THE POWER OF EXPECTATIONS: NVIDIA'S EARNINGS AND THE MARKET'S REACTION!

The expectations game!

The Lead In

- Last Wednesday (August 28), the market waited with bated breath for Nvidia's earning call, scheduled for after the market closed.
- That call, at first sight, contained good news, with revenues and earnings coming in above expectations, but the stock fell in the aftermath, with the stock down 8% in Thursday's trading and continuing its decline in the following days.
- This dance between companies and investors, playing out in expectations and actual earnings, and a feature of every earnings season, especially so in the United States, has always fascinated me.
- In this session, I will use the Nvidia earnings release to examine what news, if any, is contained in earnings reports and how traders and investors use that news to reframe their thinking about stocks.

Earnings Releases

- When I was first exposed to financial markets in a classroom, I was taught about information being delivered to markets, where that information is processed and converted into prices.
- I was fascinated by the process, and it was the subject of my doctoral thesis, on how distortions in information delivery (delays, lies, mistakes) affects stock returns.
- In the real world, that fascination has led me to pay attention to earnings reports, which while overplayed, remain the primary mechanism for companies to convey information about their performance and prospects to markets.

1. The Timing

- The Securities Exchange Act of 1934 required annual and quarterly reports from publicly traded companies be made in a timely manner, with a 1946 stipulation the annual filings being made within 90 days of the fiscal year-end, and the quarterly reports within 45 calendar days of the quarterly day end.
- If you couple the timing regularity in company filings with the fact that almost 65% of listed companies have fiscal years that coincide with calendar years, it should come as no surprise that earnings reports tend to get bunched up at certain times of the year (mid-January, mid-April, mid-July and mid-October), creating "earnings seasons".
- That said, there are quite a few companies, many of them high-profile, that preserve quirky fiscal years, and since Nvidia's earnings report triggered this post, it is worth noting that Nvidia has a fiscal year that ends on January 31 of each year, with quarters ending on April 30, July 31 and October 31.

