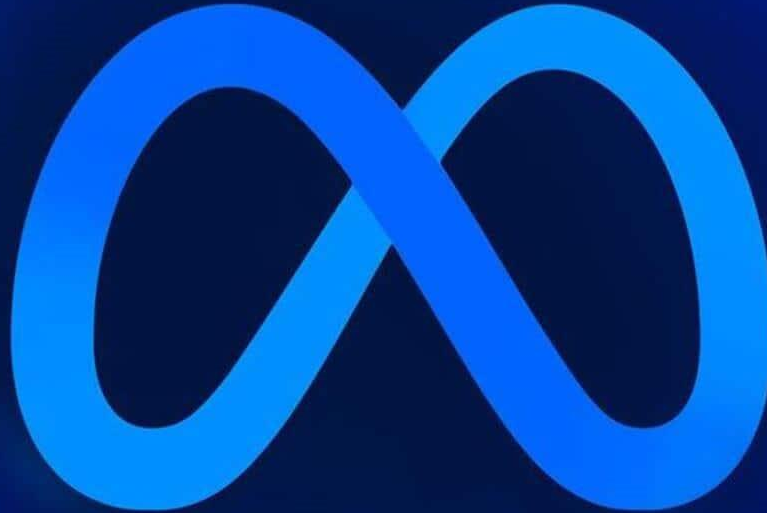


Future of Messaging



Team Name : vamshitfps
Vamshi Krishna | Aashrut Vetsa
Gowtham Chowdary
IIT Kharagpur

Executive Summary

Recommendation

META SHOULD ACQUIRE WHATSAPP



Large User Base

Integrating Whatsapp's extensive userbase into Meta's ecosystem increases engagement and ad revenue potential incredibly



Accessibility

Meta's Mission of bringing more connectivity to sparsely networking areas can be accomplished by whatsapp's low-bandwidth optimization



Optimization

Leveraging Meta's resources and infrastructure enables Whatsapp to enhance its services and scale more rapidly on a global level

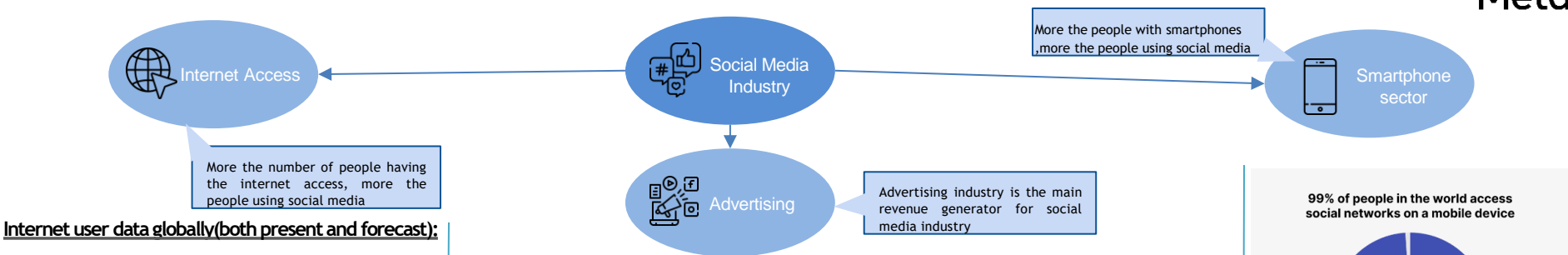


Financials

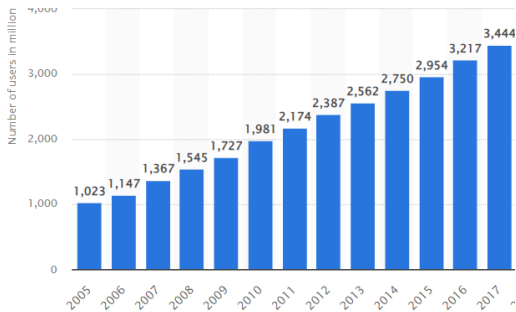
The WACC is predicted to be 9.72%
The break-even point for Meta's investment is predicted over 10 years



Social Media Industry

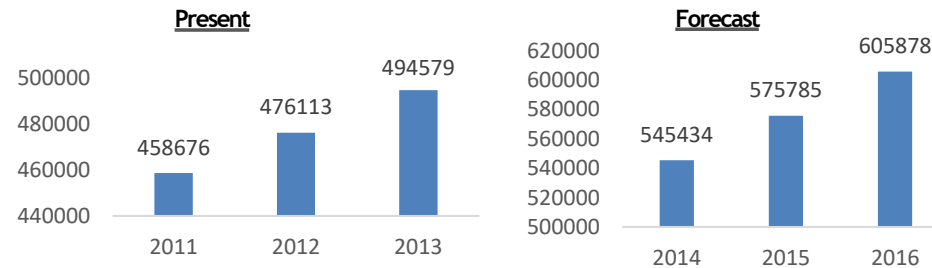


Internet user data globally(both present and forecast):



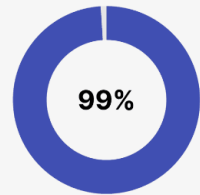
- Number of global internet users are growing in number, which in turn boosts social media industry
- Forecasts predict that Number of users having internet access will reach 3 billion by 2017.

