招銀国际 CMB INTERNATIONAL
招商银行全资附属机构 A Wholly Owned Subsidiary Of China Merchants Bank

Technology (Hardware/Semi)

Thematic investment & megatrend: CSP3 & Meta ramp up spending to stay at the AI front line

Post 3Q earnings, investors have regained confidence in AI capital spending for the next few quarters. Amazon/Microsoft/Alphabet/Meta ("CSP3 & Meta") all announced QoQ increases in their 3Q capex. The aggregate number topped US$37bn, representing the fourth highest quarterly spending in history. These companies are committed to ramping up spending to remain competitive at the AI front line.

Recent positive catalysts on AI services/products also confirm that tech infrastructure investment will continue to accelerate AI adoption. We've observed significant AI monetization progresses, such as 1) Open AI ARR having surpassed US$1.3bn (link), and 2) new products/services featuring generative AI by Microsoft (link), Amazon (link), Alphabet (link), Meta (link), Adobe (link), etc. Moreover, OpenAI held its first developer event on Nov 6 and made a series of significant announcements that we think are revolutionary. These models and products would broaden the access and reduce development costs for all, thus, **enhancing OpenAI and Microsoft's leading position in AI further.**

Implication 1: We believe CSP3 & Meta will continue allocating significant capital in AI to strengthen their capabilities and capitalize on growing demand in AI. According to Bloomberg consensus, capex forecasts for 2023/24E are raised to US$149bn and US$172bn, from previous Aug estimates of US$147bn and US$163bn. This translates into 15% YoY annual growth in 2024, reflecting resumed YoY growth from pervious 38%/34%/19% during 2020-2022. Capex to revenue ratio is projected by Bloomberg to maintain at the 12%-13% level (vs. 11.8%/12.4%/13.5% during 2020-22), based on higher revenue estimates. The revisions in forecasts reflect CSP3 & Meta's endeavor to strengthen their leading positions further. It is also reported that Apple is planning to spend US$1bn annually on developing its own generative AI products, mainly for features like improving photos and autocorrecting text (link).

Implication 2: Monetization and efficiency remain the major focuses of investors. Hyperscalers' share performance post earnings calls shows investors are tracking closely the development of their cloud businesses. Microsoft's share rallied on its strongest sales growth in six quarters. Azure's sales grew 29% YoY in 3Q and is expected to grow 26%-27% in 4Q according to its most recent earnings call, with greater contribution from AI. On the contrary, Google's share slid on a Google cloud revenue shortfall (US$8.4bn actual vs. US$8.6bn est.). The segment's revenue grew 22.5% in 3Q vs. 28% in 2Q. AWS recorded the slowest cloud segment growth at 12% among the CSP3 as big businesses looked to lower their spending, but according to the CEO of Amazon, some AWS orders were signed in September and thus will be reflected in 4Q results, and he is overall optimistic about the outlook for AWS as the "pace and volume of closed deals pick up."

Implication 3: The underlying demand for AI chips and related hardware will continue to outpace supply in the short to medium term, which is expected to boost supply chain sales. We've also noted a divergence in share performance among players in this sector, as previously mentioned in our report (link) that only a few true domestic beneficiaries rode on the AI wave and would deliver strong sales growth. Key beneficiaries in AI supply chain have outperformed in 3Q and we think they are likely to ride the tailwind of AI capex cycle in the following quarters.

OUTPERFORM
(Maintain)

China Technology Sector

Lily Yang, Ph.D
(852) 3916 3716
lilyyang@cmbi.com.hk

Kevin Zhang
(852) 3761 8727
kevinzhang@cmbi.com.hk

Related Reports

1. "Hardware – Optical transceivers : Investors expect spectacular results in the AI infrastructure arms race" – 14 Aug 2023 (link)
2. "Hardware – Optical transceivers: Implications from Coherent 2Q23 results and guidance" – 18 Aug 2023 (link)
3. "Investors focusing on 800G transceivers ramp-up after 1H23 results" – 28 Aug 2023 (link)
4. Thematic investment and megatrend: Riding the AI wave into the next phase – 17 Oct 2023 (link)
5. Quick note on newly announced restrictions on advanced AI chips - 18 Oct 2023 (link)
6. Innolight (300308 CH) – Expect higher contribution from AI revenue in 3Q; Upgrade to Buy – 20 Oct 2023 (link)
7. Innolight (300308 CH) – Strong 3Q results on accelerating AI revenue – 24 Oct 2023 (link)

