenue Growth:

We project revenue to grow 19.9% in 2024, which is the highest projected year of growth in the forecasted period. This comes off the back of earnings beats in Q1 and Q2 of 2024, as well as a boost in advertising revenues as marketing budgets open back up for firms. We forecasted revenues to generally be consistent with consensus estimates. We expect a spike in 2025 revenue growth for Reality Labs, which is due to the release of Meta's Ray-Ban smart glasses and Quest 3. We expect a small decline the following year and then used a conservative growth rate of 5% beginning in 2027, as we do not have a clear picture of when Meta's AR Orion glasses are coming out. Rumors state they will release in 2027, which we think could be a generous estimate given the tech is still in the R&D stage. By 2028, we still expect Meta's core business to revolve around its Family of Apps, and do not expect Reality Labs to significantly contribute to topline growth.



Source: Meta 10-K & HF Estimates

Operating Expense Assumptions:

Meta's cost of revenues expense has decreased over the past few years, and we expect it to stay at 9.4% of revenue in the future. We believe this is the case because there is a certain level of upkeep needed to maintain servers, data warehouses, etc. We forecast Meta to continue high levels of spending on R&D in the next couple of years but anticipate the percentage of total revenue for R&D to start declining (27% in 2024 to 24% in 2028). We believe R&D as a percentage of revenue will go down as the rubber meets the road for Meta and big tech's high AI spending. We also anticipate marketing and sales expense to go down as Meta's AI investment should help improve their ability to advertise, cut costs on customer service functions, etc. We also forecast Meta's general and administrative costs to drop as they continue to cut costs and reduce their workforce, which they overstaffed during COVID-19.

Profit Margin Forecasts:

We project Meta's gross margin to stay around historic levels (approximately 80%). In recent years, the firm's operating margin has dropped down due to a rough 2022 and high investments in R&D/AI. We expect Meta to grow their operating margin to 44% by 2028 (35% in 2023). This is largely due to cost cutting measures and less money being invested into R&D over time as Meta builds out the necessary infrastructure it needs for AI.

Earnings estimates relative to the consensus:

We expect Meta to out earn its consensus EPS estimates. Our forecast is slightly ahead of consensus, which is likely due to our cost cutting projections. We also expect strong earnings due to a better economic environment for



advertising than what Meta dealt with the past couple years with inflation and high interest rates.

Year	2021	2022	2023	2024E	2025E	2026E
EPS	\$13.19	\$8.63	\$15.19	\$21.36	\$24.44	\$28.05
HF est.				\$21.56	\$24.70	\$28.11
Growth	36.8%	-38.3%	75.9%	42.0%	14.0%	14.5%

CapEx:

Through the first two quarters of 2024, Meta spent \$15 billion on CapEx as it builds out its AI infrastructure. We forecasted 2024 CapEx at \$40 billion, which is in line with management guidance of \$37-40 billion. The firm also noted in Q2 that they expect "significant capital expenditures growth in 2025," which leaves room for interpretation. Due to the uncertainty, we forecasted a 25% increase in CapEx at \$50 billion for 2025 and then decreased CapEx \$5 billion per year for the rest of the forecasted period. This level of spending is likely to high to be fully subsidized by Meta's operating cash flow (\$71b in 2023), and the firm will need to continue to issue long-term debt to cover their capital expenditures.

Capital Structure:

Given Meta's significant CapEx in AI, the firm began taking on long-term debt in 2022. We believe they will continue to issue long-term debt throughout the forecasted period to help support their spending in AI. The firm can still fund most projects through cash and other investments on its balance sheet but is spending at a rate where utilizing longterm debt makes sense. Over the course of the projected period, we expect Meta to pull back on long-term debt issuances if spending in AI slows and their cash balance grows. We also expect Meta to utilize its cash balance to continue repurchasing shares throughout the forecasted period.

Payout Policy Forecasts:

In February, Meta announced its first ever dividend, which was a \$0.50 quarterly payout to shareholders. Shares of Meta soared 20% after the announcement. Another two \$0.50 dividends were paid out in June and September. We forecasted Meta to maintain to distribute another \$0.50 dividend in 2024, which would make \$2.00 of dividends per share on the year. Moving forward, we modeled Meta's dividend to grow by 10% per year. This makes out to be between \$5-7 billion a year, which Meta can easily



cover through its operating cash flows. We expect Meta to spend around \$43 billion on repurchases in 2024 (the pace they set through two quarters) and took the average of 2023 and 2024 to project \$31 billion in repurchases on an annual basis from 2025-2028. We forecast Meta to repurchase nearly 2.0% of total shares outstanding through 2028.

Contingent Liabilities:

Although litigation is a major concern for Meta, we did not forecast any litigation expenses for the firm. Moving forward, it will be key to monitor Meta's litigation which we anticipate will take many years to play out.

Valuation Models:

DCF:

Our DCF and economic profit model yielded a price of \$653 per share, representing an upside of 13.4%. Key drivers of our DCF projection include a 6.25% growth of NOPLAT, our estimated WACC of 10.04%, and our five-year monthly beta of 1.22. We believe the 6.25% growth in the terminal year is justified due to Meta's growth potential through AI and diverse geographic mix. The growth rate is a mixture of the US's long-term GDP average growth rate, foreign market growth rates, and an AI boost. We believe the DCF model is the best suited match for Meta given it projects out the cash flows of the business and the specific story we expect to play out. Meta's lack of a historical dividend makes the DDM less reliable, as we are taking an educated guess on their dividend increases.

DDM:

Our DDM model utilizes a 7% CV growth rate of EPS, a 32.5% CV year ROE, and a 10.2% cost of equity. This outputs a model price of \$708, but we place less weight on the model due to Meta's historical lack of a dividend, and minimal guidance from management on future dividend plans. The high CV growth rate of EPS is due to consistently strong margins and our forecasted share buyback program.

Relative Valuation:

Our P/E relative value model based on 2025 EPS values Meta as a cheap stock compared to its peer group. The group was selected by including a combination of big tech giants and AI firms. The model outputs a price of \$728 a



share based on 2025 EPS. Meta currently trails most of its AI peers in P/E (27x TTM), as they lack the physical devices such as phones, chips, etc., which gives them a slightly tougher path to winning in the AI race. They do have a higher P/E than fellow advertising/tech giant Alphabet (21x TTM), which is most likely due to Alphabet's litigation concerns. We believe Meta's consistent cash flows and market share of social media will allow them to be a winner in AI. Although we believe the DCF is the best proxy to value Meta, the relative valuation method confirms our belief that Meta is undervalued compared to tech competitors.