Market size of Advertising industry(in millions):

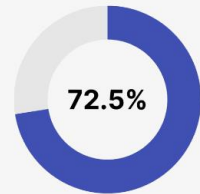


- Between 2009 and 2014, the advertising industry saw a major shift from traditional media (TV, print) to digital platforms, driven by advancements in data analytics and programmatic advertising.
- The rise of social media and mobile ads, coupled with targeted and personalized marketing, transformed ad spend allocation, making digital advertising the dominant force by second decade of 21st century

99% of people in the world access social networks on a mobile device



72.5% of Americans are on social media

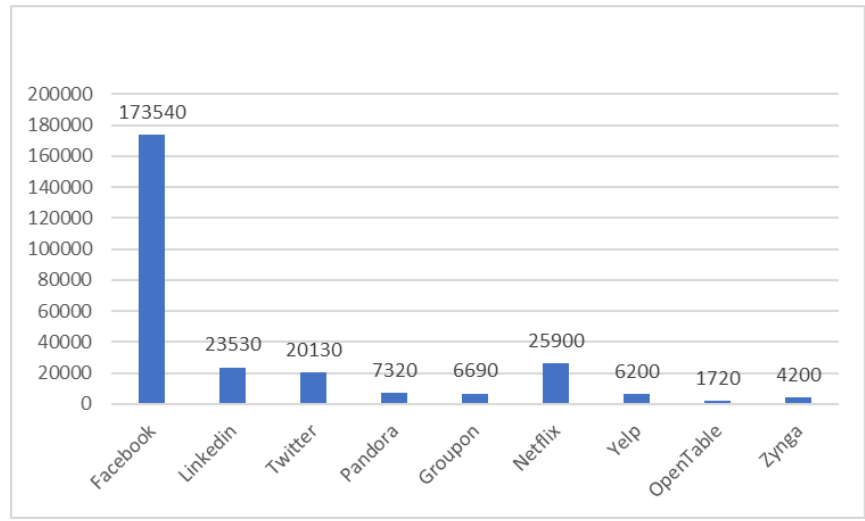


Source: Our World in Data, Bloomberg, Statista

Social Media Industry

Market Shares of Major Companies in the Social Media Industry

Market Capital of Meta (facebook) is far more than the competitors

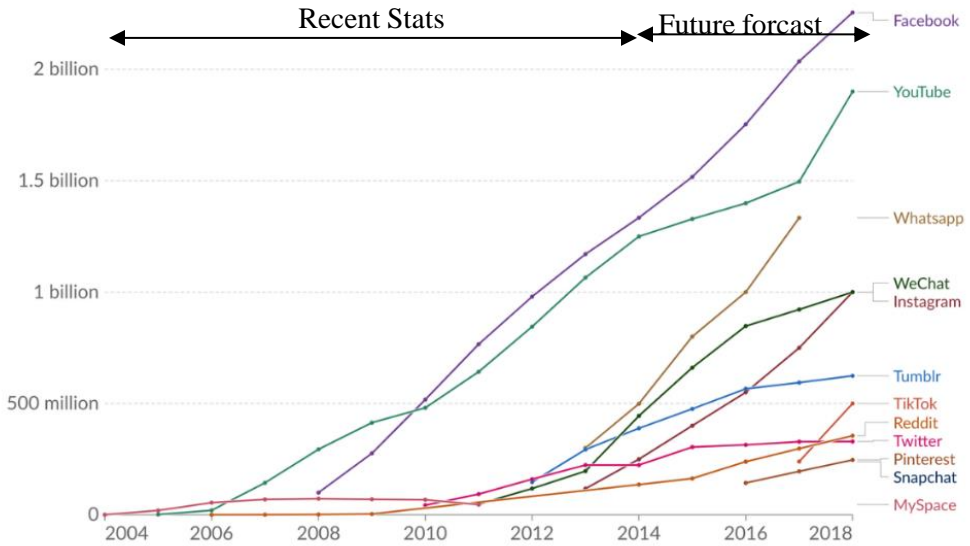


- 2014 is the time when social softwares, mobile platforms and new developments in cloud were the most involved sensor technologies at the time of Whatsapp's acquisition
- Social networking competition was strongly dense

Source: Our World in Data, Bloomberg

No. of active social media users globally

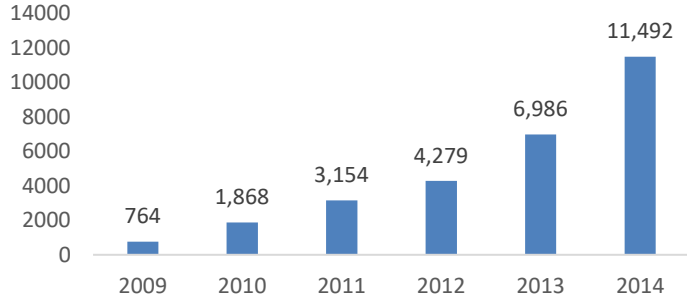
"In the fast-paced world of social media, user growth is the lifeblood that fuels innovation, market dominance, and long-term sustainability."