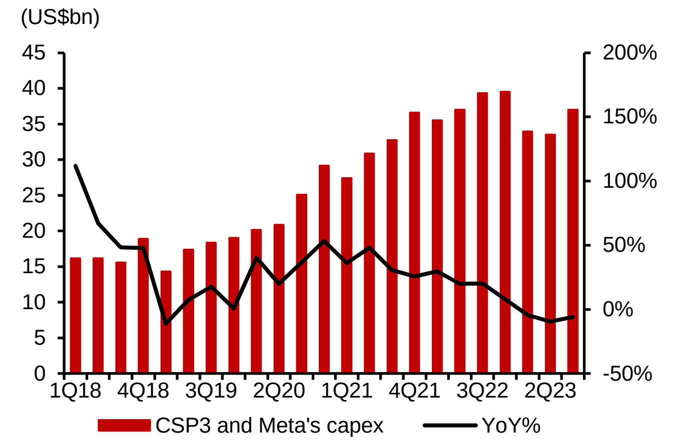
Contents

Review of hyperscalers' 3Q23 results

A rebound in capex

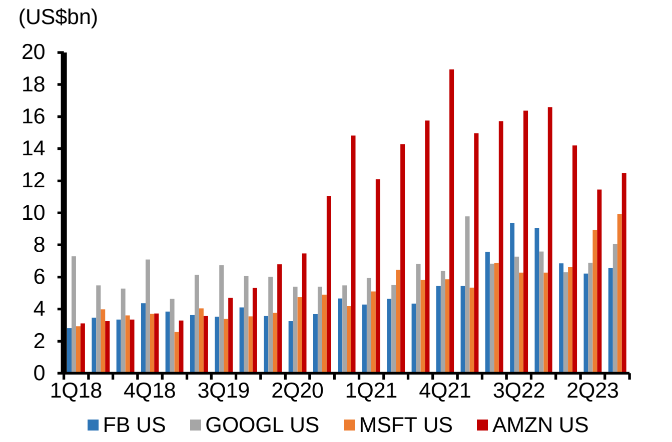
In 3Q23, there was an uptick in capex growth observed among the CSP3 and Meta. Amazon, Microsoft, Google, and Meta's capital spending grew 8.9%, 10.9%, 16.9% and 5.3% QoQ, respectively. The aggregate capex topped US$37bn in 3Q, which declined 5.9% YoY (given capex peaked in 2H22) but grew 10.4% QoQ in 3Q23.

Figure 1: The CSP3 and Meta's aggregate capex topped US$37bn in 3Q23



Source: Company data, CMBIGM estimates

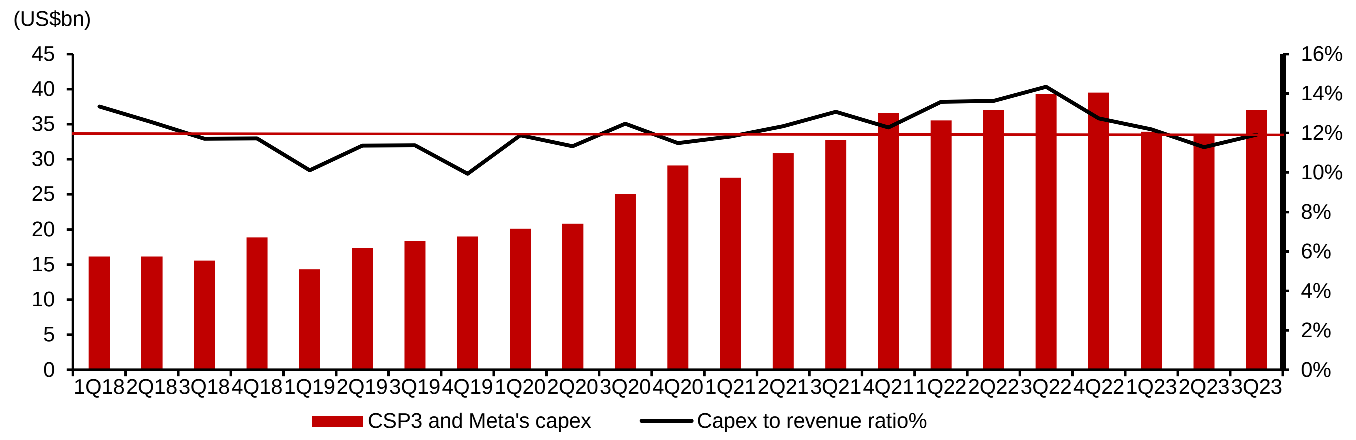
Figure 2: An uptick in capex growth observed among the CSP3 and Meta



Source: Company data, CMBIGM estimates

The capex to revenue ratio dropped to 11.9% in 3Q23 from its peak of 14.3% in 3Q22, largely due to revenue expansion. **The 3Q ratio is back to the 2020 level, which should ease some investors' concerns about a quick pullback of capital investment in the near term.** Looking forward, the ratio is expected to be maintained at the 12%-13% level according to Bloomberg.

Figure 3: Hyperscalers' quarterly capex to revenue ratio



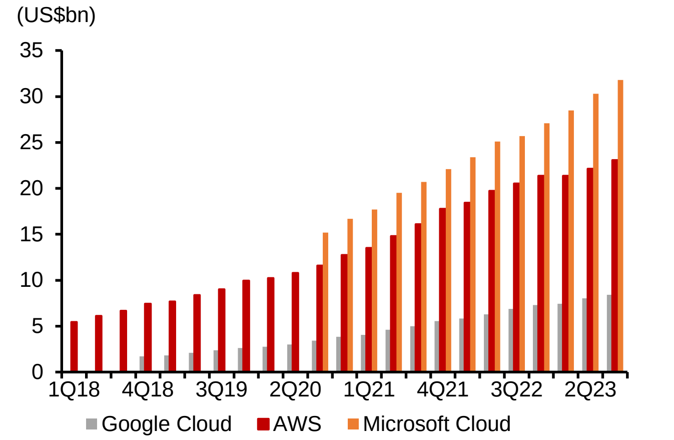
Source: Company data, CMBIGM estimates

Differing results in cloud business growth

3Q earnings from hyperscalers paint a mixed picture of the industry landscape.

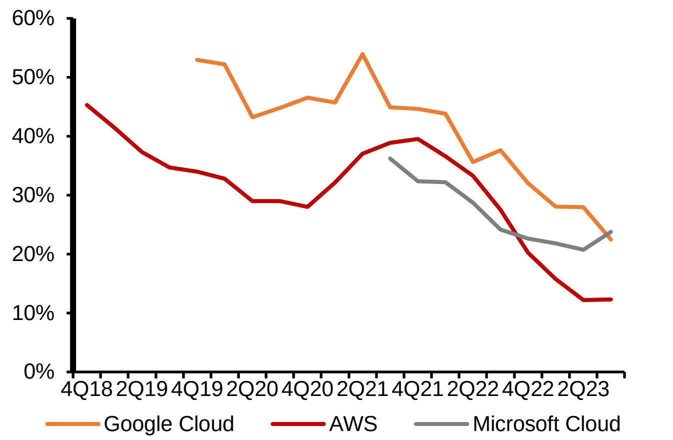
- Microsoft stands out prominently with strong growth across the board, particularly in its Intelligent Cloud segment. Azure's sales grew 29% YoY in 3Q and is expected to grow 26%-27% in 4Q according to its latest earnings call, with greater contribution from AI.
- On the other hand, Google's overall revenue grew but its cloud division fell short of expectations, underscoring the challenging competition it encounters in catching up with industry leaders like Amazon and Microsoft.
- Amazon's revenue was US$143.1bn, up 11% YoY. AWS' annualized revenue run rate is US$92bn, with growth rate stabilizing at 12%. While the company saw elevated cost optimization relative to a year ago, it continued to attenuate as more companies transition to deploying net new workloads and moving from being on-premises to being in the cloud. These initiatives have been stalled because companies are being more conservative with their spend and wary of an uncertain economy.