Sensitivity Analysis:

				CV Gr	owth of NOI	PLAT		
	653.53	5.50%	5.75%	6.00%	6.25%	6.50%	6.75%	7.00%
	9.29%	685.58	726.69	774.06	829.23	894.31	972.23	1,067.19
	9.54%	639.34	674.74	715.16	761.73	815.96	879.94	956.53
U	9.79%	598.51	629.26	664.06	703.79	749.57	802.88	865.77
WACC	10.04%	562.21	589.10	619.32	653.53	692.59	737.58	789.99
>	10.29%	529.72	553.39	579.82	609.52	643.15	681.54	725.77
	10.54%	500.48	521.43	544.69	570.67	599.87	632.92	670.65
	10.79%	474.02	492.66	513.25	536.12	561.65	590.34	622.83

The CV growth of NOPLAT has the largest effect on our DCF's share value. We believe the rate of 6.25% is justified given Meta's consistent revenue growth and international business mix. Meta's WACC also has a significant effect on our DCF price, which is largely due to a five-year monthly beta of 1.22, which factors in Meta's volatile and rough 2022.

				2026	R&D as a % o	fsales		
	653.53	23.00%	24.00%	25.00%	26.00%	27.00%	28.00%	29.00%
2	6.40%	757.30	740.00	722.71	705.41	688.12	670.83	653.53
COGS % of sales	7.40%	740.00	722.71	705.41	688.12	670.83	653.53	636.24
8	8.40%	722.71	705.41	688.12	670.83	653.53	636.24	618.95
S	9.40%	705.41	688.12	670.83	653.53	636.24	618.95	601.65
8	10.40%	688.12	670.83	653.53	636.24	618.95	601.65	584.36
2026	11.40%	670.83	653.53	636.24	618.95	601.65	584.36	567.06
20	12.40%	653.53	636.24	618.95	601.65	584.36	567.06	549.77

Another key factor for our DCF valuation was R&D as a percentage of sales. If Meta can build out its infrastructure and develop strong products sooner than expected, cut costs will dramatically increase the stock's price. We expect R&D costs to be at 26% of sales in 2026, which is 2.5% lower than its level in 2023.

KEYS TO MONITOR

As Meta enters the end of 2024 and into 2025, we will keep our eyes on product developments in both hardware and software, overall spending on AI infrastructure and R&D, as well as the overall growth of the artificial intelligence market.

Key Drivers:



We expect the firm to continue to pump out good results on the back of their social media moat. The advertising business should perform well as marketing budgets open back up after inflationary and interest rate pressures cut them down the past couple of years. We also believe that Meta will be able to innovate in the AI space as a leader of AR/VR solutions. At a bare minimum, if all their hardware ventures flop, they still have an incredible core business in advertising and will be able to utilize AI investments to improve that. The firm has a proven track record of innovation and the ability to roll out new products, which we value as the firm works through the growth stage of the AI market.

Key Risks:

Although we are bullish on Meta's outlook, it still has a few risks we want to pay attention to over the coming years. The first of those is their lack of hardware in the market. Compared to Alphabet and Apple who have phones and devices to integrate their AI systems in, Meta is limited on how it can incorporate its AI investments since its glasses tech is still in the early stages. Another key risk to follow is regulation on multiple fronts. Like Alphabet, regulators are coming for Meta's business model moat in social media. Meta also faces lawsuits due to child safety concerns regarding the addictive nature of social media and advertising reaching young users. Another concern is investment in the Metaverse, which we see as a waste resources. We do not believe people will be seeking out a Metaverse environment for everyday life anytime soon and believe shutting down that side of the business would improve margins and the stock. If the firm were to exceed spending expectations on CapEx or R&D by 25-30% more than expectation without profitability in sight, it would give us pause on the long-term plan.

Conclusion:

We believe at current prices Meta is a strong investment opportunity right now due to lower valuation than its tech peers, a positive outlook on the advertising market, its great track record in product innovation, etc. We believe the firm is set up well to utilize AI in its core business, and if their bets in glasses tech or other hardware hit, there is major upside. We utilized our DCF model to arrive at a target price of \$653, representing an upside of 13.4%. We project the firm to continue beating earnings estimates and trust their ability to make it through the AI growth phase as a leader in the space.



REFERENCES

- 1. Bloomberg
- 2. FactSet
- 3. Statista
- 4. Meta 10-K
- 5. Meta 2Q 2024 10-Q
- 6. Alphabet 10-K
- 7. Apple 10-K
- 8. NVIDIA 10-K
- 9. Oracle 10-K
- 10. Amazon 10-K
- 11. National Bureau of Economic Research
- 12. Federal Reserve Economic Data (FRED)
- 13. European Central Bank
- 14. International Monetary Fund
- 15. NYT Meta's Children Lawsuits
- 16. The Economist
- 17. CNBC Meta Q2 Earnings Announcement
- 18. NYT Antitrust in Big Tech
- 19. WSJ AI CapEX
- 20. Goldman Sachs Al Report

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Revenue Decomposition

Fiscal Years Ending Dec. 31	2021	2022	2023	2024 Q1A	2024 Q2A	2024 Q3E	2024 Q4E	2024E	2025 Q1E	2025 Q2E	2025 Q3E	2025 Q4E	2025E	2026E	2027E	2028E
Family of Apps User Revenue Breakdown:			_													
Daily Active People (DAP) in millions	2,820	2,960	3,190	3,240	3,270	3,309	3,349	3,349	3,388	3,428	3,468	3,508	3,508	3,666	3,812	3,892
growth	8.5%	5.0%	7.8%		0.9%	1.2%	1.2%	5.0%	1.2%	1.2%	1.2%	1.2%	4.7%	4.5%	4.0%	2.1%
Average Revenue Per Person (based on DAP)	41.82	39.39	42.29	11.25	11.95	12.13	13.76	49.08	12.29	12.94	13.13	14.95	53.31	56.55	60.86	65.44
growth	26.5%	-5.8%	7.3%		6.2%	1.5%	13.4%	16.1%	-10.7%	5.3%	1.4%	13.9%	8.6%	6.1%	7.6%	7.5%
Family of Apps:																
Advertising	114,934	113,642	131,948	35,635	38,329	39,287	44,453	157,705	40,408	43,136	44,244	50,739	178,528	201,040	225,225	247,252
growth	36.6%	-1.1%	16.1%		7.6%	2.5%	13.2%	19.5%	-9.1%	6.8%	2.6%	14.7%	13.2%	12.6%	12.0%	9.8%
Other App Revenue	721	808	1,058	380	389	393	441	1,603	463	438	446	735	2,083	2,205	2,128	2,346
growth	-59.9%	12.1%	30.9%		2.4%	0.9%	12.4%	51.5%	4.9%	-5.3%	1.9%	64.7%	30.0%	5.9%	-3.5%	10.3%
Total Family of Apps Revenue	115,655	114,450	133,006	36,015	38,718	39,680	44,895	159,307	40,871	43,574	44,691	51,475	180,611	203,245	227,353	249,598
growth	34.5%	-1.0%	16.2%		7.5%	2.5%	13.1%	19.8%	-9%	6.6%	2.6%	15.2%	13.4%	12.5%	11.9%	9.8%
Reality Labs	2,274	2,159	1,896	440	353	453	1,173	2,419	762	800	840	966	3,369	4,043	4,650	5,115
growth		-5.1%	-12.2%		-19.8%	28.4%	158.7%	27.6%	-35.0%	5.0%	5.0%	15.0%	39.3%	20.0%	15.0%	10.0%
Total Revenue	117,929	116,609	134,902	36,455	39,071	40,133	46,067	161,726	41,633	44,374	45,531	52,441	183,980	207,288	232,003	254,713
growth	37.2%	-1.1%	15.7%		7.6%	2.7%	14.8%	19.9%	-10%	6.6%	2.6%	15.2%	13.8%	12.7%	11.9%	9.8%