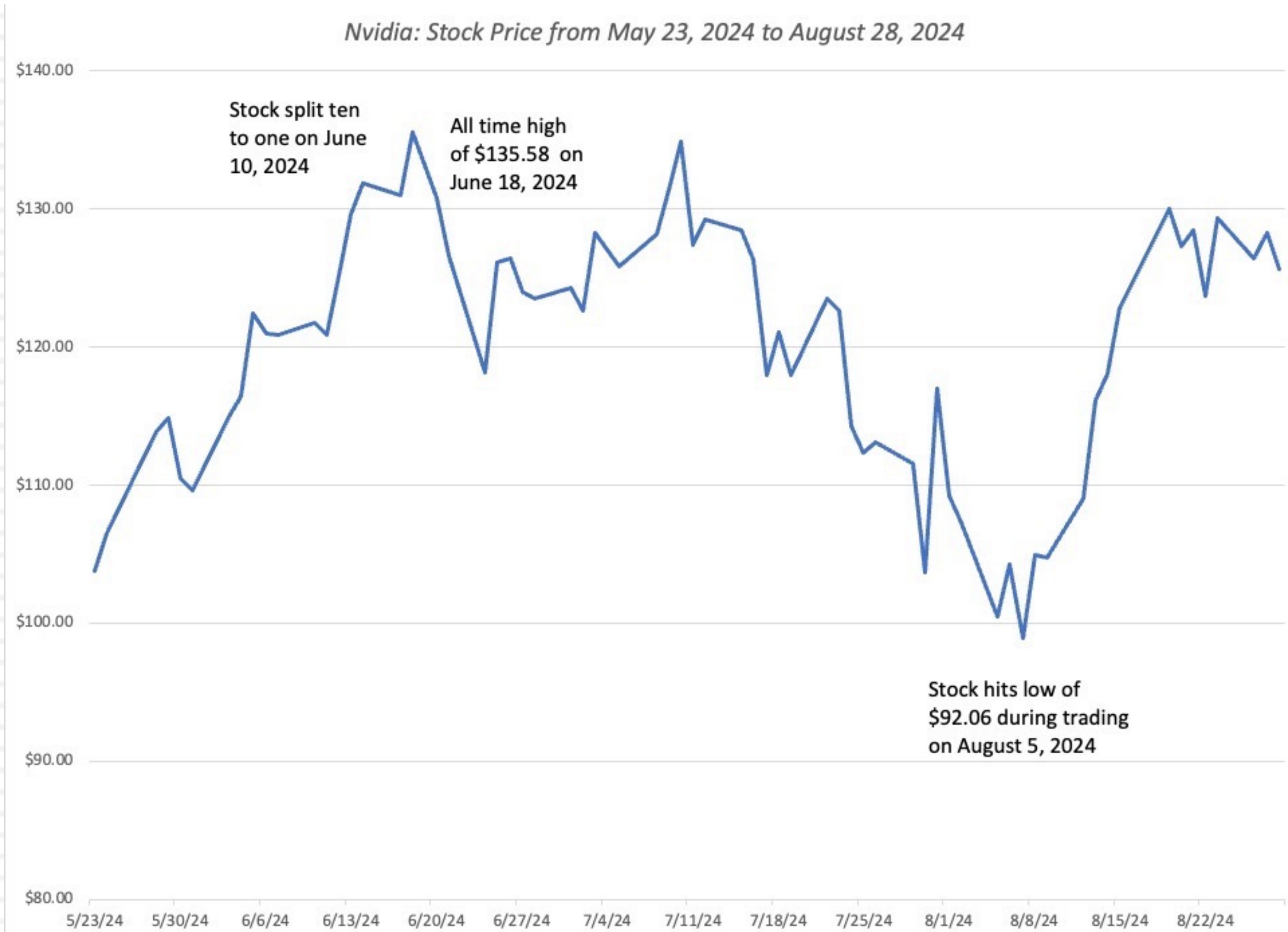
2. The Expectations Game

- A significant portion of sell side equity research is dedicated to forecasting the contents of the next earning report, especially earnings per share, with revisions made to the expected earnings, as you get closer and closer to the next earnings report.
- In making their earnings judgments and revisions, analysts draw on many sources, including:
  1. The company's history: Analysts consider a company's historical trend lines in forecasting revenues and earnings.
  2. Peer group reporting: It is natural to consider the positive or negative the operating results from other companies in the group, that may have reported ahead of your company.
  3. Other analysts' estimates: Much as analysts claim to be independent thinkers, it is human nature to be affected by what others in the group are doing.
  4. Macro news: While macroeconomic news (about the economy, inflation or currency exchange rates) cuts across the market, some companies may be more exposed than others, and analysts will have to revisit earnings estimates in light of new information.