Figure 4: Hyperscalers' revenue comparison



Source: Company data, CMBIGM estimates

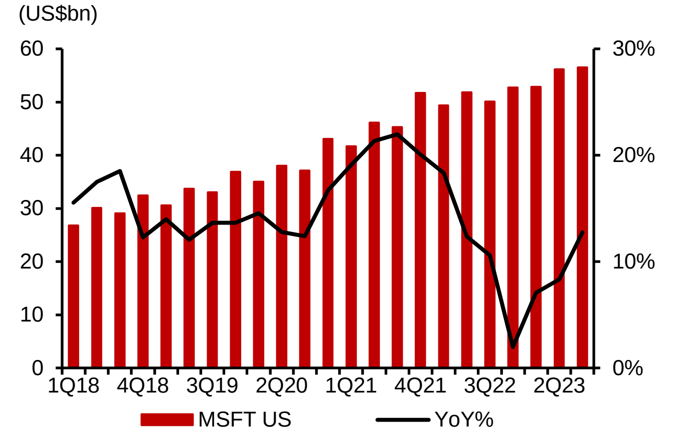
Figure 5: Hyperscalers' cloud revenue growth: Microsoft Cloud resumed growth, AWS managed to stabilize, while Google Cloud missed expectations



Source: Company datal, CMBIGM estimates

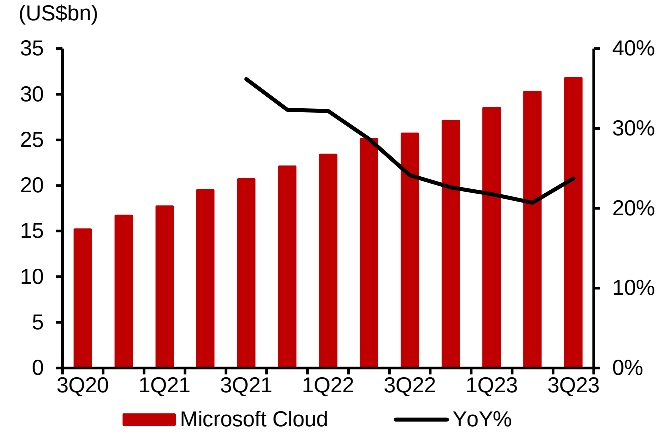
The clear winner: Microsoft posted revenue/NP growth of 13%/27% YoY. Notably, Microsoft Cloud posted robust 24% YoY revenue growth during the past quarter. Azure's sales grew 29% YoY in 3Q. Microsoft anticipates consistent Azure revenue growth in 4Q (26%-27%), with a growing contribution from AI. However, its mgmt. also notes that clients continue to seek ways to save on cloud spending, a trend noted by multiple major CSPs (cloud service providers) in recent quarters. The trend compels CSPs to strike a balance between their future capex and expected return in order to ensure sustainable growth in their AI-related developments.

Figure 6: Microsoft's quarterly revenue



Source: Company data, CMBIGM estimates

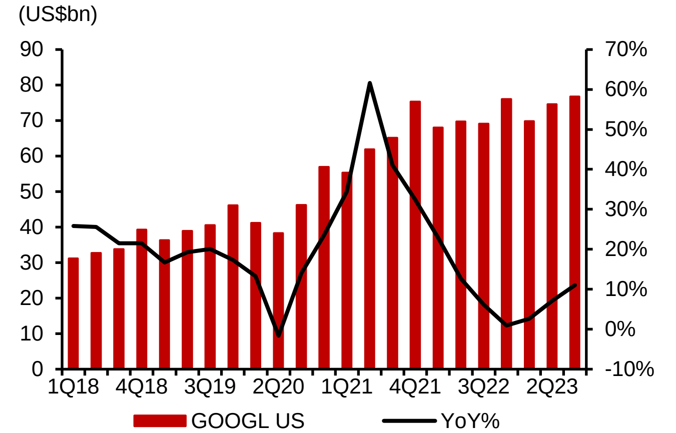
Figure 7: Microsoft Cloud's quarterly revenue



Source: Company data, CMBIGM estimates

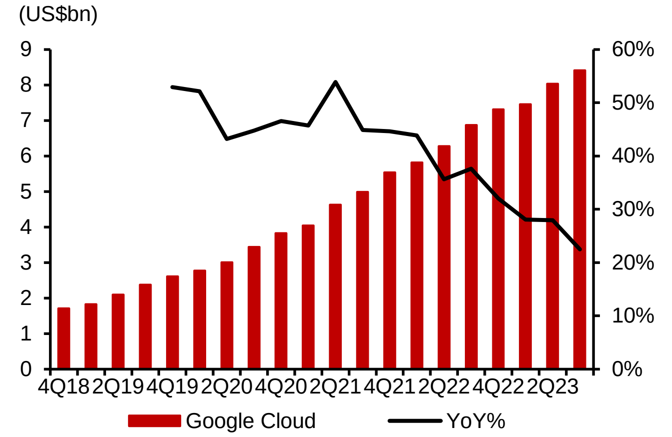
The overshadowed: Google, which reported 11% YoY revenue growth in 3Q23, has seen its cloud revenue fall short of expectations, with 22% YoY growth (vs. 25% est. by consensus). Alphabet, Google's parent company, has invested significantly in its cloud unit as it strives to compete with major CSPs like Amazon and Microsoft. Mgmt. at Alphabet has also noted that its investments in 3Q were primarily driven by investment in technical infrastructure with the "largest components for servers and followed by data centers."