Income Statement (in millions)

Fiscal Years Ending Dec. 31	2021	2022	2023	2024 Q1A	2024 Q2A	2024 Q3E	2024 Q4E	2024E	2025 Q1E	2025 Q2E	2025 Q3E	2025 Q4E	2025E	2026E	2027E	2028E
Revenue	117,929	116,609	134,902	36,455	39,071	40,133	46,067	161,726	41,633	44,374	45,531	52,441	183,980	207,288	232,003	254,713
Costs and expenses:																
Cost of revenue	22,649	25,249	25,959	6,640	7,308	7,408	7,965	29,321	8,434	8,691	8,800	9,449	35,374	42,293	47,898	52,090
Research and development	24,655	35,338	38,483	9,978	10,537	10,823	12,424	43,762	10,825	11,537	11,838	13,635	47,835	53,895	58,001	61,131
Marketing and sales	14,043	15,262	12,301	2,564	2,721	2,795	3,208	11,288	2,498	2,662	2,732	3,146	11,039	11,919	12,760	13,372
General and administrative	9,829	11,816	11,408	3,455	3,658	3,692	4,146	14,951	3,539	3,661	3,642	4,064	14,906	13,992	14,500	14,646
Total costs and expenses	71,176	87,665	88,151	22,637	24,224	24,718	27,743	99,323	25,295	26,552	27,013	30,295	109,154	122,099	133,159	141,240
Income from operations	46,753	28,944	46,751	13,818	14,847	15,415	18,324	62,403	16,338	17,822	18,519	22,147	74,826	85,189	98,843	113,473
Interest income, net	461	276	1,639	585	540	751	751	2,627	737	737	737	737	2,948	3,503	4,752	6,351
Interest expense			(446)	(127)	(128)	(215)	(215)	(684)	(254)	(254)	(254)	(254)	(1,016)	(1,203)	(1,342)	(1,438)
Foreign currency exchange gains (losses), net	(140)	(81)	(366)	(148)	(168)	-	-	(316)	-	-	-	-	-	-	-	-
Other income (expense)	210	(320)	(150)	55	15		-	70	-	-	-	-	-			-
Interest and other income (expense), net	531	(125)	677	365	259	537	537	1,697	483	483	483	483	1,933	2,300	3,410	4,912
Income before provision for income taxes Provision for income taxes	47,284	28,819	47,428 8,330	14,183 1.814	15,106 1.641	16,488 3,017	18,860 3,451	64,637 9,924	16,821 3,078	18,306 3,350	19,002 3,477	22,630 4.141	76,758 14,047	87,489	102,254 18.712	118,385
Net Income	7,914	5,619		1-	1.						- /	,		16,011	- /	21,665
Net income	39,370	23,200	39,098	12,369	13,465	13,470	15,409	54,713	13,743	14,956	15,525	18,488	62,711	71,479	83,541	96,721
Basic Earnings per Share (EPS)	13.99	8.63	15.19	4.86	5.31	5.32	6.07	21.56	5.41	5.89	6.11	7.28	24.70	28.11	33.07	38.88
Year end shares outstanding (basic)	2,741	2,614	2,561	2,537	2,533	2,536	2,538	2,538	2,539	2,539	2,540	2,540	2,540	2,546	2,506	2,470
Weighted average shares outstanding class A & B (basic)	2,815	2,687	2,574	2,545	2,534	2,534	2,537	2,550	2,539	2,539	2,539	2,540	2,539	2,543	2,526	2,488
Annual Dividends per Share	-	-	-	0.50	0.50	0.50	0.50	2.00	0.55	0.55	0.55	0.55	2.20	2.42	2.66	2.93

Balance Sheet (in millions)