- The number of social media users worldwide are increasing exponentially and Meta(Facebook) is predicted to reach 2 billion mark by 2018

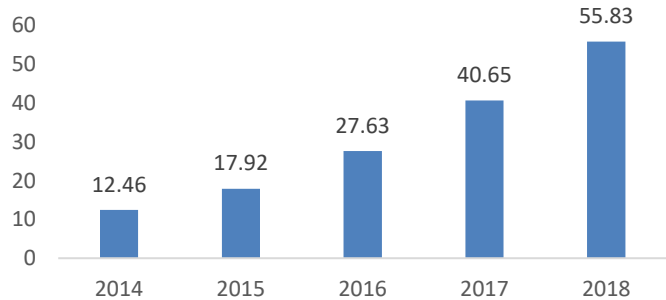
Meta Business overview

Meta(Facebook) Revenue till 2014(in millions)



- Revenue of Meta is growing at a CAGR of 71.64%
- This growth rate indicates that Meta is the best in the social media industry
- Meta's Revenue is forecasted grow at a CAGR of 45.49%

Meta(Facebook) Revenue Forecast(in billions)

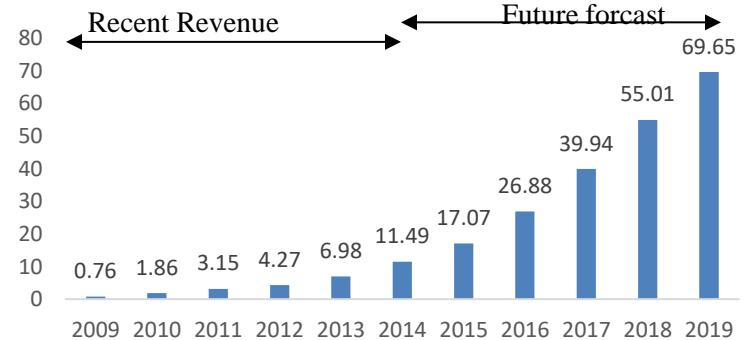


Source: Statistica, Google

Motto of Meta

- Founded on a mission to give the people the power to build community and bring the world closer together
- Mission is to bring more connectivity and utility to the world by delivering core internet services efficiently and affordably

Meta(Facebook) Ad Revenue till 2014(in billions)

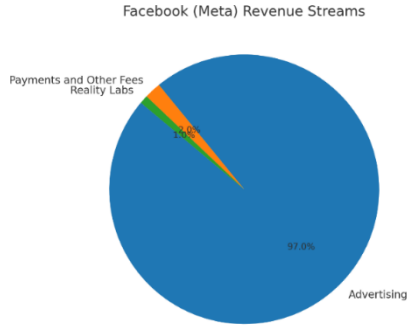


- The trend in Facebook's ad revenue from 2009 to 2019 reveals an exponential growth trajectory, driven by a shift to mobile-first strategies, precise ad targeting, and data-driven personalization.
- The steep rise after 2014 highlights how effectively Facebook capitalized on mobile usage and advertiser demand for targeted ads, setting the foundation for it to dominate the digital advertising market.

Meta Business overview

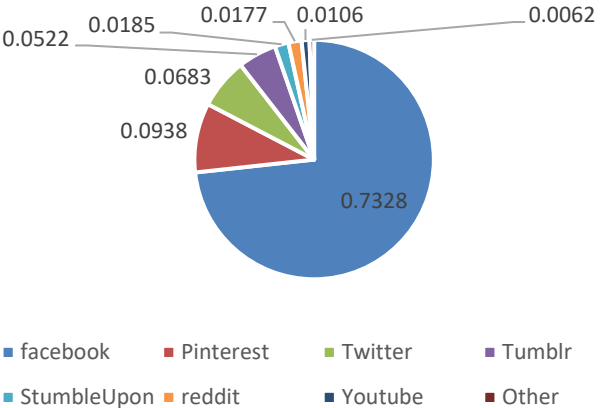
In 2014, Advertising consists of 97% of Meta's Revenue Stream

Meta Revenue Breakdown 2014:



In 2014, Meta's market share in social media Industry is incredible

Market Share of different companies in Social Media Industry



Meta's Industry partners

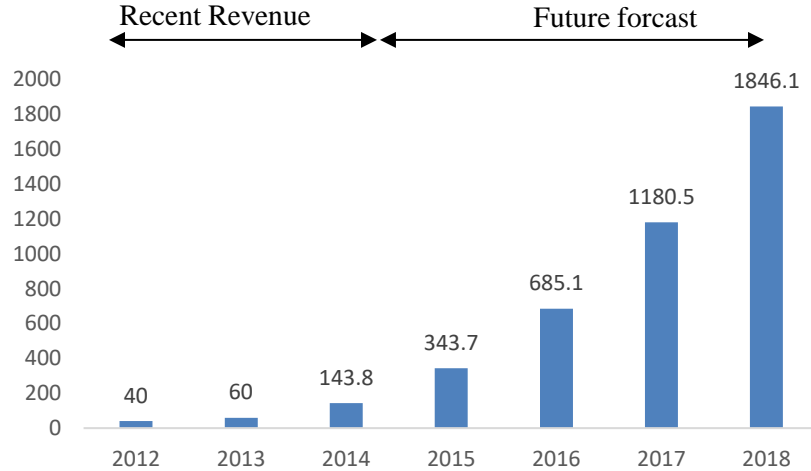


In 2014, Meta's (then Facebook) revenue soared by 58%, heavily influenced by its groundbreaking shift to mobile and the introduction of video ads. This innovation not only capitalized on the growing mobile user base but also tapped into the rising demand for video content, marking a pivotal moment in digital advertising.