Figure 8: Google's quarterly revenue



Source: Company data, CMBIGM estimates

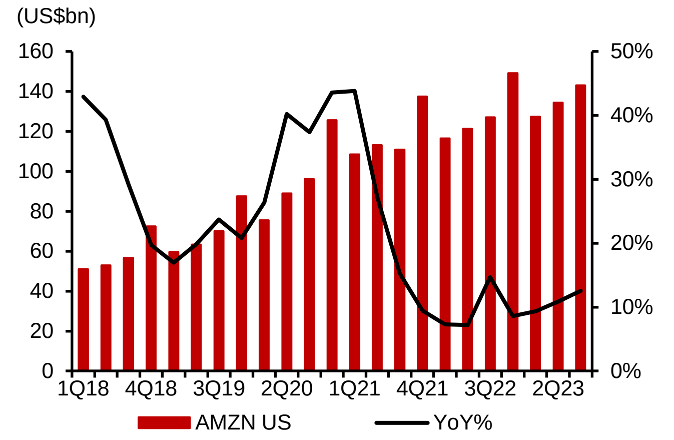
Figure 9: Google Cloud's quarterly revenue



Source: Company data, CMBIGM estimates

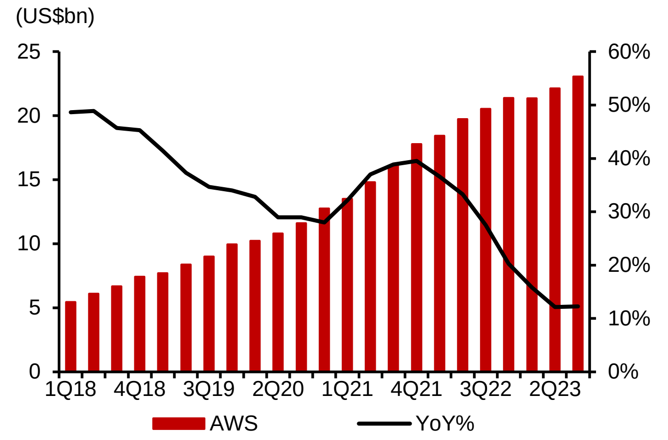
The hybrid giant: Amazon reported better-than-expected 3Q results as its revenue increased by 12.6% YoY and net income more than tripled to nearly US$9.9bn. AWS, Amazon's cloud unit, saw revenue growth of 12.3% YoY and 4.2% QoQ. AWS growth seemed to have stabilized to a slower pace comparing with the past few years as large businesses sought to reel in their spending. However, mgmt. at Amazon still sees "the pace and volume of closed deals picking up" from earlier in the year. The company observed attenuation in customers' optimization as more companies transition to deploying new workloads than one year ago. The move from being on-premises to being in the cloud has been stalled in 2023 because companies are being more conservative with their spend and wary of an uncertain economy.

Figure 10: Amazon's quarterly revenue



Source: Company data, CMBIGM estimates

Figure 11: AWS's quarterly revenue



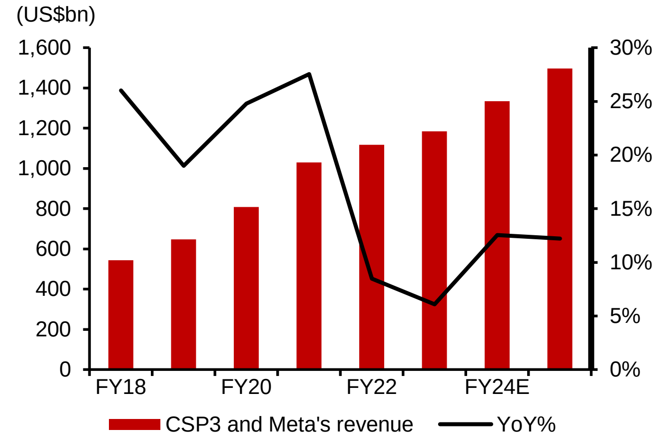
Source: Company data, CMBIGM estimates

The reborn: Meta had a decent quarter as its revenue grow by 23% and net profit more than doubled YoY, reflecting the positive impact of its ongoing business turnaround efforts. Regarding capex, Meta has chosen to significantly increase its spending, primarily directed towards AI data centers. The company anticipates its capex for 2023 to fall within the range of US$27-29bn and estimates 2024 capex to be approximately US$30-35bn. These investments will focus on expanding server infrastructure, including both AI and non-AI hardware, and expanding data center facilities, aligning with the new design announced late last year.

