INSIDE EDGE
CAPITAL

Big Tech
Bets On AI

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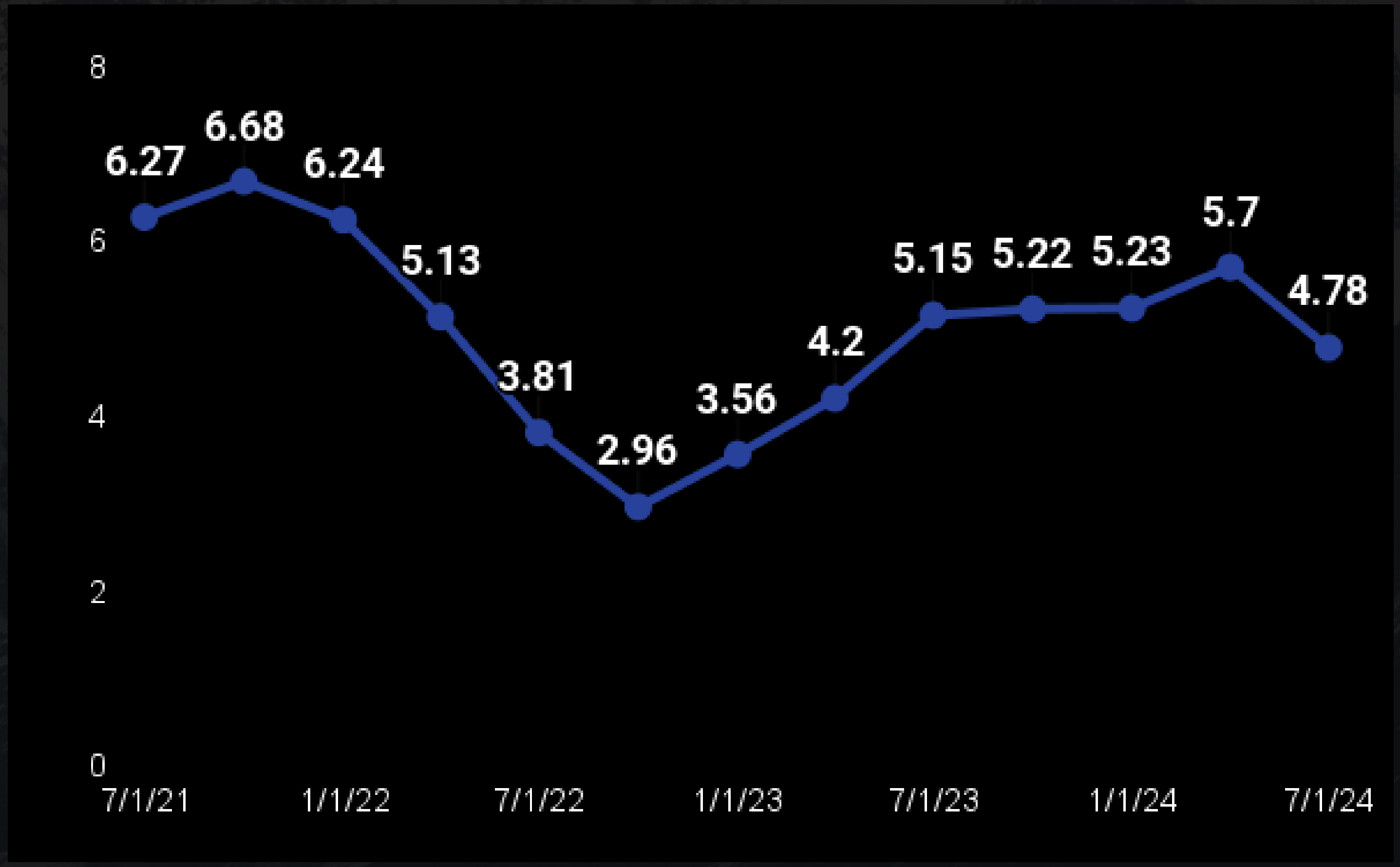
Various indexes were chosen that are generally recognized as indicators or representation of the stock market in general. Indices are typically not available for direct investment, are unmanaged and do not include fees or expenses. Some indices may also not reflect reinvestment of dividends.

What Is Capital Expenditure?