Fiscal Years Ending Dec. 31	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Assets								
Current assets:								
Cash and cash equivalents	16,601	14,681	41,862	39,267	51,182	79,565	116,219	171,423
Marketable securities	31,397	26,057	23,541	24,530	25,560	26,633	27,752	28,918
Accounts receivable, net	14,039	13,466	16,169	19,104	21,733	24,487	27,406	30,089
Prepaid expenses and other current assets	4,629	5,345	3,793	4,547	5,173	5,828	6,523	7,162
Total current assets	66,666	59,549	85,365	87,449	103,648	136,513	177,900	237,591
Non-marketable equity securities	6,775	6,201	6,141	6,399	6,668	6,948	7,240	7,544
Property and equipment, net	57,809	79,518	96,587	122,302	154,214	176,406	190,316	197,169
Operating lease right-of-use assets, net	12,155	12,673	13,294	16,833	21,226	24,280	26,195	27,138
Intangible assets, net	634	897	788	652	555	509	485	470
Goodwill	19,197	20,306	20,654	20,654	20,654	20,654	20,654	20,654
Other assets	2,751	6,583	6,794	7,079	7,377	7,687	8,009	8,346
Total assets	165,987	185,727	229,623	261,368	314,341	372,996	430,799	498,910
Liabilities and stockholders' equity Current liabilities:								
Accounts payable	4,083	4,990	4,849	4,852	5,519	6,219	6,960	7,641
Partners payable	1,052	1,117	863	809	920	1,036	1,160	1,274
Operating lease liabilities, current	1,127	1,367	1,623	2,055	2,591	2,964	3,198	3,313
Accrued expenses and other current liabilities	14,312	19,552	24,625	29,522	33,584	37,838	42,350	46,495
Total current liabilities	21,135	27,026	31,960	37,237	42,614	48,058	53,668	58,723
Operating lease liabilities, non-current	12,746	15,301	17,226	21,812	27,504	31,461	33,942	35,164
Long-term debt	-	9,923	18,385	21,747	25,768	28,732	30,803	32,067
Long-term income taxes	5,938	6,645	7,514	8,549	10,015	11,685	13,637	15,897
Otherliabilities	1,289	1,119	1,370	1,428	1,487	1,550	1,615	1,683
Total liabilities	41,108	60,014	76,455	90,773	107,388	121,486	133,665	143,534
Commitments and contingencies								
Stockholders' equity:								
Common stock and additional paid-in capital	55,811	64,444	73,253	83,680	94,107	104,534	104,534	104,534
Accumulated other comprehensive loss	(693)	(3,530)	(2,155)	(2,155)	(2,155)	(2,155)	(2,155)	(2,155)
Retained earnings	69,761	64,799	82,070	89,070	115,001	149,132	194,755	252,997
Total stockholders' equity	124,879	125,713	153,168	170,595	206,953	251,510	297,134	355,376
Total liabilities and stockholders' equity	165,987	185,727	229,623	261,368	314,341	372,996	430,799	498,910

Historical Cash Flow Statement (in millions)

Fiscal Years Ending Dec. 31	2021	2022	2023
Cash flows from operating activities			
Net income	39,370	23,200	39,098
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	7,967	8,686	11,178
Lease abandonment expense	-	-	-
Share-based compensation	9,164	11,992	14,027
Deferred income taxes	609	(3,286)	131
Impairment charges for facilities consolidation, net	-	2,218	2,432
Data center assets abandonment	-	1,341	(224)
Tax benefit from share-based award activity	-	-	-
Excess tax benefit from share-based award activity	-	-	-
Other	(127)	641	635
Changes in assets and liabilities:			
Accounts receivable	(3,110)	231	(2,399)
Prepaid expenses and other current assets	(1,750)	162	559
Other assets	(349)	(106)	(80)
Accounts payable	1,436	210	51
Partners payable	(12)	90	(271)
Accrued expenses and other current liabilities	3,357	4,210	5,352
Deferred revenue & deposits	187		
Other liabilities	941	886	624
Net cash provided by operating activities	57,683	50,475	71,113
Cash flows from investing activities	37,000	30,173	, 1,110
Purchases of property and equipment	(18,567)	(31,431)	(27,266)
Proceeds relating to property and equipment	(10,007)	245	221
Purchases of marketable debt securities	(30,407)	(9,626)	(2,982)
Sales and maturities of marketable debt securities	42,586	13,158	6,184
Purchases of non-marketable equity securities	42,580	(5)	0,104
Purchases of equity investments	(47)	(5)	
Acquisitions of businesses and intangible assets	(851)	(1,312)	- (629)
Change in restricted cash & deposits	(001)	(1,512)	(029)
-	(284)	- 1	(22)
Other investing activities		(28,970)	(23)
Net cash used in investing activities	(7,570)	(28,970)	(24,495)
Cash flows from financing activities			(7.01.2)
Taxes paid related to net share settlement of equity awards	(5,515)	(3,595)	(7,012)
Excess tax benefit from share-based award activity	-	-	-
Principal payments on capital lease obligations	-	-	-
Repurchases of Class A common stock	(44,537)	(27,956)	(19,774)
Net change in overdraft in cash pooling entities	14	-	-
Proceeds from exercise of stock options	-	-	-
Proceeds from issuance of long-term debt, net	-	9,921	8,455
Principal payments on finance leases	(677)	(850)	(1,058)
Other financing activities	(13)	344	(111)
Net cash used in financing activities	(50,728)	(22,136)	(19,500)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(474)	(638)	113
Net increase (decrease) in cash, cash equivalents, and restricted cash	(1,089)	(1,269)	27,231
Cash, cash equivalents, and restricted cash at beginning of the period	17,954	16,865	15,596
Cash, cash equivalents, and restricted cash at end of the period	16,865	15,596	42,827

Forecasted Cash Flow Statement (in millions)

Fiscal Years Ending Dec. 31	2024E	2025E	2026E	2027E	2028E
Operating Cash Flows					
Net Income	54,713	62,711	71,479	83,541	96,721
Depreciation + Amortization	14,285	18,088	22,808	26,090	28,147
Change in Accounts receivable, net	(2,935)	(2,629)	(2,753)	(2,919)	(2,683)
Change in Prepaid expenses and other current assets	(754)	(626)	(655)	(695)	(639)
Change in Operating lease right-of-use assets, net	(3,539)	(4,392)	(3,054)	(1,915)	(943)
Change in Other assets	(285)	(297)	(310)	(323)	(336)
Change in Accounts payable	3	668	699	741	681
Change in Partners payable	(54)	111	117	124	114
Change in Operating lease liabilities, current	432	536	373	234	115
Change in Accrued expenses and other current liabiliti	4,897	4,062	4,255	4,511	4,146
Change in Operating lease liabilities, non-current	4,586	5,691	3,958	2,481	1,222
Change in Long-term income taxes	1,035	1,465	1,670	1,952	2,260
Change in Other liabilities	58	60	62	65	68
Net cash flows from operating activities	72,440	85,450	98,648	113,888	128,873
Investing Cash Flows					
CapEx	(40,000)	(50,000)	(45,000)	(40,000)	(35,000)
Change in Marketable securities	(989)	(1,030)	(1,074)	(1,119)	(1,166)
Change in Non-marketable equity securities	(258)	(269)	(280)	(292)	(304)
Change in Intangible assets, net	136	97	46	24	15
Net cash flows from investing activities	(41,111)	(51,202)	(46,308)	(41,386)	(36,455)
Financing Cash Flows					
Change in Long-term debt	3,362	4,020	2,964	2,071	1,264
Change Common stock and additional paid-in capital	10,427	10,427	10,427	-	-
Repurchases of Stock	(42,614)	(31,194)	(31,194)	(31,194)	(31,194)
Total Dividends Paid	(5,099)	(5,586)	(6,154)	(6,724)	(7,285)
Net cash flows from financing activities	(33,924)	(22,333)	(23,957)	(35,847)	(37,215)
Change in Cash	(2,595)	11,914	28,383	36,654	55,203
Beginning of Year Cash	41,862	39,267	51,182	79,565	116,219
End of Year Cash	39,267	51,182	79,565	116,219	171,423