Big four's capex outlook: 15% YoY projected growth in 2024

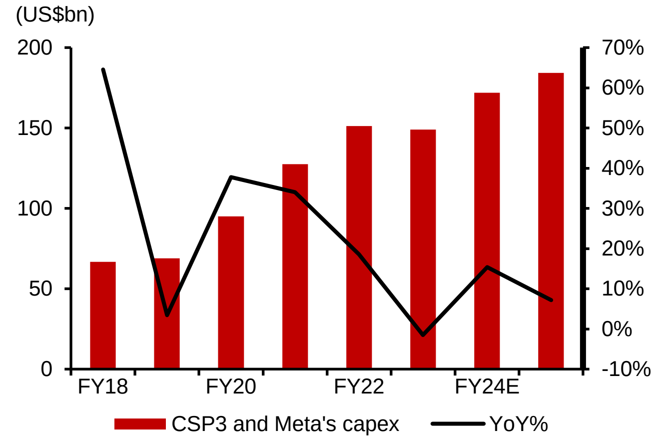
We believe the CSP3 & Meta will continue allocating significant capital in AI to strengthen their capabilities and capitalize on growing demand in AI. According to Bloomberg consensus, capex forecasts for 2023/24E are raised to US$149bn and US$172bn, from previous Aug estimates of US$147bn and US$163bn. This translates into 15% YoY annual growth in 2024, reflecting resumed YoY growth from pervious 38%/34%/19% during 2020-2022. According to Bloomberg consensus, the capex to revenue ratio will be maintained at the 12%-13% level (vs. 11.8%/12.4%/13.5% during 2020-22), based on higher revenue estimates. The revisions in forecasts reflect the CSP3 & Meta's endeavor to strengthen their leading positions further.

Figure 12: CSP3 and Meta's revenue is expected to grow 12.5%/12.2% YoY in 2024-25



Source: Company data, Bloomberg consensus, CMBIGM estimates

Figure 13: CSP3 and Meta's capex is expected to resume growth of 15.4%/7.2% YoY in 2024-25



Source: Company data, Bloomberg consensus, CMBIGM estimates

Figure 14: Overseas hyperscalers' cloud business outlook and capex forecast for 2023

	Hypersecalers' capex outlook	
	Business outlook	**Capex comments**
Amazon	AWS revenue up 12% YoY to US$23.1bn. Amazon has noted that customers continued to seek optimization on their spending on cloud, which remained as a headwind. Mgmt. believed many companies reserved their plan for migration to cloud due to macro uncertainties in 2023. Looking forward, the mgmt. believes as it expands its footprints, there will eventually be more demand.	For full-year 2023, the company expects capex to be around US$50bn, compared to US$59bn last year. However, a larger portion of the capex will be dedicated to supporting growth of AWS, including additional "investments related to generative AI and LLM efforts."
Google	Google Cloud's revenue in 3Q was US$8.4bn, representing 22.5% YoY growth, which was the slowest since 1Q21. Mgmt. attributed the weak growth to "customer optimization efforts," but mgmt. reinstated that there is still strong interest in AI with multiple projects underway, particularly on the Vertex platform.	Google's capex in 3Q was US$8bn and was primarily driven by investment in technical infrastructure with the "largest components for servers and followed by data centers." Capex growth might seem muted in 3Q due to the "timing of supplier payments," and Google is dedicated to continuing investing in tech infrastructure to seize any potential opportunities in 4Q as well as throughout 2024. "2024 aggregate capex will be above the full year 2023."
Microsoft	Microsoft expects its Cloud segment's GPM to increase slightly next quarter as a result of improvement in Azure and Office 365. In terms of revenue, Microsoft expects its Intelligent Cloud to grow by 17-18%, and its Azure to grow by 26-27% with increasing contribution from AI. A substantial portion (around 3 percentage points) of Azure's growth in the quarter was attributed to AI, exceeding the company's previous forecast of 2 points of growth in that area. Microsoft is confident about its competitive position, execution, and its ability to gain market share.	Microsoft's capex in 3Q was US$11.2bn driven mostly by investments to scale its AI infrastructure. It also saw stronger cash flow from operations (up 32% YoY) due to strong cloud billings. Microsoft expects capex to "increase sequentially on a dollar basis" due to heavier investments in its cloud and AI infrastructure.
Meta	3Q total revenue was US$34.1bn, up 23% YoY, beating the street consensus. The better-than-expected results could largely be attributed to the company's swift monetization strategy accompanied by strong user engagement. Mgmt. noted that its investments in AI capacity has enabled it to "support leading generative AI research."	Capex was US$6.8bn "driven by investments in servers, data centers, and network infrastructure." But the dollar value was below last year's level due to "lower server and data center construction spend" as the company is prepared to shift to a new data center design. "2023 capital expenditures to be in the range of $27-29 billion, updated from our prior estimate of $27-30 billion. Full-year 2024 capital expenditures will be in the range of $30-35 billion, with growth driven by investments in servers, including both non-AI and AI hardware, and in data centers as we ramp up construction on sites with the new data center architecture we announced late last year."

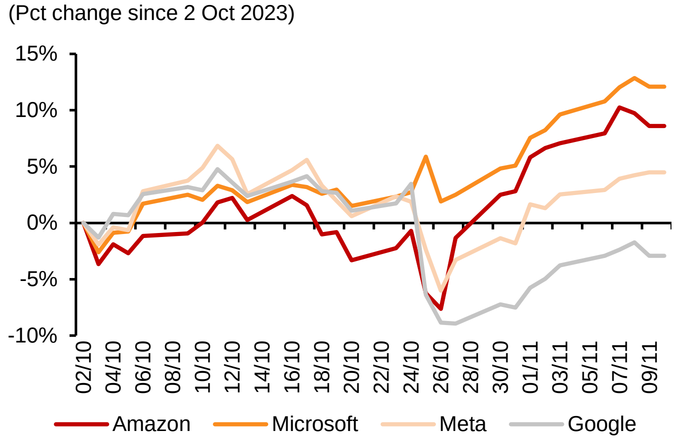
Source: Company data, CMBIGM estimates

A divergence in share performance post earnings as the market focuses on monetization and efficiency

Monetization and efficiency remain the major focuses of investors. Hyperscalers' share performance post earnings calls shows investors are tracking closely the development of their cloud businesses.