Whatsapp Business overview

WhatsApp focused on rapid user growth over revenue generation, offering a simple, ad-free messaging service that quickly gained popularity worldwide. By 2013, it had amassed over 400 million active users.

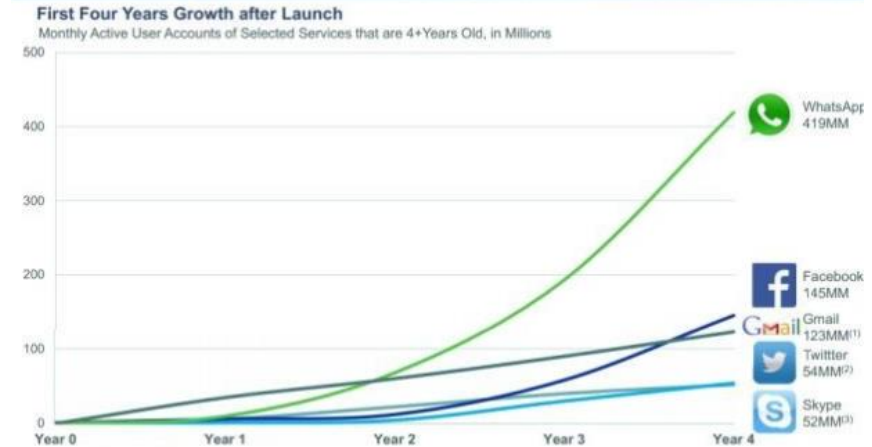
Revenue Growth of Whatsapp:



- At the time of acquisition the CAGR of whatsapp is around 200%
- This rapid growth shows the Whatsapp's strong market performance during the time of Acquisition
- The revenue of Whatsapp is expected to grow at a CAGR of 50% in next 5 years

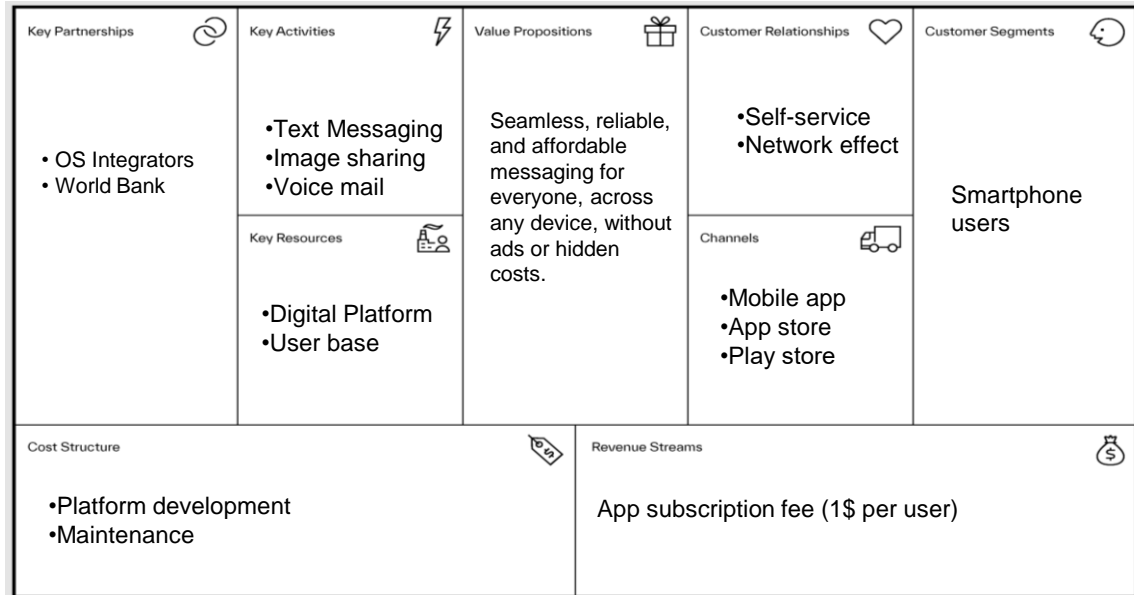
Source: Facebook, Statista

User growth in the first 4 years of companies initial launch



- At the time of acquisition the daily user growth of whatsapp is approximately 1 million users per day
- This is a very huge figure when compared to its peers and when compared with Meta itself
- If Meta takes so much time for this acquisition, the number of users will be huge and Meta will have to value for a lot more

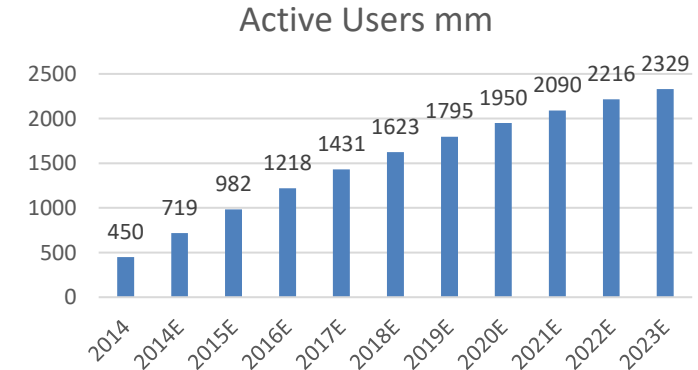
Whatsapp Business overview



Motto of Whatsapp

- NO ADS
- NO GAMES
- NO GIMMICKS

Active users prediction:



Business Insights:

- The growth rate of whatsapp in 2014 is around 1million users per day
- This shows the demand of the messaging application at the time of acquisition
- Whatsapp has around 30 employees

- The growth rate approximation is given in DCF calculation Page:13
- The estimated growth rate accelerates between 2014 and 2017, nearly tripling from 450 million to 1,431 million users.
- From 2020 onwards, the user base continues to expand steadily, adding over 1,000 million users in just three years.