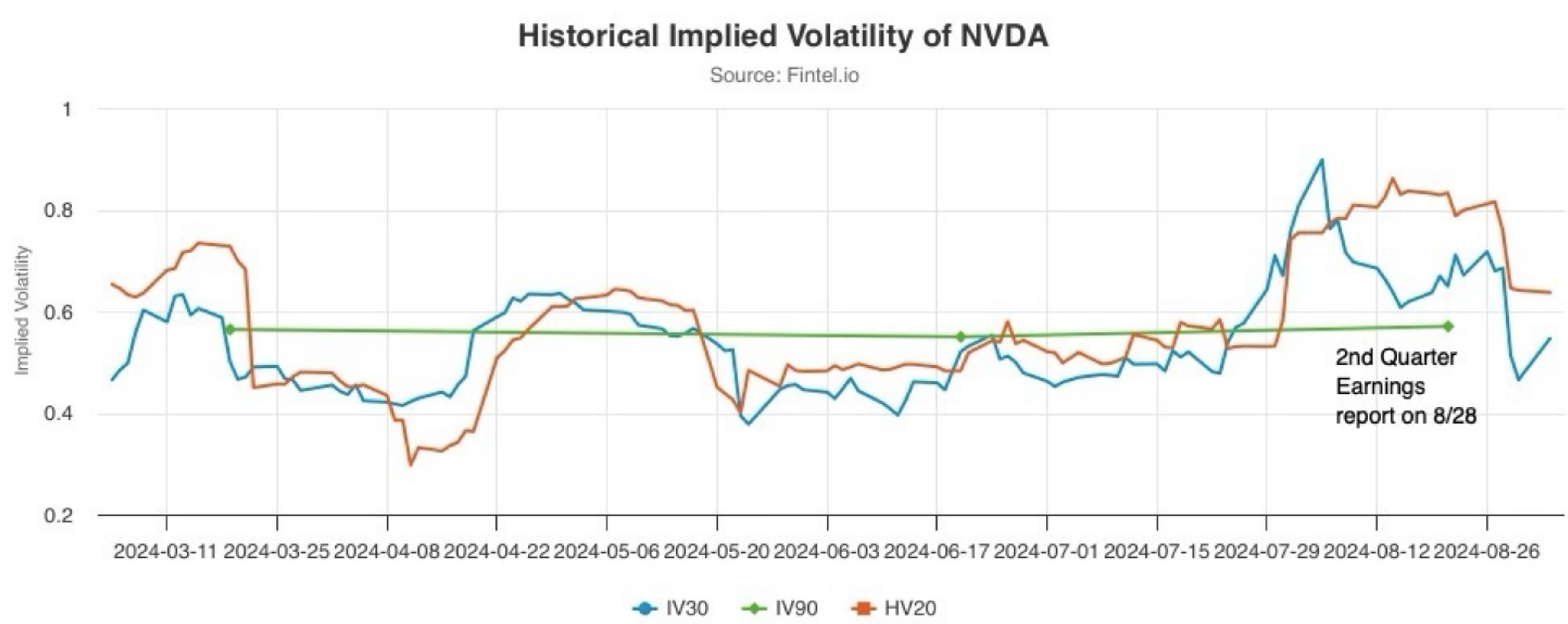
Nvidia: The Expectations Set

- Nvidia is one of the most widely followed companies in the world, and most of the seventy analysts who publicly track the firm play the estimation game, leading into the earnings reports.
- Ahead of the most recent second quarter earnings report, the analyst consensus was that the company would report revenues of $28.42 billion for the quarter, and fully diluted earnings per share of 64 cents; in the 30 days leading into the report, the earnings estimates had drifted up mildly (about 0.1%), with the delay in the Blackwell (NVidia's new AI chip) not expected to affect revenue growth near term.
- It is worth noting that not all analysts tracking the stock forecast every metric, and that there was disagreement among them, which is also captured in the range on the estimates; on earnings per share, for instance, the estimates ranged from 60 to 68 cents, and on revenues, from $26 to $30 billion.

The Stock Price lead in..



And uncertainty (volatility)…



3. The Event: Nvidia's Earnings Report

Revenue Growth
The good news is that revenues in the second quarter more than doubled (122.4%), relative to revenues in the same quarter in the previous year. The bad news is that growth rate is down from the revenue growth rates in the last three quarters.

Economies of scale (Operating margin)
The operating margin (62.06%) would be the envy of any businesse, but the increae in margins, reflecting economies of scale, seen in previous quarters has been reversed.

Unit Economics (Gross margin)
The gross margins were sky high (75.15%), in the top decile of all US companies, but here again, that numbers is leveling off, suggesting that whie unit economics remain impressive, the improvements have leveled off.