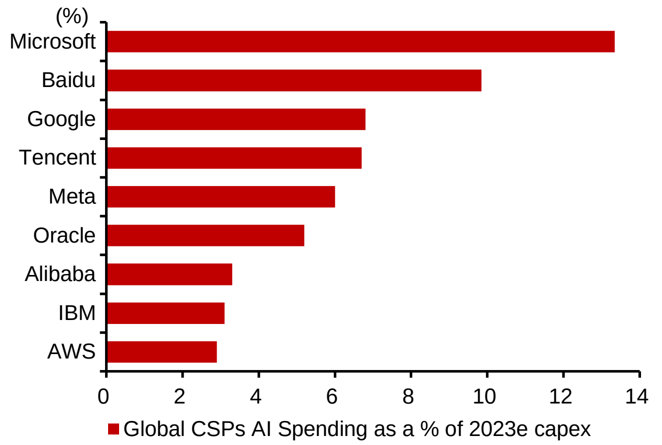
- Microsoft's share rallied on its strongest sales growth in six quarters. Azure's sales grew 29% YoY in 3Q and is expected to grow 26%-27f% in 4Q according to its latest earnings call, with greater contribution from AI.
- On the contrary, Google's share slid on a Google cloud revenue shortfall (US$8.4bn actual vs. US$8.6bn est.). The segment's revenue grew 22.5% in 3Q vs. 28% in 2Q.
- Despite that AWS had the lowest growth of 12% YoY, the company disclosed several large orders came in late and will be reflected in the next quarter. Share price responded immediately after these comments.

Figure 15: A divergence in share performance post earnings



Source: Company data, Bloomberg, CMBIGM estimates

Figure 16: Global cloud service providers' AI spending



Source: Counterpoint, CMBIGM estimates

CSP3 and Meta's 3Q results confirmed a new tech infrastructure investment cycle

Based on the most recent earnings calls, **the CSP3 and Meta are committed to ramping up spending to remain competitive at the AI front line.** Apart from that, **recent positive catalysts on AI services/products also confirm that tech infrastructure investment will continue to accelerate AI adoption.** We've observed significant AI monetization progresses, such as 1) Open AI ARR having surpassed US$1.3bn (link), and 2) new products/services featuring generative AI by Microsoft (link), Amazon (link), Alphabet (link), Meta (link), Adobe (link), etc.

Figure 17: AI monetization strategies for key players

Company (Products)	AI monetization strategies
Microsoft (OpenAI)	**Microsoft launched its Microsoft Office 365 Copilot, which is set to be priced at $30/month for enterprise customers starting in November.** **OpenAI: 1) OpenAI generates most of its revenue from licensing fees for its models and products. Fees are based on usage, such as charging per image for Dall-E or per token for language models. 2) Subscriptions: OpenAI introduced ChatGPT Plus, a $20 per month premium subscription, providing users with enhanced access to compute resources.**
Meta (Instagram, WhatsApp)	**Ad targeting and optimization:** Meta leverages AI to enhance ad targeting. Machine learning algorithms analyze user data and behavior to help advertisers reach their target audiences more effectively. **AI-driven ad tools:** Meta offers AI-driven advertising tools like Advantage+ to marketers. These tools automate various aspects of the ad creation and optimization process.
Alphabet (YouTube, Google)	**Consumer-facing AI:** Google integrates AI-generated answers into search results, utilizing its dominant market share for adoption and potential targeted advertising. **Enterprise AI:** Google Cloud is a leader in AI services, benefiting from its ecosystem and cloud platform.
Amazon (AWS)	**Generative AI for advertising:** AWS demonstrates the use of generative AI for ad creative generation, creating hyper-personalized images and taglines. This helps tailor ads to specific audiences and demographics. **Shoppable video:** AWS provides solutions for shoppable video experiences, allowing viewers to shop within content seamlessly, enhancing engagement.
Baidu (Ernie Bot)	Ernie Bot is a generative dialogue product launched by Baidu, based on the Wenxin pre-trained Model (PTM). During its launch event, Baidu demonstrated Ernie Bot's capabilities, which include literary creation, business copywriting, mathematical and logical deduction tasks, Chinese comprehension, and multimodal generation (text, pictures, speech, dialect, and video). Baidu has already established partnerships with over 650 companies across various industries, including media, finance, automotive, and enterprise software. Local banks like CITIC Bank and PSBC have partnered with Baidu's Ernie LLM to apply human-computer dialogue AI technology in financial scenarios.
Iflytek	Education, healthcare, 2C, Auto industry, etc.

Source: Company data, CMBIGM

Moreover, **OpenAI held its first developer event on Nov 6 and made a series of significant announcements that we think are revolutionary.** These models and products would broaden access and reduce development costs for all, thus, enhancing OpenAI and Microsoft's leading position in AI further.

Key notes are listed below:

- Introduction of GPT-4 Turbo: The latest model by OpenAI, GPT-4 Turbo boasts enhanced capabilities with an updated database cutoff of April 2023 in addition to a 128k context window (equivalent to 300 pages of text in a single prompt). It also offers a cost advantage compared to the original GPT-4 model.
- GPTs and GPT Store: GPTs allow users to create custom versions of ChatGPT for specific purposes. GPTs can also be tailored to be more helpful in various aspects of daily life, work, or home tasks. Additionally, creating a GPT requires no coding background and can be shared with anyone.
- Assistants API: Empowering developers to create "agent-like experiences" within their own applications. An assistant is a specialized AI with specific instructions, access to additional knowledge, and the ability to utilize models and tools for various tasks. This API includes features like the Code Interpreter and Retrieval, as well as Function Calling, to simplify complex tasks that developers previously had to handle themselves, enabling the development of high-quality AI applications.
- New modalities in the API: includes GPT-4 Turbo with vision, DALL·E 3, and TTS (Text-to-Speech). 1) GPT-4 Turbo with vision can accept images as inputs in the "Chat Completions API," allowing use cases like generating captions, analyzing real world images with focus on detail, and interpreting documents with figures. 2) DALL·E 3 can now be integrated into ChatGPT and Enterprise customers into their own applications and products. 3) TTS allows developers to generate high-quality speech from text and currently offers six preset voices to choose from.