Possible Operations post-merger

Market Segmentation:

- Meta's platform was rich in multimedia content, including photos videos and interactive features which required stable and faster internet connections
- The application was designed to be lightweight and efficient, making it accessible even in regions with limited internet infrastructure



- Meta can focus the users with better internet connectivity
- Whatsapp can focus the users with less internet connectivity speeds

Product/Tech Integration

- Post-acquisition, there were discussions about integrating WhatsApp's messaging capabilities with Facebook's platform to enhance user experience across different devices and services²
- In November 2014, WhatsApp partnered with Open Whisper Systems to implement the TextSecure encryption protocol³.



- Meta can develop cross-platform features and seamless integration in eco-system
- Whatsapp can integrate features like encryption and user enhancements

Server and Infrastructure

- WhatsApp's server infrastructure was based on Erlang/FreeBSD. The integration with Facebook's infrastructure will be aimed to further enhance this scalability and efficiency.
- This acquisition allowed Facebook to provide its robust server infrastructure and cloud services to optimize WhatsApp's operations.



- Meta can provide server infrastructure and cloud to optimize whatsappp
- Whatsapp can cut it's cost for server as it is outsourcing from 3rd party providers

Source: 10 years of WhatsApp under Meta ownership: Feels like one long day (androidpolice.com)

Possible Operations post-merger

Monetization Strategies

- Meta's revenue model is well established in social media advertising leveraging extensive user data
- Meta's and Whatsapp's distinct market positions justify their focus on ads and subscriptions respectively, aligning with their core services and user expectations



- Meta can focus its revenue from social media advertisements
- Whatsapp can focus its revenue form its subscription fee

Partner Collaboration

- This acquisition can be seen as a strategic move to integrate WhatsApp's user base and capabilities into Facebook's broader ecosystem, paving the way for future business tool expansions.
- in 2014, WhatsApp was recognized for its potential to facilitate business communication due to its widespread use and simplicity



- Facebook can help in expanding Whatsapp business and API tools in future
- Whatsapp can focus on building business communication channels through existing users

Data and User Analytics

- This acquisition was seen as a strategic move to integrate WhatsApp's user base and data into Facebook's broader ecosystem, which could enhance targeted advertising.
- Although specific integration details were not immediately disclosed, the potential for leveraging WhatsApp data for better ad targeting was widely recognized.
- The platform's simplicity and widespread use made it an attractive option for businesses to engage with customers



- Meta can integrate and analyse data from Whatsapp to enhance targeting ads
- Whatsapp can use the analytics for business APIs to enhance targets

Source: [The WhatsApp Architecture Facebook Bought For \\$19 Billion - High Scalability](#) -

Whatsapps' Potential Peer Groups

Our Peer Group Segment for Whatsapp Consist of Telecommunication Platform, Data Privacy and Encryption, Social Media and Networking.

Tele Communication



Logic: They operate in the broader telecommunications, offering services that facilitate global connectivity, messaging and data transmission.

Video Communication



Logic: They provide Platforms for communication through voice and video calls, catering to both personal and professional interactions.

Social Media and Networking



Logic: They operate in the social media and digital communication space, providing platform that enable user interaction and content sharing.









Messaging Platforms



Logic: They all provide messaging and communication services, enabling users to send text and multimedia messaging across various devices.

COMPARABLES ANALYSIS

After discarding the aforementioned sectors, 20 businesses from Messaging Platform and Social Media & Networking are retained for further evaluating possible acquisitions to replace whatsapp.
























	Market Size	Market Size CAGR	Brand Relevance	Revenue Drivers	Cost Drivers	Retained
Whatsapp	-	74%	-	<ul style="list-style-type: none"> Advertising Revenue Subscription Global Subscriber growth rate User Data 	<ul style="list-style-type: none"> Cloud Storage Human Resources Tech & Development Infrastructure 	
Tele Communication	\$1.26B	6.26%		<ul style="list-style-type: none"> Advertising Revenue Subscription Global Subscriber growth rate User Data 	<ul style="list-style-type: none"> Cloud Storage Human Resources Tech & Development Infrastructure 	
Video Communication	\$2.54B	20.4%		<ul style="list-style-type: none"> Advertising Revenue Subscription Global Subscriber growth rate User Data 	<ul style="list-style-type: none"> Cloud Storage Human Resources Tech & Development Infrastructure 	
Social media & Networking	\$15B	29.2%		<ul style="list-style-type: none"> Advertising Revenue Subscription Global Subscriber growth rate User Data 	<ul style="list-style-type: none"> Cloud Storage Human Resources Tech & Development Infrastructure 	
Messaging Platform	\$1.93B	8.58%		<ul style="list-style-type: none"> Advertising Revenue Subscription Global Subscriber growth rate User Data 	<ul style="list-style-type: none"> Cloud Storage Human Resources Tech & Development Infrastructure 	