Common Size Income Statement

Fiscal Years Ending Dec. 31	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Revenue	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Costs and expenses:								
Cost of revenue	19.21%	21.65%	19.24%	18.13%	19.23%	20.40%	20.65%	20.45%
Research and development	20.91%	30.30%	28.53%	27.06%	26.00%	26.00%	25.00%	24.00%
Marketing and sales	11.91%	13.09%	9.12%	6.98%	6.00%	5.75%	5.50%	5.25%
General and administrative	8.33%	10.13%	8.46%	9.24%	8.10%	6.75%	6.25%	5.75%
Total costs and expenses	60.35%	75.18%	65.34%	61.41%	59.33%	58.90%	57.40%	55.45%
Income from operations	39.65%	24.82%	34.66%	38.59%	40.67%	41.10%	42.60%	44.55%
Interest and other income (expense), net	0.45%	-0.11%	0.50%	1.05%	1.05%	1.11%	1.47%	1.93%
Income before provision for income taxes	40.10%	24.71%	35.16%	39.97%	41.72%	42.21%	44.07%	46.48%
Provision for income taxes	6.71%	4.82%	6.17%	6.14%	7.63%	7.72%	8.07%	8.51%
Net Income	33.38%	19.90%	28.98%	33.83%	34.09%	34.48%	36.01%	37.97%

Common Size Balance Sheet

Fiscal Years Ending Dec. 31	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Assets								
Current assets:								
Cash and cash equivalents	14.08%	12.59%	31.03%	24.28%	27.82%	38.38%	50.09%	67.30%
Marketable securities	26.62%	22.35%	17.45%	15.17%	13.89%	12.85%	11.96%	11.35%
Accounts receivable, net	11.90%	11.55%	11.99%	11.81%	11.81%	11.81%	11.81%	11.81%
Prepaid expenses and other current assets	3.93%	4.58%	2.81%	2.81%	2.81%	2.81%	2.81%	2.81%
– Total current assets	56.53%	51.07%	63.28%	54.07%	56.34%	65.86%	76.68%	93.28%
Non-marketable equity securities	5.74%	5.32%	4.55%	3.96%	3.62%	3.35%	3.12%	2.96%
Property and equipment, net	49.02%	68.19%	71.60%	75.62%	83.82%	85.10%	82.03%	77.41%
Operating lease right-of-use assets, net	10.31%	10.87%	9.85%	10.41%	11.54%	11.71%	11.29%	10.65%
Intangible assets, net	0.54%	0.77%	0.58%	0.40%	0.30%	0.25%	0.21%	0.18%
Goodwill	16.28%	17.41%	15.31%	12.77%	11.23%	9.96%	8.90%	8.11%
Other assets	2.33%	5.65%	5.04%	4.38%	4.01%	3.71%	3.45%	3.28%
Total assets	140.75%	159.27%	170.21%	161.61%	170.86%	179.94%	185.69%	195.87%
Liabilities and stockholders' equity	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Current liabilities:	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Accounts payable	3.46%	4.28%	3.59%	3.00%	3.00%	3.00%	3.00%	3.00%
Partners payable	0.89%	0.96%	0.64%	0.50%	0.50%	0.50%	0.50%	0.50%
Operating lease liabilities, current	0.96%	1.17%	1.20%	1.27%	1.41%	1.43%	1.38%	1.30%
Accrued expenses and other current liabilities	12.14%	16.77%	18.25%	18.25%	18.25%	18.25%	18.25%	18.25%
Total current liabilities	17.92%	23.18%	23.69%	23.02%	23.16%	23.18%	23.13%	23.05%
Operating lease liabilities, non-current	10.81%	13.12%	12.77%	13.49%	14.95%	15.18%	14.63%	13.81%
Long-term debt	0.00%	8.51%	13.63%	13.45%	14.01%	13.86%	13.28%	12.59%
Long-term income taxes	5.04%	5.70%	5.57%	5.29%	5.44%	5.64%	5.88%	6.24%
Other liabilities	1.09%	0.96%	1.02%	0.88%	0.81%	0.75%	0.70%	0.66%
Total liabilities	34.86%	51.47%	56.67%	56.13%	58.37%	58.61%	57.61%	56.35%
Commitments and contingencies								
Stockholders' equity:								
Common stock and additional paid-in capital	47.33%	55.27%	54.30%	51.74%	51.15%	50.43%	45.06%	41.04%
Accumulated other comprehensive loss	-0.59%	-3.03%	-1.60%	-1.33%	-1.17%	-1.04%	-0.93%	-0.85%
Retained earnings	59.16%	55.57%	60.84%	55.07%	62.51%	71.94%	83.95%	99.33%
Total stockholders' equity	105.89%	107.81%	113.54%	105.48%	112.49%	121.33%	128.07%	139.52%
Total liabilities and stockholders' equity	140.75%	159.27%	170.21%	161.61%	170.86%	179.94%	185.69%	195.87%