	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
Revenues	$13,507.00	$18,120.00	$22,103.00	$26,044.00	$30,040.00
Gross Income	$9,462.00	$13,400.00	$16,791.00	$20,406.00	$22,574.00
Operating Income	$6,800.00	$10,417.00	$13,614.00	$16,909.00	$18,642.00
Net Income	6,188.0	9,243.0	12,285.0	14,881.0	16,599.0
EPS	$0.25	$0.37	$0.50	$0.60	$0.68
	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2
Revenue Growth (Yon	101.48%	205.51%	265.28%	262.12%	122.40%
Gross margin	70.05%	73.95%	75.97%	78.35%	75.15%
Operating margin	50.34%	57.49%	61.59%	64.92%	62.06%
Net margin	45.81%	51.01%	55.58%	57.14%	55.26%

Leverage effects (Net margin)
The company has very little debt, not much in terms of non-operating assets (no cross holdings) and a low effective tax rate (about 13%), making its net margin (55.26%) close to its operating margin.

The Bottom Line on Nvidia's second quarter results
Nvidia's second quarter earnings, standing alone, represent an astonishing combination of triple-digit revenue growth and top-tier margins, but when you have primed the market for improvements on those dimesions, disappointment is inevitable. It may not be fair, but Nvidia set a standard for performance in the last three quarters that no company can maintain for very long, and by those standards, Nvidia underperformed. More critically, this is likely to accelerate in future quarters, as scale works against them on revenue growth, TSMC will bargain for more worsening unit economics and competition will pick up (hurting operating margins).