Source: (Polaris, 2014), (PR Newswire, 2014), (Statista, 2016), (Precedence, 2021)

DCF Evaluation(Part-1)

Whatsapp's valuation of 22Billion\$ is a fair value in DCF Method

- Discount Rate:** A discount rate of roughly 10% should ensure a good equilibrium allowing WhatsApp to not be overvalued in the long term way
- Growth rate:** the terminal growth rate (g) assumed to value WhatsApp was 5%

Year	Unit	2014	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	
Active Users	mm	450	719	982	1218	1431	1623	1795	1950	2090	2216	2329	
New user Additions per Day	mm	null	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	
% Paying	%	null	20%	35%	45%	55%	65%	70%	75%	80%	85%	90%	
Usage Charges per Annum	\$	null	1	1	1	1	1	1	1	1	1	1	
Average Revenue per paying User	\$	null	1	1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	
Revenue	\$mm	20	143.8	343.7	685.13	1180.58	1846.16	2513	3290.63	4180	5179.9	6288.3	
(-) Hosting costs (assumed \$0.50 per user)	null		71.9	171.85	274.05	393.53	527.48	628.25	731.25	836	941.8	1048.05	
(-) Salaries (assumed \$250K per employee)	null		13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	
% Cash Expenses	%	null	20%	25%	25%	25%	25%	25%	25%	25%	25%	25%	
(-) Cash Expenses		null	28.76	85.93	171.28	295.14	461.54	628.25	822.66	1045	1294.98	1572.08	
Profit before Taxes	\$mm	null	29.39	72.18	226.04	478.16	843.4	1242.75	1722.97	2285.25	2929.38	3654.43	
EBITDA Margin	%	null	0.2	0.21	0.33	0.41	0.46	0.49	0.52	0.55	0.57	0.58	
(-) Taxes	35%	null	10.29	25.26	79.12	167.35	295.19	434.96	603.04	799.84	1025.28	1279.05	
Profit after Taxes	\$mm	null	19.1	46.91	146.93	310.8	548.2	807.79	1119.93	1485.41	1904.09	2375.38	
(-) Incremental Working Capital	10%	null	12.38	32.37	34.14	49.55	66.56	66.68	77.76	88.94	99.99	110.84	
(-) Capital Expenditures	5%	null	7.19	17.19	34.26	59.03	92.31	125.65	164.53	209	259	314.42	
Free Cash Flows to the Firm (FCFF)	\$mm	null	-0.47	-2.64	78.53	202.23	389.34	615.45	877.64	1187.48	1545.11	1950.12	
Terminal Growth Rate	%	0.05											
Discount Rate	%	0.1											
Terminal Value	\$mm	null										43381.9	
PV of FCFF	\$mm	null		-2.41	65.23	153.1	268.65	387.05	503.04	620.33	735.65	846.23	
(+) PV of TV	\$mm	null										18825.1	
Enterprise Valuation	\$mm	2240196											

Executive
Summary

Industry
Overview

Company
Analysis

Strategic
Fit

Financial
Analysis

Acquisition
Feasibility

Conclusion

13

DCF Evaluation(Part-2)

Using some assumptions we shall calculate the Whatsapp's valuation in DCF Method

WACC Assumptions

Assumptions	Value
Beta	94.00%
Risk Free Rate	2.74%
Market Return	10.17%
Pre-Tax Cost Debt	nil

Cost of Debt Calculation

pre-tax cost of debt	nil
tax rate	nil
after tax cost of debt	nil

Cost of Equity Calculation

Cost of Equity=Risk Free Rate+Beta(Market return-Risk Free Rate)

Risk Free rate	2.74%
Beta	0.94
market return	10.17%
Cost of Equity	9.72%

Source:

- As Whatsapp is a private company and it has no debt while the time acquisition, there is no need of doing the WACC sensitivity analysis and stock price calculations. Hence, the total capitalization is directly equal to Market Value of the equity

Total Capitalization

	%weight	Cost%
Market Value of Debt	0%	0%
Market Value of equity	100%	9.72%
Total Capitalization	100%	9.72%

WACC = 9.72%

- The Weighted Average Cost of Capital (WACC) represents return to lenders and shareholders.
- Whatsapp's WACC of 9.72% represents the required rate of return (discount rate) necessary for DCF analysis. Furthermore, it indicates that the Company must pay investors an average of \$0.0972 for every \$1 received in funding.