Figure 18: Revisions of OpenAI's LLM pricing

	Pricing revisions	
	Older models	New models
GPT-4 Turbo	**GPT-4 8K** Input: US$0.03 Output: US$0.06 **GPT-4 32K** Input: US$0.06 Output: US$0.12	**GPT-4 Turbo 128K** Input: US$0.01 Output: US$0.03
GPT-3.5 Turbo	**GPT-3.5 Turbo 4K** Input: US$0.0015 Output: US$0.002 **GPT-3.5 Turbo 16K** Input: $0.003 Output: $0.004	**GPT-3.5 Turbo 16K** Input: US$0.001 Output: US$0.002
GPT-3.5 Turbo fine-tuning	**GPT-3.5 Turbo 4K fine-tuning** Training: US$0.008 Input: US$0.012 Output: US$0.016	**GPT-3.5 Turbo 4K and 16K fine-tuning** Training: US$0.008 Input: US$0.003 Output: US$0.006

Source: Company data, CMBIGM

Implications for key beneficiaries within the AI value chain

The underlying demand for AI chips and related hardware will continue to outpace supply in the short to medium term, which should boost supply chain sales, in our view. We have also noted a divergence in share performance among players in this sector, as previously mentioned in our report (link) that **only a few true domestic beneficiaries rode on the AI wave and would deliver strong sales growth.**

Key beneficiaries in AI supply chain have outperformed in 3Q. For overseas players, Arista (ANET US) saw revenue/NP growth of 28.3%/54.0% YoY. Domestic suppliers, Innolight (300308 CH, BUY) and TFC (300394 CH) saw their revenue/NP grow by 14.9%/89.5% YoY and 73.6%/95.0% YoY. Nvidia (NVDA US) will announce 3Q results on Nov 21, with market expectations of a beat and raised guidance again.

Figure 19: Comments from overseas supply chain (3Q23)

Company	3Q23 AI-related comments
Fabrinet	Company saw revenue of US$533.3mn in 3Q, which was a new quarterly record with strong QoQ Datacom growth of 26%. The strong growth in Datacom was driven by 800G for AI applications, and has offset the weakness in telecom revenue, which recorded a decline of 6% QoQ. Looking forward, mgmt. believes datacom revenue to again dominate its telecom segment in the next quarter, during which inventory digestion in this segment is likely to continue.
Arista	Revenue was up by 3.5% QoQ and 28.3% YoY in 3Q23 boosted by strong demand for the company's cloud service. The company signals strong demand from its customers and has predicted at least double-digit growth for 2024 and even further beyond.
Coherent	The company recorded US$1.05bn in revenue with -12.6% QoQ growth above the guidance during the past quarter mainly due to weakness in telecom segment. However, the company's Datacom business remains resilient, as it predicts that **80% of its Datacom transceivers revenue will be from hyperscalers (currently at 60%) in FY25 driven by AI/ML applications.** The company also notes softness in the telecom sector as a combination of "end market softness and inventory digestions" at some key customers.

Source: Company data, CMBIGM

We expect the supply chain to ride the tailwind of AI capex cycle in the following quarters. Selected overseas beneficiaries include: AMD (AMD US), Broadcom (AVGO US), Marvell (MRVL US), Fabrinet (FN US), Arista (ANET US) and Micron (MU US). Selected Asia names include: SK Hynix (000660 KR), Innolight (300308 CH, BUY), LuxNet (4979.TT), Suzhou TFC (300394 CH), Yoke Tech (002409 CH), and Shannon Semi (300475 CH).

We want to highlight Innolight (300308CH) once more as a prime domestic beneficiary of the current AI-driven surge. We anticipate that hyperscalers will consistently allocate a significant portion of their capex to procure high-speed optical transceiver modules, e.g., 400G and 800G. We maintain our BUY rating for Innolight, with a TP of RMB109.3.

We have also identified some other potential beneficiaries of the AI trend listed as follows: AMD (AMD US), Broadcom (AVGO US), Super Micro Computer (SMCI US), Marvell (MRVL US), Fabrinet (FN US),and Micron (MU US). Selected Asia names: SK Hynix (000660 KR), Innolight (300308 CH), LuxNet (4979.TT), Suzhou TFC (300394 CH), Yoke Tech (002409 CH), and Shannon Semi (300475 CH).

Figure 20: AI comps table

		Mkt Cap	Price	P/E (x)		ROE (%)		EPS (US$)	
Company	Ticker	US$(mn)	(LC)	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E
Other identified AI beneficiaries									
Nvidia	NVDA US	1,159,665	465.7	143.9	43.1	29.7	76.2	3.3	10.9
AMD	AMD US	183,343	113.6	42.8	29.9	6.4	8.2	2.7	3.8
BROADCOM	AVGO US	376,159	911.1	21.6	19.6	73.2	72.4	42.2	46.4
SUPER MICRO	SMCI US	14,122	260.3	23.4	15.0	36.3	40.3	11.3	17.6
MARVELL	MRVL US	45,288	51.6	24.7	34.2	8.8	7.8	2.1	1.5
FABRINET	FN US	6,067	171.9	21.9	20.1	20.6	19.1	7.6	8.3
MICRON TECH	MU US	80,782	72.3	-	-	(11.4)	(4.7)	(4.5)	(1.4)
SK HYNIX INC	000660 KS	71,233	127,600.0	-	16.7	(13.7)	9.9	(8.6)	5.9
Peers Avg.				***46.4***	***25.5***	***18.7***	***28.6***	***7.0***	***11.6***
Peers Median				***24.1***	***20.1***	***14.7***	***14.5***	***3.0***	***7.1***
China A-share AI beneficiaries: optical modules									
INNOLIGHT	300308 CH	11,347	96.7	43.1	21.6	14.3	22.7	0.33	0.65
EOPTOLINK	300502 CH	4,167	41.3	41.6	24.3	12.7	19.1	0.14	0.24
ACCELINK	002281 CH	3,235	30.1	35.8	28.4	9.2	10.7	0.11	0.14
SUZHOU TFC	300394 CH	4,329	76.2	50.7	32.7	20.3	25.3	0.22	0.34
Peers Avg.				***42.8***	***26.7***	***14.1***	***19.5***	***0.2***	***0.3***
Peers Median				***42.3***	***26.3***	***13.5***	***20.9***	***0.2***	***0.3***