- In the last month, as I have been working alongside Todd and Kyle, I have been learning more about the markets then I ever could have asked for.
- I came into this internship with a basic understanding of the markets, but have vastly expanded this knowledge as the team and I have worked over the past month.
- One big idea we have been talking about is the growth of capital expenditures in companies, something that I had not even heard of prior to this internship.
- **Capital Expenditure**
    - Measures spending on equipment, buildings, land, and R&D.
    - All expenses that do not directly relate to selling expenses but allow for the buildout of new products.
    - Capital Expenditures (CapEx) goes on the Statement of Cash Flows.
- Companies CapEx has been growing at such a rapid rate because of AI spending.
- Most companies do not yet have the infrastructure built out to run massive AI models, and the race is underway to get their AI products to market and monetize them.
- However, these products will not be hitting the market immediately, and most major companies will see their products hit the market in at least a year.
- Because CapEx is a long-term investment, companies depreciate these costs over time on the Statement of Cash Flows.

Meta

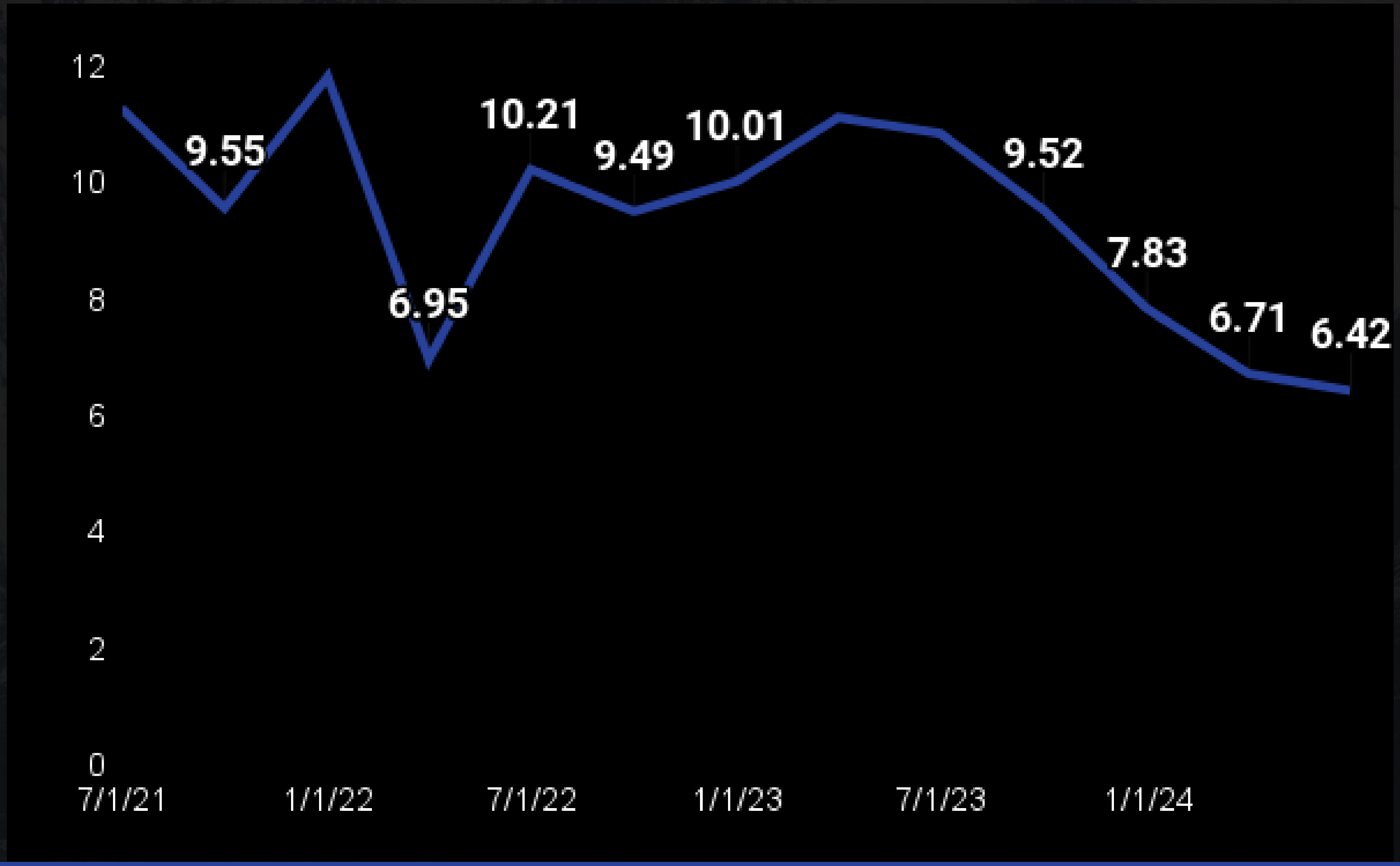
- So far, Google, Microsoft, Meta, and Apple have reported Q2 earnings, and this trend of growing CapEx can be seen with each company
- The Mag 7 have spent more than anyone else on CapEx, because they really believe in the future of AI and building it into their products.
- In Meta's earnings report, they raised their annual CapEx estimate from $30-33 billion to $35-40 billion.
  - From 2020 to 2023, Meta's CapEx grew by 90%, from roughly $15 billion to almost $29 billion.
  - After this massive growth in CapEx Meta announced that in 2024 they are estimated to spend even more, between $35-40 billion on CapEx.
  - The chart below shows the Revenue/CapEx Ratio for Meta
    - A high ratio indicates efficient return on CapEx, and a low ratio indicates a poor return on CapEx.
    - Meta's CapEx returns have been declining steadily since 2021, and have rebounded slightly, but the company is still not seeing great returns on its CapEx.
- Meta has increased their CapEx at such a rapid rate, without any real evidence that they can turn a profit in their AI business segments.
  - Reality Labs, which develops Meta's AI products, has been bleeding cash in the past 4 years.
  - In 2020 they lost over $6 billion. They lost $10 billion in 2021, $13 billion in 2022 and $16 billion in 2023.
  - This trend shows no signs of stopping, as yesterday Meta said that the unit lost $4.48 billion in Q2 2024.