Precedent Transactions

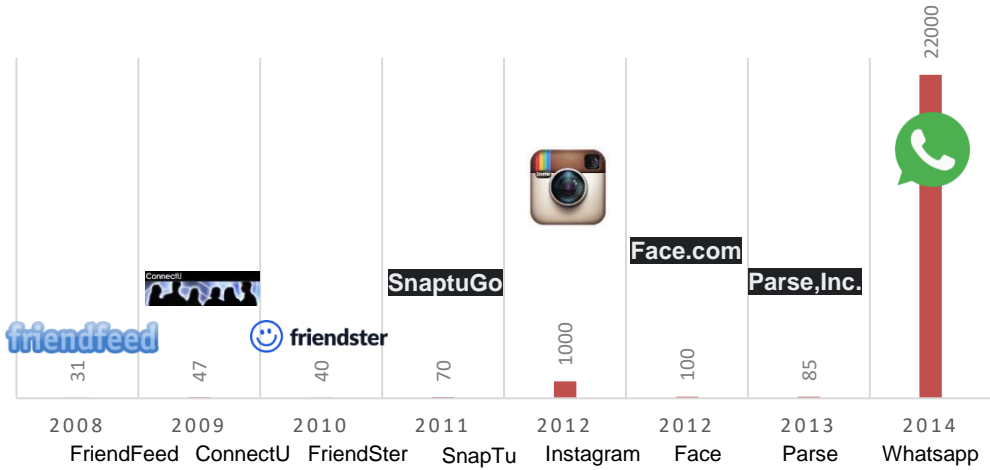
Previous Mergers/Acquisitions by Meta compared to Whatsapp

- Instagram is the only acquisition which is near to the valuation of Whatsapp. These major acquisitions by meta lead to control over social media industry
- Meta has Acquired almost 25 companies before Whatsapp but the graph shows only the major acquisitions

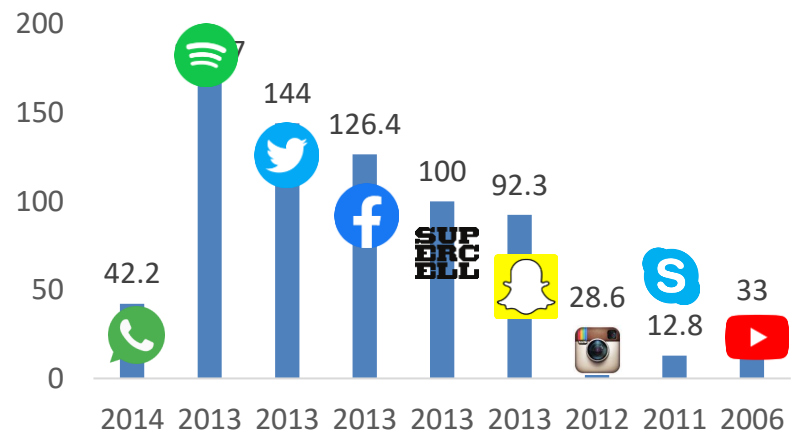
Acquisitions compared to Whatsapp in a time frame of 10years

- In the social media industry there have been many acquisitions
- The data of valuation per user while acquiring is given below
- Comparing with this data shows whatsapp's valuation is fair when compared to the other companies in the industry

VALUATION IN MILLION



Valuation per user (in Dollars)



Short and Long Term Synergies

Here we discuss about different possible synergies between Meta and Whatsapp

	Synergies	Duration	Explanation
Corporate Functions	<ul style="list-style-type: none"> Integrate operations to eliminate redundancies Centralize leadership and management functions Standardize communication protocols 	1-3 yrs	<ul style="list-style-type: none"> Cost optimization Operational Alignment Strategic integration
User Base integration	<ul style="list-style-type: none"> Leverage Whatsapp user data for personalised and targeted Facebook and Instagram ads Boost cross-platform user engagement 	1-2 yrs	<ul style="list-style-type: none"> User retention Data monetization Ecosystem growth
Product and Technology	<ul style="list-style-type: none"> Integrating messaging systems across platforms Unify data infrastructure and analytics Share encryption and protocols 	2-4yrs	<ul style="list-style-type: none"> Technology alignment Feature Enhancement Resource efficiency
Monetization	<ul style="list-style-type: none"> Introduce in-app payment features Explore business messaging and API tools Develop premium subscription model 	3-5yrs	<ul style="list-style-type: none"> Revenue expansion Market penetration Profit maximization
Post-Merger	<ul style="list-style-type: none"> Align company culture and HR practices Retain and incentivize key talent Harmonize brand identity and customer experience 	Lifelong	<ul style="list-style-type: none"> Cultural alignment Talent Retention Brand Synergy

Acquisition Feasibility

Acquisition of Whatsapp offers Meta a advantage to enhance it's global presence and market dominance



Advantages:

•Massive User Base & Data Access for Ad Revenue

At acquisition, WhatsApp's rapid growth, adding over 1 million users daily, provided Facebook with a vast user base and valuable data. Although WhatsApp lacked an ad model, Facebook could leverage this data to enhance ad targeting on its platforms, boosting revenue on Facebook and Instagram.

•Integration with Facebook's Cloud Infrastructure

By replacing WhatsApp's third-party cloud storage with its own infrastructure, Facebook could achieve cost savings, improve data security, and gain better control over user data, enhancing WhatsApp's efficiency and user experience.

•Expansion of Facebook's Global Reach

WhatsApp's strong presence in markets like India, Brazil, and parts of Europe allowed Facebook to expand in regions where it had lower penetration, aligning with its growth strategy and unlocking new monetization opportunities.

•Synergies with Facebook's Messaging Services

The acquisition enabled synergies between WhatsApp and Facebook Messenger, fostering cross-platform innovation and a cohesive messaging ecosystem, which strengthened Facebook's position against competitors like WeChat and iMessage.