Meta Value Driver Estimation

Fiscal Years Ending Dec. 31	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
NOPLAT:															
EBITA:															
Revenues	12,466	17,928 1,945	27,638 2,342	40,653 3,025	55,838	70,697	85,965	117,929	116,609	134,902 11.178	161,726 14,285	183,980 18,088	207,288 22,808	232,003	254,713 28,147
Depreciation Expense Operating Costs:	1,243	1,945	2,342	3,025	4,315	5,741	6,862	7,967	8,686	11,178	14,285	18,088	22,808	26,090	28,147
Other cost of revenues	910	922	1,447	2,429	5,040	7,029	9,830	14,682	16,563	14,781	15,036	17,286	19,485	21,808	23,943
Research and development	2,666	4,816	5,919	7,754	10,273	13,600	18,447	24,655	35,338	38,483	43,762	47,835	53,895	58,001	61,131
Marketing and sales	1,680	2,725	3,772	4,725	7,846	9,876	11,591	14,043	15,262	12,301	11,288	11,039	11,919	12,760	13,372
General and administrative	973	1,295	1,731	2,517	3,451	10,465	6,564	9,829	11,816	11,408	14,951	14,906	13,992	14,500	14,646
Plus: implied interest on operating leases	1.1.1	1.1	1.1	1.1	1.1	482	498	648	778	880	1,115	1,405	1,608	1,734	1,797
EBITA:	4,994	6,225	12,427	20,203	24,913	24,468	33,169	47,401	29,722	47,631	63,518	76,231	86,797	100,578	115,270
Less: adjusted taxes															
Total Income Tax Provision (income tax expense)	1,970 4	2,506	2,301	4,660	3,249	6,327	4,034	7,914	5,619	8,330 82	9,924 125	14,047 186	16,011 220	18,712 246	21,665 263
Add: Tax shield on interest expense Minus: Tax on interest or investment income	4 (5)	4 (10)	(32)	(73)	(121)	4 (169)	(123)	(84)	(51)	(300)	(481)	186 (540)	(641)	(870)	(1,162)
Add: Tax shield on implied lease interest	(5)	(10)	(32)	(75)	(121)	88	91	119	142	161	204	257	294	317	329
Add: tax shield on any non-operating losses	16	12	14	1	39	19	30	26	73	94	58				
Minus: tax on any non-operating income	1.1	(1)	(0)	(1)	(2)	(5)		(38)			(13)				
Total adjusted taxes	1,985	2,512	2,284	4,588	3,167	6,264	4,032	7,935	5,784	8,367	9,817	13,950	15,884	18,406	21,094
Change in Deferred Taxes		1,268	(27)	2,941	(717)	996	(626)	913	707	869	1,035	1,465	1,670	1,952	2,260
NOPLAT	3.009	4.981	10.116	18.556	21.029	19.200	28.511	40.378	24.645	40.133	54,736	63,746	72,583	84,124	96,436
	3,009	4,701	10,110	10,000	21,023	13,200	20,311	40,370	24,043	40,100	34,/30	03,740	12,203	04,124	20,430
Invested Capital (IC):															
Operating Current Assets (CA):															
Normal Cash Accounts Recievable	1,569	2,257	3,480	5,118 5,832	7,030	8,901 9.518	10,823 11,335	14,847	14,681	16,984 16,169	20,361	23,163 21,733	26,097	29,209	32,068
Accounts Recievable Prepaid expenses and other current assets	1,678 793	2,559 659	3,993 959	5,832	7,587 1.779	9,518	2,381	14,039 4.629	13,466 5,345	16,169	19,104 4,547	21,/33 5,173	24,487 5,828	27,406 6,523	30,089 7,162
Total operating current assets	4,040	5,475	8,432	11,970	16,396	20,271	24,539	33,515	33,492	36,946	44,013	50,069	56,412	63,138	69,319
Non Interest-Bearing Current Liabilities (CL):															
Accounts payable	176	196	302	380	820	1,363	1,331	4,083	4,990	4,849	4,852	5,519	6,219	6,960	7,641
Partners payable	202 866	217 1.449	280 2,203	390 2,892	541 5,509	886 6.185	1,093	1,052 11,058	1,117 14.757	863 18.033	809 29,522	920 33.584	1,036 37,838	1,160 42,350	1,274 46,495
Accrued expenses and other current liabilities	1,244	1,449	2,203	3,662	6,870	8,434	9,530	16,193	20,864	23,745	35,182	40,023	45,093	50,470	55,410
Net Operating Working Capital	2,796	3,613	5,647	8,308	9,526	11,837	12.585	17,322	12,628	13,201	8,831	10,046	11,319	12,668	13,908
							p.e.								
Property & equipment, net	3,967	5,687	8,591	13,721	24,683	35,323	45,633	57,809	79,518	96,587	122,302	154,214	176,406	190,316	197,169
Net Other Operating Assets (net of depreciation or amortization)															
Intangible assets, net	3,929	3,246	2,535	1,884	1,294	894	623	634	897	788	652	555	509	485	470
Operating lease right-of-use assets, net	1.1	1.1	1.1	1.1	1.1	9,460	9,348	12,155	12,673	13,294	16,833	21,226	24,280	26,195	27,138
Other assets Total Net Other Operating Assets	637 4,566	796	1,312	2,135	2,576	2,759	2,758	2,751	6,583 20,153	6,794 20.876	7,079 24,565	7,377 29,157	7,687	8,009	8,346 35,954
Total Net Other Operating Assets	4,500	4,042	5,647	4,015	5,670	15,115	12,729	15,540	20,135	20,870	24,303	29,137	52,470	54,005	55,954
Other Operating Liabilities Other liabilities	368	269	461		862	1,055	1.389	1.289		1.370	4 420	1,487	4 550		1 600
Total Other Operating Liabilities	368	269	461	1,045 1,045	862	1,055	1,389	1,289	1,119 1,119	1,370	1,428 1,428	1,487	1,550 1,550	1,615 1,615	1,683
INVESTED CAPITAL (IC)	10.961	13,073	17,624	25,003	37,217	59,218	69,558	89,382	111,180	129,294	154,270	191,930	218,650	236,058	245,348
-															
Free Cash Flow (FCF):															
Free Cash Flow (FCF): NOPLAT	3,009	4,981	10,116	18,556	21,029	19,200	28,511	40,378	24,645	40,133	54,736	63,746	72,583	84.124	96.436
Change in IC	2,005	2,112	4,550	7,380	12,214	22,001	10,340	19,824	21,798	18,114	24,976	37,660	26,721	17,408	9,290
FCF		2,870	5,565	11,176	8,815	(2,801)	18,170	20,554	2,847	22,019	29,760	26,086	45,863	66,717	87,146
Return on Invested Capital (ROIC):															
NOPLAT	3,009	4,981	10,116	18,556	21,029	19,200	28,511	40,378	24,645	40,133	54,736	63,746	72,583	84,124	96,436
Beginning IC	.,	10,961	13,073	17,624	25,003	37,217	59,218	69,558	89,382	111,180	129,294	154,270	191,930	218,650	236,058
ROIC		45.44%	77.38%	105.29%	84.11%	51.59%	48.15%	58.05%	27.57%	36.10%	42.33%	41.32%	37.82%	38.47%	40.85%
Economic Profit (EP):															
Beginning IC		10,961	13,073	17,624	25,003	37,217	59,218	69,558	89,382	111,180	129,294	154,270	191,930	218,650	236,058
x (ROIC - WACC)	-10.04%	35.41%	67.34%	95.25%	74.07%	41.55%	38.11%	48.02%	17.54%	26.06%	32.30%	31.29%	27.78%	28.44%	30.82%
EP		3,881	8,804	16,787	18,520	15,465	22,568	33,398	15,676	28,976	41,761	48,265	53,323	62,183	72,747