Google

- Google was the first of the Mag 7 companies to report earnings this quarter, and although they beat expectations on both the top and bottom line, their stock fell after they reported.
- Google reported that their CapEx was increasing, and investors ignored the companies earnings beat and focused on Google's high CapEx.
- The CEO, Sundar Pichai, doubled down on the spending, and said "the risk of under-investing is dramatically greater than the risk of over-investing for us here."
    - Year-over-year, Google's CapEx is up almost 92%, spending $13 billion on CapEx last quarter alone.
- This growth in CapEx is not showing signs of stopping, both because of their CEO's comments on under-investing and the guidance they released.
    - In their earnings report, Google said to expect CapEx of above 12 billion for multiple quarters consecutively in the future.

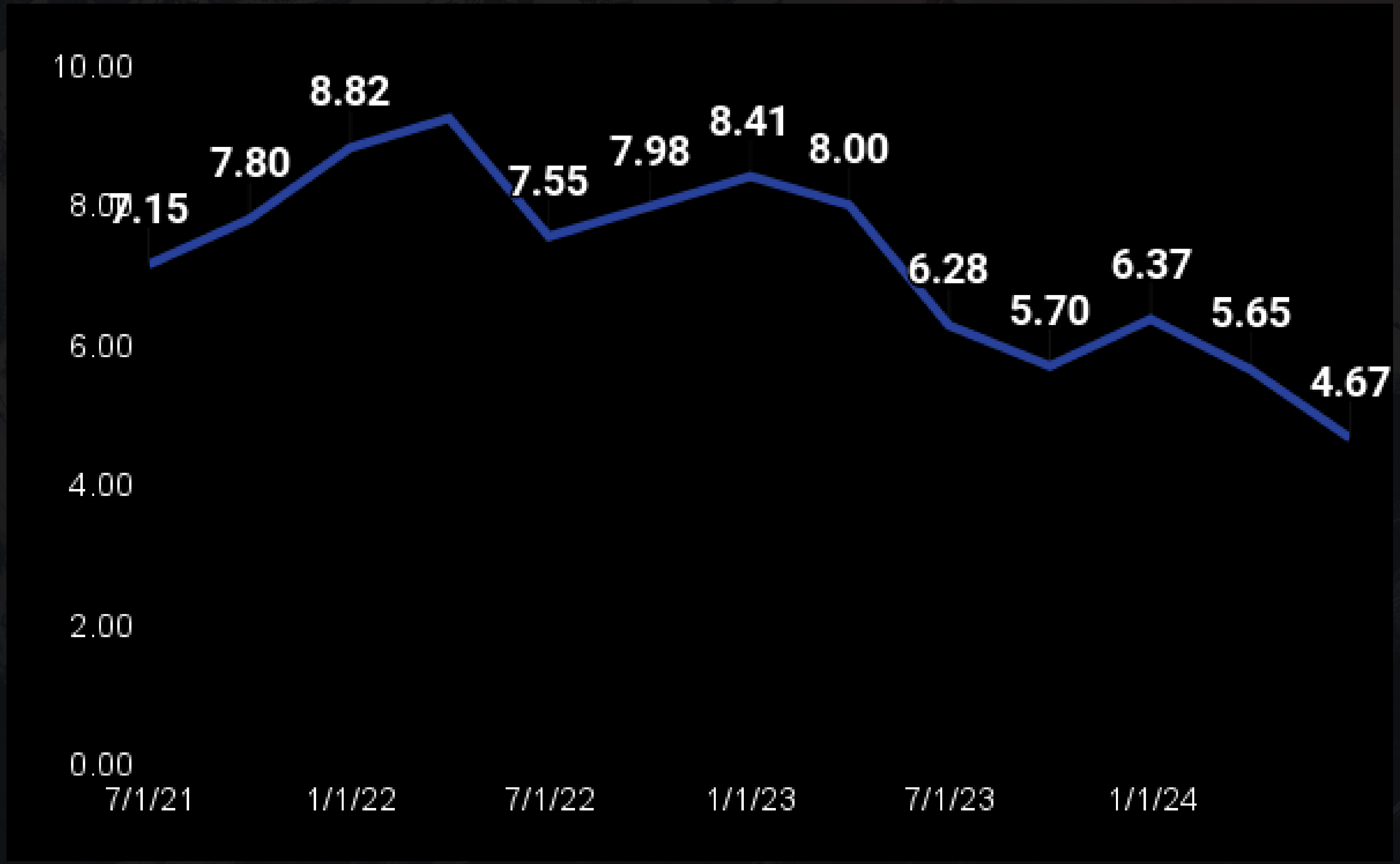
- Google's Revenue/CapEx chart shows a declining trend, which means they are **increasing** their spend on AI infrastructure relative to revenue.
- Since they ramped up spending in 2023, this ratio has been steadily declining.
    - However, Google has reported that AI systems are slowly starting to contribute to revenue, and in the near future should have a big impact on margins.