•Defense Against Competitors

Acquiring WhatsApp was also a defensive strategy, preventing competitors like Google or Apple from acquiring the platform, thus reinforcing Facebook's dominance in global communication and reducing the threat from rivals.

Conclusion:

After evaluating the potential benefits and risks, Facebook should proceed with acquiring WhatsApp. This move offers a substantial opportunity to expand Facebook's user base and enhance its position in key international markets. Integrating WhatsApp's growing user base can boost ad revenue and global reach, while incorporating WhatsApp into Facebook's cloud infrastructure promises cost efficiencies and improved data security. Additionally, this acquisition serves as a defensive strategy, preventing competitors from gaining a major messaging platform. However, Facebook must manage this acquisition carefully, focusing on valuation and integration to avoid overpayment and operational challenges. Effective communication with stakeholders is crucial to address concerns about stock dilution and earnings impact. Overall, acquiring WhatsApp aligns with Facebook's long-term goals and, if executed well, can solidify its leadership in global communication and support sustained growth.

Risks:

• Lack of Competition

Acquiring WhatsApp could further cement Facebook's dominance in the global internet media industry, reducing competitive pressures. This consolidation might lead to decreased innovation and productivity, which are crucial for long-term growth and market performance.

• Overvaluation Risk

There is concern that Facebook's stock might be overvalued, potentially leading to lower long-term returns and reduced operating performance. Historical examples show that tech companies often face significant stock price declines after high-profile acquisitions.

• Integration Challenges

Integrating WhatsApp into Facebook's ecosystem carries risks. Challenges in this process could cause customer dissatisfaction and user attrition, similar to integration issues seen in other major acquisitions.

• Stock Dilution & EPS Impact

The acquisition would increase Facebook's shares outstanding, leading to stock dilution and a potential drop in earnings per share (EPS). This could negatively affect investor sentiment and the company's stock price.

• Lack of Diversification

The acquisition might reduce diversification by concentrating Facebook's focus on social media and messaging. This increase in firm-specific risk could lead some investors to reconsider their investment in Facebook, impacting its long-term appeal.

Type of Acquisition & Expected ROI timeline

Combination of Cash and Stock acquisition is recommended for balanced finances and synergy
The expected ROI CAGR with synergy is around 47.82% and Meta can expect it's ROI in 10 years

Possible types of acquisitions:

All-cash Acquisition

- Pros: Efficient, Transparent, Full Control, captures all synergies
- Cons: High agency costs, potential impact on credit rating

All-stock Acquisition

- Pros: Split synergies, avoids capital gains taxes for target shareholders
- Cons: May signal that the target is overvalued

Combination of Cash and Stock Acquisition

- Pros: Efficient transaction cost management, Flexibility
- Cons: Requires careful balance between cash and stock

Recommended Acquisition

- Considering Meta's situation, a combination of cash and stock seems favourable
- This acquisition allows Meta to strike a balance between financial impact and synergy capture

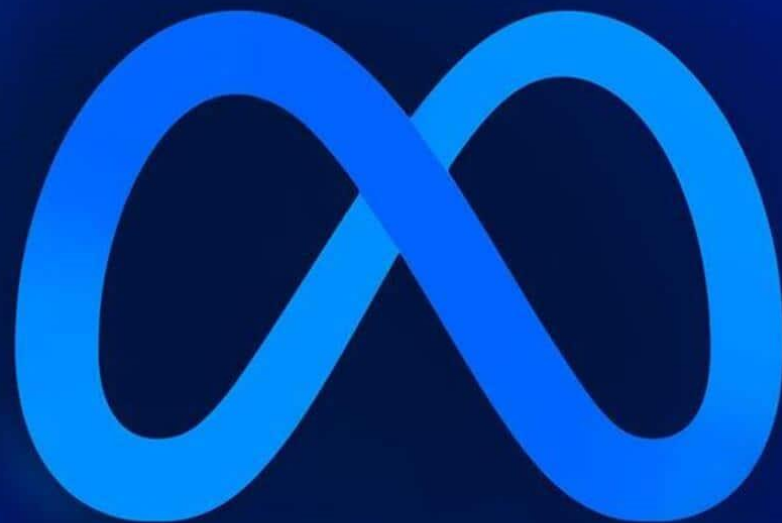
Assumptions:

- Whatsapp Revenue is predicted from the user growth during DCF calculation
- Meta Revenue from Whatsapp is assumed to be 1/3rd of Whatsapp's Revenue
- Meta Revenue with the synergy is assumed to be 2 times of Meta's Revenue from Whatsapp

Break-even point prediction:

Year	WhatsApp Revenue (USD Million)	Meta Revenue Growth from WhatsApp (USD Million)	Meta Revenue Growth with whatsapp synergy(USD Billion)
2014	143.8	47.9	95.8
2015	343.7	114.5	229
2016	685.1	228.3	456.6
2017	1180.5	393.5	787
2018	1846.1	615.3	1230.6
2019	2513	837.6	1675.2
2020	3290.6	1096.2	2192.4
2021	4180	1393.3	2786.6
2022	5179.9	1726.6	3453.2
2023	6288.3	2096.1	4192.2
2024	7100.1	2366.7	4733.4
			21832

- Determining a precise break-even point for the acquisition is difficult due to various factors. Considering the estimated data, the break-even point might fall beyond the 10-year timeframe analyzed in this table.



Thank you