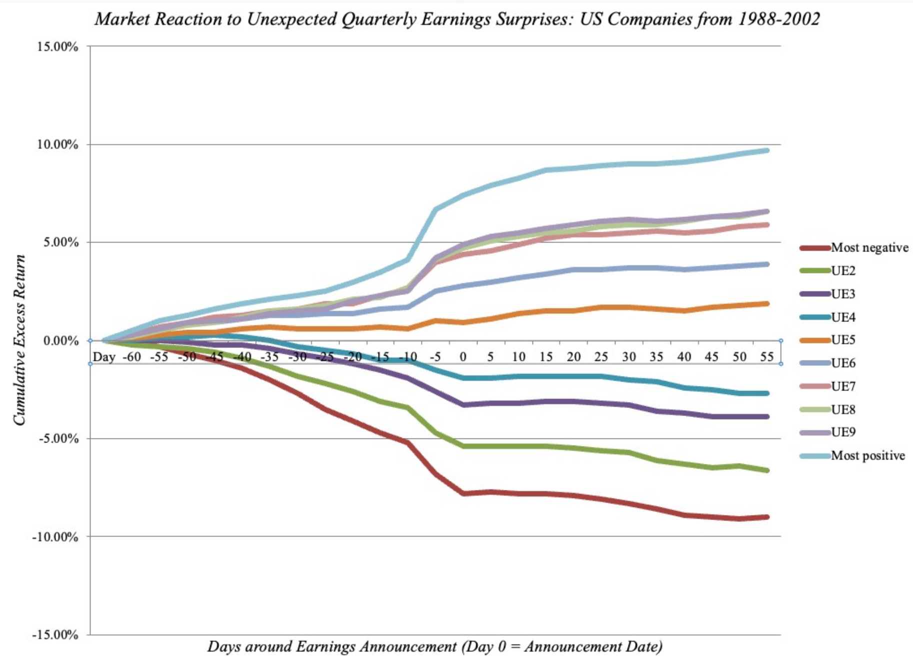
The Guidance

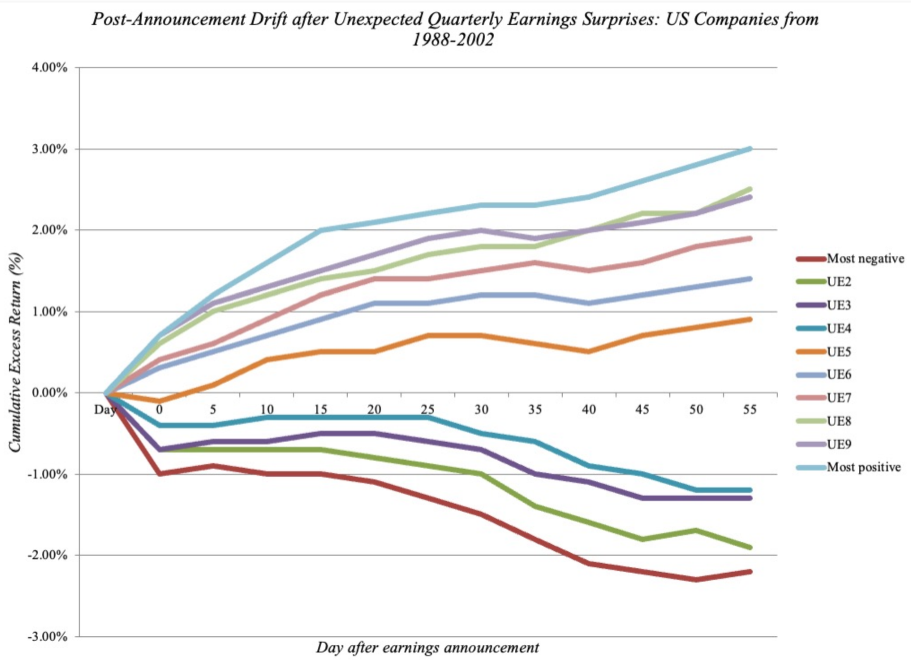
- Over the last two decades, companies have supplemented the financial reports with guidance on key metrics, particularly revenues, margins and earnings, in future quarters.
- That guidance has two objectives, with the first directed at investors, with the intent of providing information to the market and the second at analysts, to frame expectations for the next quarter.
- As a company that has played the expectations game well, it should come as no surprise that Nvidia provided guidance for future quarters in its second quarter report, and here too, there were reminders that comparisons would get more challenging in future quarters, as they predicted that revenue growth rates would come back to earth, and that margins would, at best, level off or perhaps even decline.

The Rest of the News

- Finally, in an overlooked news story, Nvidia announced that it would had authorized **$50 billion in buybacks**, over an unspecified time frame.
- While that cash return is not surprising for a company that has became a profit machine, it is at odds with the story that some investors were pricing into the stock of a company with almost unlimited growth opportunities in an immense new market (AI).
- Just as Meta and Alphabet's dividend initiations signaled that they were approaching middle age, Nvidia's buyback announcement may be signaling that the company is entering a new phase in the life cycle, intentionally or by accident.