Microsoft (MSFT)

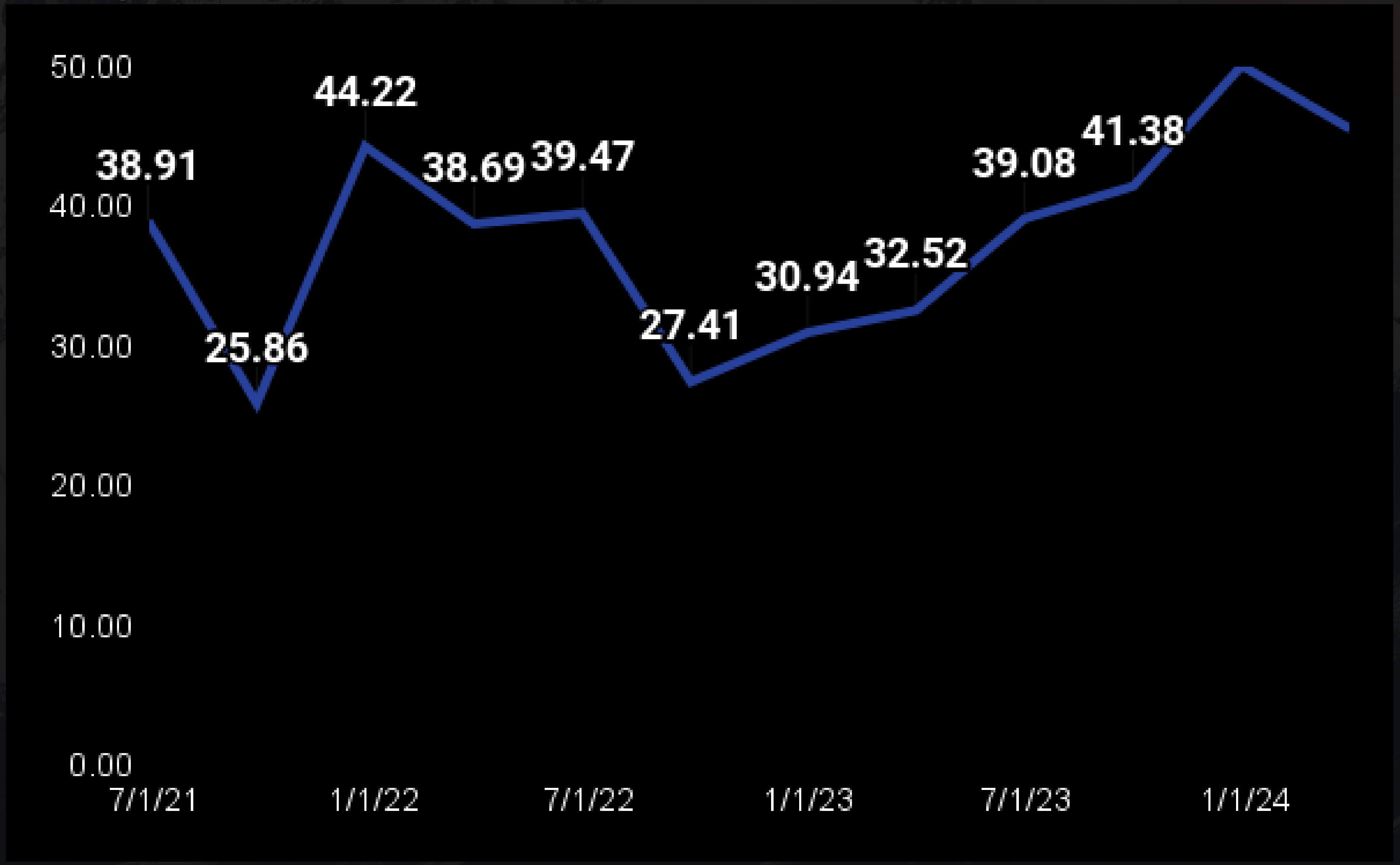
- Microsoft reported earnings last week, and followed the same story as most of the other Mag 7 companies as of late
- Even though the company beat on EPS, the stock sold off after the earnings report, as investors were worried by the high CapEx.
  - The company spent almost $14 billion on CapEx this most recent quarter, and the company said that it expects to spend more on CapEx in 2025 than 2024.
- Year-over-year, CapEx is up 55%.
- For the fiscal year ending in June, CapEx was up 60% to 69 billion.
- Microsoft has seen some promising signs from their AI investments in Azure, which has taken market share from AWS (Amazon Web Services)
  - Five years ago, Azure was only half as big as AWS, and now, Azure is three-quarters as big as AWS
  - Additionally, Azure's revenue is growing faster
    - 30% revenue growth from Azure versus 13% AWS reveune growth year-over-year