Weighted Average Cost of Capital (WACC) Estimation

st of Equity:		ASSUMPTIONS:
Risk-Free Rate	4.09%	10y Treasury
Beta	1.22	5y Monthly Beta
Equity Risk Premium	5.00%	Henry Fund Estimate
Cost of Equity	10.19%	
st of Debt:		
Risk-Free Rate	4.09%	10y Treasury
Implied Default Premium	0.58%	
Pre-Tax Cost of Debt	4.67%	YTM on META 10y corporate bond
Marginal Tax Rate	18%	
	3.82%	

	Estimated WACC	10.04%	
Market Value of the Firm	1,531,577.35	100.00%	
MV of Total Debt	37,234	2.43%	
PV of Operating Leases	18,849		
Long-Term Debt	18,385		
Current Portion of LTD	-		
Short-Term Debt	-		
Market Value of Debt:			
MV of Equity	1,494,343	97.57%	
Current Stock Price	\$589.95		
Total Shares Outstanding	2,533		
Market Value of Common Equity:		MV Weights	

Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models

Key Inputs:					
CV Growth of NOPLAT	6.25%				
CV Year ROIC	40.85%				
WACC	10.04%				
Cost of Equity	10.19%				
Fiscal Years Ending Dec. 31	2024E	2025E	2026E	2027E	2028E
DCF Model:					
Free Cash Flow (FCF)	29,760	26,086	45,863	66,717	87,146
Continuing Value (CV)	23,700	20,000	13,003	00,717	2,158,030
PV of FCF	27,046	21,545	34,424	45,510	1,472,088
	27,010	22,010	01,121	10,010	1,1,2,000
Value of Operating Assets:	1,600,614				
Non-Operating Adjustments	_,,				
Excess Cash	24,878				
Marketable Securities	29,682				
Total Debt	-37,234				
PV of ESOP	-59,703				
Litigation Liabilities	-6,592				
Value of Equity	1,551,645				
Shares Outstanding	2,561				
Intrinsic Value of Last FYE	\$ 605.87				
Implied Price as of Today	\$ 653.53				
EP Model:					
Economic Profit (EP)	41,761	48,265	53,323	62,183	72,747
Continuing Value (CV)					1,921,972
PV of EP	37,953	39,863	40,024	42,418	1,311,062
Total PV of EP	1,471,320				
Invested Capital (last FYE)	129,294				
Value of Operating Assets:	1,600,614				
Non-Operating Adjustments					
Excess Cash	24,878				
Marketable Securities	29,682				
Total Debt	-37,234				
PV of ESOP	-59,703				
Litigation Liabilities	-6,592				
Value of Equity	1,551,645				
Shares Outstanding	2,561				
Intrinsic Value of Last FYE	\$ 605.87				
Implied Price as of Today	\$ 653.53				

Dividend Discount Model (DDM) or Fundamental P/E Valuation Model

Fiscal Years Ending		2024E	2025E	2026E	2027E		2028E
EPS	\$	21.56	\$ 24.70	\$ 28.11	\$ 33.07	\$	38.88
Key Assumptions							
CV growth of EPS		7.00%					
CV Year ROE		32.55%					
Cost of Equity		10.19%					
Future Cash Flows							
P/E Multiple (CV Year)						۲	24.61
EPS (CV Year) Future Stock Price					-	\$ ¢	38.88 956.65
Dividends Per Share		2.00	2.20	2.42	2.66	ç	2.93
Discounted Cash Flows		1.82	1.81	1.81	1.81	\$	648.91
Intrinsic Value as of Last FYE Implied Price as of Today	\$ \$	656.15 707.77					

Relative Valuation Models

			EPS	EPS		
Ticker	Company	Price	2024E	2025E	P/E24	P/E 25
AAPL	Apple	\$227.80	\$6.67	\$7.42	34.15	30.70
GOOGL	Alphabet	\$163.39	\$7.66	\$8.68	21.33	18.82
MSFT	Microsoft	\$414.69	\$13.17	\$15.32	31.49	27.07
NVDA	NVIDIA	\$134.88	\$2.73	\$3.79	49.41	35.59
ORCL	Oracle	\$174.66	\$4.63	\$5.40	37.72	32.34
AMZN	Amazon	\$189.20	\$4.73	\$5.85	40.00	32.34
				Average	35.68	29.48
META	Meta	\$589.95	\$21.56	\$24.70	27.4	23.9
Implied Relative Value: P/E (EPS24) P/E (EPS25)		\$ \$	769.42 728.00			

Key Management Ratios

Fiscal Years Ending Dec. 31	2021	2022	2023	2024E	2025E	2026E	2027E	2028E
Liquidity Ratios:								
Current Ratio (current assets / current liabilities)	3.15	2.20	2.67	2.35	2.43	2.84	3.31	4.05
Net Working Capital % of Revenue	14.69%	10.83%	9.79%	5.46%	5.46%	5.46%	5.46%	5.46%
Cash Ratio (cash / current liabilities)	0.79	0.54	1.31	1.05	1.20	1.66	2.17	2.92
Asset-Management Ratios:								
Cash Turnover Ratio (Revenue / Cash)	7.10	7.94	3.22	4.12	3.59	2.61	2.00	1.49
Asset turnover ratio (Revenue / average total assets)	0.73	0.66	0.65	0.66	0.64	0.60	0.58	0.55
Working capital turnover ratio (revenue/(current assets - current liabilities)	2.59	3.59	2.53	3.22	3.01	2.34	1.87	1.42
Financial Leverage Ratios:								
LT Debt/Total Equity	0.00	0.08	0.12	0.13	0.12	0.11	0.10	0.09
LT Debt/Total Assets	0.00	0.05	0.08	0.08	0.08	0.08	0.07	0.06
Total Debt/Total Assets	0.08	0.14	0.16	0.17	0.18	0.17	0.16	0.14
Profitability Ratios:								
Return on Equity (NI/Beg TSE)	30.69%	18.58%	31.10%	35.72%	36.76%	34.54%	33.22%	32.55%
Gross Margin	80.79%	78.35%	80.76%	81.87%	80.77%	79.60%	79.35%	79.55%
Return on Assets (NI/Avg Total Assets)	17.92%	22.39%	11.17%	22.29%	21.79%	20.80%	20.79%	20.81%
Operating Margin	39.65%	24.82%	34.66%	38.59%	40.67%	41.10%	42.60%	44.55%
Payout Policy Ratios:								
Dividend Payout Ratio (Dividend/EPS)	0.00%	0.00%	0.00%	9.28%	8.91%	8.61%	8.05%	7.53%
Total Payout Ratio ((Divs. + Repurchases)/NI)	113.12%	120.50%	50.58%	87.21%	58.65%	52.25%	45.39%	39.78%