Source: Bloomberg

Disclosures & Disclaimers

Analyst Certification

The research analyst who is primary responsible for the content of this research report, in whole or in part, certifies that with respect to the securities or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about the subject securities or issuer; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific views expressed by that analyst in this report.
Besides, the analyst confirms that neither the analyst nor his/her associates (as defined in the code of conduct issued by The Hong Kong Securities and Futures Commission) (1) have dealt in or traded in the stock(s) covered in this research report within 30 calendar days prior to the date of issue of this report; (2) will deal in or trade in the stock(s) covered in this research report 3 business days after the date of issue of this report; (3) serve as an officer of any of the Hong Kong listed companies covered in this report; and (4) have any financial interests in the Hong Kong listed companies covered in this report.

CMBIGM Ratings

BUY	: Stock with potential return of over 15% over next 12 months
HOLD	: Stock with potential return of +15% to -10% over next 12 months
SELL	: Stock with potential loss of over 10% over next 12 months
NOT RATED	: Stock is not rated by CMBIGM
OUTPERFORM	: Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM	: Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM	: Industry expected to underperform the relevant broad market benchmark over next 12 months

CMB International Global Markets Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

CMB International Global Markets Limited ("CMBIGM") is a wholly owned subsidiary of CMB International Capital Corporation Limited (a wholly owned subsidiary of China Merchants Bank)

Important Disclosures

There are risks involved in transacting in any securities. The information contained in this report may not be suitable for the purposes of all investors. CMBIGM does not provide individually tailored investment advice. This report has been prepared without regard to the individual investment objectives, financial position or special requirements. Past performance has no indication of future performance, and actual events may differ materially from that which is contained in the report. The value of, and returns from, any investments are uncertain and are not guaranteed and may fluctuate as a result of their dependence on the performance of underlying assets or other variable market factors. CMBIGM recommends that investors should independently evaluate particular investments and strategies, and encourages investors to consult with a professional financial advisor in order to make their own investment decisions.
This report or any information contained herein, have been prepared by the CMBIGM, solely for the purpose of supplying information to the clients of CMBIGM or its affiliate(s) to whom it is distributed. This report is not and should not be construed as an offer or solicitation to buy or sell any security or any interest in securities or enter into any transaction. Neither CMBIGM nor any of its affiliates, shareholders, agents, consultants, directors, officers or employees shall be liable for any loss, damage or expense whatsoever, whether direct or consequential, incurred in relying on the information contained in this report. Anyone making use of the information contained in this report does so entirely at their own risk.
The information and contents contained in this report are based on the analyses and interpretations of information believed to be publicly available and reliable. CMBIGM has exerted every effort in its capacity to ensure, but not to guarantee, their accuracy, completeness, timeliness or correctness. CMBIGM provides the information, advices and forecasts on an "AS IS" basis. The information and contents are subject to change without notice. CMBIGM may issue other publications having information and/ or conclusions different from this report. These publications reflect different assumption, point-of-view and analytical methods when compiling. CMBIGM may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.
CMBIGM may have a position, make markets or act as principal or engage in transactions in securities of companies referred to in this report for itself and/or on behalf of its clients from time to time. Investors should assume that CMBIGM does or seeks to have investment banking or other business relationships with the companies in this report. As a result, recipients should be aware that CMBIGM may have a conflict of interest that could affect the objectivity of this report and CMBIGM will not assume any responsibility in respect thereof. This report is for the use of intended recipients only and this publication, may not be reproduced, reprinted, sold, redistributed or published in whole or in part for any purpose without prior written consent of CMBIGM.
Additional information on recommended securities is available upon request.

For recipients of this document in the United Kingdom
This report has been provided only to persons (I)falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended from time to time)("The Order") or (II) are persons falling within Article 49(2) (a) to (d) ("High Net Worth Companies, Unincorporated Associations, etc.,) of the Order, and may not be provided to any other person without the prior written consent of CMBIGM.

For recipients of this document in the United States
CMBIGM is not a registered broker-dealer in the United States. As a result, CMBIGM is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. The research analyst who is primary responsible for the content of this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA"). The analyst is not subject to applicable restrictions under FINRA Rules intended to ensure that the analyst is not affected by potential conflicts of interest that could bear upon the reliability of the research report. This report is intended for distribution in the United States solely to "major US institutional investors", as defined in Rule 15a-6 under the US, Securities Exchange Act of 1934, as amended, and may not be furnished to any other person in the United States. Each major US institutional investor that receives a copy of this report by its acceptance hereof represents and agrees that it shall not distribute or provide this report to any other person. Any U.S. recipient of this report wishing to effect any transaction to buy or sell securities based on the information provided in this report should do so only through a U.S.-registered broker-dealer.

For recipients of this document in Singapore
This report is distributed in Singapore by CMBI (Singapore) Pte. Limited (CMBISG) (Company Regn. No. 201731928D), an Exempt Financial Adviser as defined in the Financial Advisers Act (Cap. 110) of Singapore and regulated by the Monetary Authority of Singapore. CMBISG may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, as defined in the Securities and Futures Act (Cap. 289) of Singapore, CMBISG accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact CMBISG at +65 6350 4400 for matters arising from, or in connection with the report.