- However, in the chart below, we see Microsoft's CapEx has been increasing much faster than revenue's, which is why this ratio is falling.
- Microsoft could have a long way to go before their AI investments really pay off, and their Revenue/CapEx ratio will continue to fall until this happens.



Apple

- Apple reported earnings last week, and beat earnings on the top and the bottom lines.
- Apple has adopted a different strategy approaching AI, and in doing so their CapEx has been more efficient. All of their competitors have been pumping billions into AI investment with little to show for it, while Apple seems to be spending very little on AI.
- Apple's CapEx has been around $2 billion a quarter consistently over the past few years, while most of the Mag 7 has seen their quarterly CapEx rise above $10 billion a quarter consistently.
  - Looking at the chart to the right, Apple's Revenue/CapEx ratio is head and shoulders above its competition. Meta and Microsoft have a ratio of 4 and are trending even further downward, and Apple is trending higher at almost 50.
    - Apple brings in $50 for every dollar spent on CapEx, while Meta/Microsoft bring in $4 for every dollar spent on CapEx.
  - Though Apple has not announced many details about their AI plans, they have released some clues.
    - Apple did say they are taking a hybrid approach to the AI race, and will not spend hundreds of billions like their competitors. Instead, it appears they will be using their partners and suppliers servers and data centers, pushing the costs over to them.
- Apple also has the advantage of manufacturing their own chips in house, and does not need to outsource to Nvidia as much as the rest of big tech.
    - To train Apple Intelligence, Apple rented cheaper Google TPU's, instead of buying expensive Nvidia chips to build data centers to train the model.
  - Additionally, Apple has been holding discussions with Open AI to integrate its chatbot into IOS 18.



Overall Trend In the Market

- In the first quarter of the year, companies like Meta saw their stocks plummet after announcing CapEx increases.
- As recent as last week, when Google reported that their CapEx had grown so rapidly, the stock sold off quickly.
- However, when Meta reported earnings and increased their estimates on CapEx for this year, their stock rose 5%, and was up over 6% yesterday.
    - Recently, Mag 7 companies have sold off following announcements of CapEx increases, but this time was different.
        - This raises the question, are markets realizing that this CapEx growth is necessary to be able to compete with every other company creating new AI products?
        - Additionally, will the market begin to punish companies not spending on AI and increasing CapEx, fearing they will be left behind if they don't keep up? Or is Apple's Strategy going to end up paying off much quicker than the rest of big tech
            - So far, Apple's move to spend significantly less than the Mag 7 on AI seems to be paying off, but they could also quickly fall behind.
    - It will be interesting to see how this trend develops as earnings season continues on

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