4. The Reaction: Earnings reports and Stock Prices





Nvidia’s Earnings Surprises

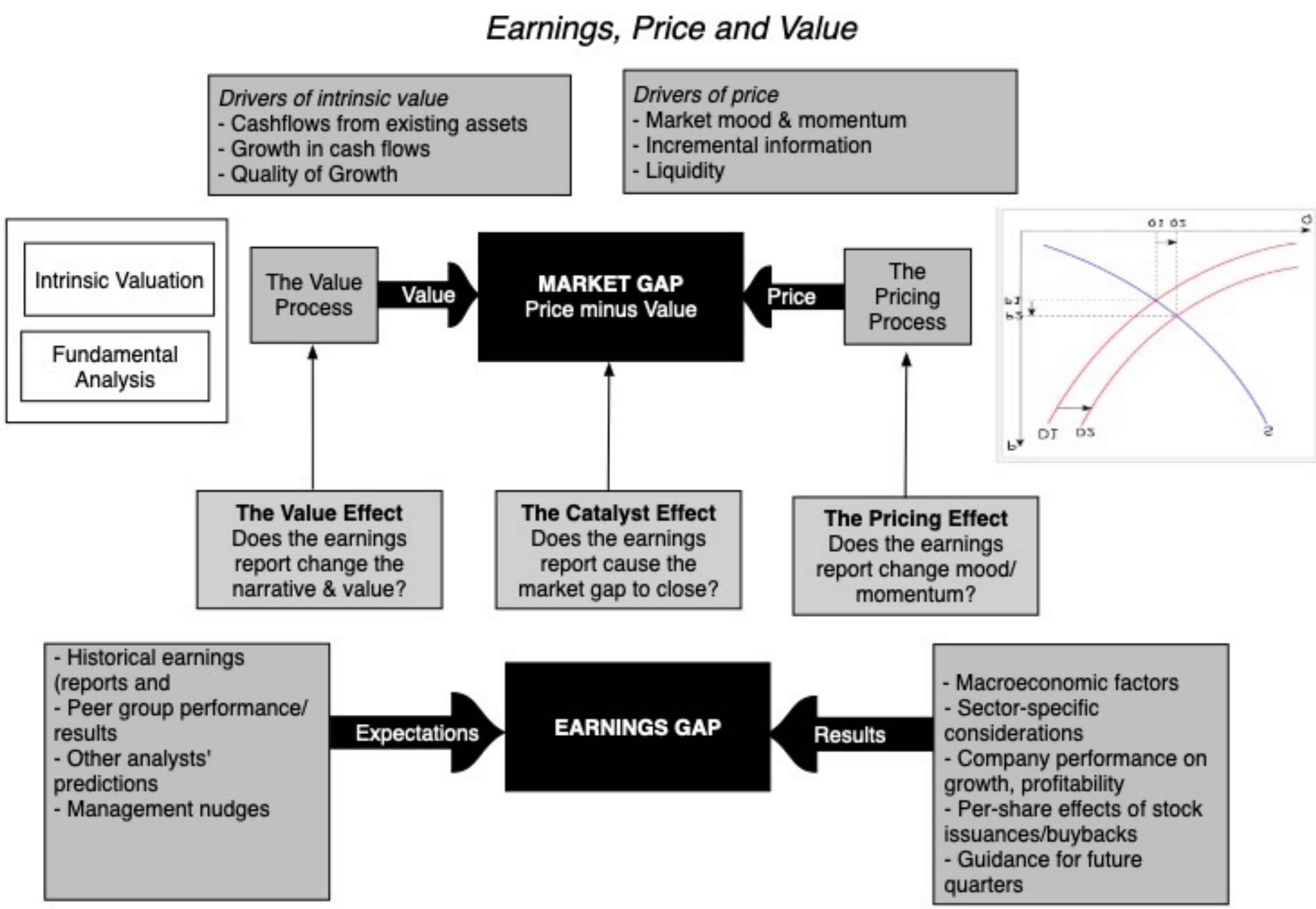
Date	% Surprise	Date	% Surprise	Date	% Surprise	Date	% Surprise
Nov-19	13.38%	Feb-21	10.71%	May-22	4.62%	Aug-23	8.64%
Feb-20	13.86%	May-21	11.59%	Aug-22	-8.93%	Nov-23	19.64%
May-20	6.51%	Aug-21	2.97%	Nov-22	-0.17%	Feb-24	13.41%
Aug-20	12.37%	Nov-21	5.41%	Feb-23	8.64%	May-24	11.48%
Nov-20	13.23%	Feb-22	8.20%	May-23	18.48%	Aug-24	6.25%

1. Nvidia, as with many other technology companies, has enough discretion in both its expenditures (especially in R&D) and in its revenue recognition, that it can use it to beat what analysts expect.
2. The speed with which the demand for AI chips has grown has surprised everyone in the space (company, analysts, investors) and that the results reflect the undershooting on forecasts.

Losing the expectations game!

- Focusing specifically on the 2025 second quarter, Nvidia beat analyst expectations, delivering earnings per share of 68 cents (above the 64 cents forecast) and revenues of $30 billion (again higher than the $28.4 billion forecast), but the percentage by which it beat expectations was smaller than in the most recent quarters.
- That may sound like nitpicking, but the expectations game is an insidious one, where investors move the goal posts constantly, and more so, if you have been successful in the past.
- On August 28, after the earnings report, Nvidia saw share prices drop by 8% and not only did that loss persist through the next trading day, the stock has continued to lose ground, and was trading at $106 at the start of trading on September 6, 2028.

Earnings reports: Reading the tea leaves!