Valuation of Options Granted under ESOP

Current Stock Price	\$589.95
Risk Free Rate	4.09%
Current Dividend Yield	0.34%
Annualized St. Dev. of Stock Returns	35.00%

Range of Outstanding Options	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)	B-S Option Price	Value of Options Granted
Range 1	149.062	209.85	3.00 \$	400.53 \$	59,703
Total	149 \$	209.85	3.00 \$	406.43 \$	59,703

Effects of ESOP Exercise and Share Repurchases on Common Stock Account and Number of Shares Outstanding

Number of Options Outstanding (shares):	149
Average Time to Maturity (years):	 3.00
Expected Annual Number of Options Exercised:	 50
Current Average Strike Price:	\$ 209.85
Cost of Equity:	10.19%
Current Stock Price:	\$589.95

Fiscal Years Ending Dec. 31		2024E		2025E	2026E	2027E	2028E
Increase in Shares Outstanding:		50		50	50	0	0
Average Strike Price:	\$	209.85 \$	\$	209.85	\$ 209.85	\$ 209.85	\$ 209.85
Increase in Common Stock Account:		10,427		10,427	10,427	-	-
Share Repurchases (\$)		42,614		31,194	31,194	31,194	31,194
Expected Price of Repurchased Shares:	\$	589.95 \$	5	648.06	\$ 711.89	\$ 782.02	\$ 859.04
Number of Shares Repurchased:		72		48	44	40	36
Shares Outstanding (beginning of the year)		2,561		2,538	2,540	2,546	2,506
Plus: Shares Issued Through ESOP		50		50	50	0	0
Less: Shares Repurchased in Treasury	_	72		48	44	40	36
Shares Outstanding (end of the year)		2,538		2,540	2,546	2,506	2,470

WACC

2026 COGS % of sales

Sensitivity Tables

		CV Growth of NOPLAT										
653.53	5.50%	5.75%	6.00%	6.25%	6.50%	6.75%	7.00%					
9.29%	685.58	726.69	774.06	829.23	894.31	972.23	1,067.19					
9.54%	639.34	674.74	715.16	761.73	815.96	879.94	956.53					
9.79%	598.51	629.26	664.06	703.79	749.57	802.88	865.77					
10.04%	562.21	589.10	619.32	653.53	692.59	737.58	789.99					
10.29%	529.72	553.39	579.82	609.52	643.15	681.54	725.77					
10.54%	500.48	521.43	544.69	570.67	599.87	632.92	670.65					
10.79%	474.02	492.66	513.25	536.12	561.65	590.34	622.83					

		Marginal Tax Rate								
	653.53	16.80%	17.30%	17.80%	18.30%	18.80%	19.30%	19.80%		
t	3.92%	667.10	662.85	658.59	654.33	650.07	645.81	641.54		
Cost of Debt	4.17%	666.81	662.57	658.32	654.06	649.81	645.56	641.30		
t of	4.42%	666.53	662.29	658.04	653.80	649.55	645.30	641.05		
Cost	4.67%	666.24	662.01	657.77	653.53	649.29	645.05	640.81		
ax (4.92%	665.96	661.73	657.50	653.27	649.04	644.80	640.57		
Pre-Tax	5.17%	665.67	661.45	657.23	653.01	648.78	644.55	640.32		
Ы	5.42%	665.39	661.18	656.96	652.74	648.52	644.30	640.08		

-			Normal Cash Estimate								
	653.53	9.59%	10.59%	11.59%	12.59%	13.59%	14.59%	15.59%			
	3.34%	826.51	824.22	821.93	819.65	817.36	815.07	812.78			
e	3.59%	762.61	760.43	758.26	756.09	753.91	751.74	749.56			
Rate	3.84%	707.51	705.43	703.36	701.28	699.20	697.12	695.05			
Risl-Free	4.09%	659.51	657.52	655.53	653.53	651.54	649.55	647.55			
sl-F	4.34%	617.33	615.41	613.49	611.57	609.65	607.73	605.81			
Ri	4.59%	579.95	578.10	576.24	574.39	572.53	570.68	568.82			
	4.84%	546.61	544.81	543.02	541.22	539.43	537.63	535.83			

					2025 CapEX			
	653.53	42,500	45,000	47,500	50,000	52,500	55,000	57,500
Marketing % of revenue	5.25%	702.02	690.32	678.62	666.91	655.21	643.51	631.80
eve	5.50%	697.56	685.86	674.16	662.45	650.75	639.05	627.34
ofr	5.75%	693.10	681.40	669.70	657.99	646.29	634.59	622.88
% 5	6.00%	688.64	676.94	665.24	653.53	641.83	630.13	618.42
ting	6.25%	684.18	672.48	660.78	649.07	637.37	625.67	613.96
arke	6.50%	679.72	668.02	656.32	644.61	632.91	621.21	609.50
ğ	6.75%	675.26	663.56	651.86	640.15	628.45	616.75	605.05

	2026 R&D as a % of sales												
6	53.53	23.00%	24.00%	25.00%	26.00%	27.00%	28.00%	29.00%					
6.	40%	757.30	740.00	722.71	705.41	688.12	670.83	653.53					
7.	40%	740.00	722.71	705.41	688.12	670.83	653.53	636.24					
8.	40%	722.71	705.41	688.12	670.83	653.53	636.24	618.95					
9.	40%	705.41	688.12	670.83	653.53	636.24	618.95	601.65					
10	.40%	688.12	670.83	653.53	636.24	618.95	601.65	584.36					
11	.40%	670.83	653.53	636.24	618.95	601.65	584.36	567.06					
12	.40%	653.53	636.24	618.95	601.65	584.36	567.06	549.77					

					Beta			
	653.53	1.07	1.12	1.17	1.22	1.27	1.32	1.37
Equity Risk Premium	4.70%	917.49	843.65	780.40	725.62	677.72	635.47	597.94
	4.80%	882.39	812.33	752.18	699.98	654.25	613.86	577.93
	4.90%	849.78	783.16	725.84	676.00	632.27	593.59	559.14
	5.00%	819.40	755.92	701.20	653.53	611.65	574.55	541.47
	5.10%	791.03	730.43	678.10	632.44	592.26	556.63	524.81
	5.20%	764.48	706.53	656.40	612.59	573.99	539.72	509.09
	5.30%	739.57	684.08	635.98	593.89	556.76	523.75	494.22