The Trader’s Take on Nvidia

- For Nvidia, the second quarter report contained good news, if good is defined as beating expectations, but the earnings beat was lower than in prior quarters.
- Coupled with sober guidance and a concern the stock had gone up too much and too fast, as its market cap had increased from less than half a trillion to three trillion over the course of two years, the stage was set for a mood and momentum shift, and the trading since the earnings release indicates that it has happened.
- Note, though, that this does not mean that something else could not cause the momentum to shift back, but before you, as an Nvidia manager or shareholder, are tempted to complain about the vagaries of momentum, recognize that for much of the last two years, no stock has benefited more from momentum than Nvidia.

The Investor Take on Nvidia

Input	*The Good News*	*The Caveats*	*The Forecast*
Revenue Growth	The rush by companies to incorporate AI into their business models has driven demand for AI chips through the roof, and as the dominant company in the space, with a market share close to 80%, Nvidia has more than doubled revenues in the last year. **AI chip market in 2023-24: $80 billion** **Nvidia market share: 80%**	The growth in the market has pushed the AI chip plans of competitors into hyper speed. While they have been slow to make inroads, that will change over time.	While Nvidia will remain the dominant player in the AI market, the growth in the market will start to slow, and competition will increase. **AI chip market in 2034: $500 billion** **Nvidia market share: 60%**
Gross Margins	Gross margins of close to 70%, driven by great unit economics. Put simply, Nvidia, as a design company, lets TSMC make its chips, and is able to mark them up, and at least for the moment, TSMC is going along. **Nvidia gross margin = 70-75% in 2024 Q2**	At current levels, there is little room for improving unit economics and as chip-making contracts get renegotiated, TSMC will have stronger bargaining power.	The higher prices that Nvidia eventually have to pay for chips will depress gross margins, albeit only slightly. TSMC has just as much to lose as Nvidia, from pushing too hard. **Nvidia gross margin in 2034 = 65%**
Operating Margins	As the dominant player providing the processing power for the fastest growing market (AI) in the world, Nvidia has significant pricing power. It is using it to full effect right now. **Nvidia operating margin = 61.9% in TTM 2024 Q2** **Nvidia R&D adj operating margin = 67.0% in TTM 2024 Q2**	Four big tech companies (MSFT, GOOG, AMZN and META) account for 40% of revenues. They need AI chips urgently to expand their AI presence, and are willing to pay Nvidia's prices.	As competition emerges, the big tech companies will start looking for alternatives (with other chip makers as well as with their own in-house chips). That will reduce Nvidia's pricing power, and operating margins. **Nvidia's R&D adj operating margin in 2034 = 60%**
Reinvestment	As a chip-design company, R&D remains the biggest reinvestment component. Nvidia spent $10.6 billion on R&D in the most recent year, and will continue to spend immense amounts, both in next-gen AI chips and in chips in other businesses. **Current sales to capital in July 2024 = 1.66** **Marginal sales to capital in TTM = 6.98**	There are two issues with R&D reinvestment (that are not specific to Nvidia): 1. *Lagged effect*: It take a while for growth to show up. Much of Nvidia's current success comes from R& D done years ago. 2. *Uncertainty*: The benefits remain uncertain, especially on the portion of R&D that is early stage.	Nvidia's R&D has been opportunistic and timely, giving the company early entry into the gaming, crypto and AI businesses. While R&D spending will continue at high levels, they will decrease relative to sales. **Marginal sales to capital between 2024 and 2034 = 2.50**
Risk	Nvidia in the last decade has largely escaped the cycles that have bedeviled the semiconductor chip business historically. Dependent on TSMC for its chap making, the company has significant exposure to China risk. **Nvidia cost of capital in 2024 = 10.70%**	Nvidia has been able to use growth in new markets (crypto, gaming and AI) to keep the chip cycle risk at bay, but that risk lurks under the surface.	Nvidia's cost of capital will remain higher than the median company, even in steady state. It is set to the third quartile of US companies. **Nvidia cost of capital in 2034 = 8.49%**

Nvidia	Sep-24

Base Year and Comparison

	Company	Industry
Revenue Growth	149.90%	5.77%
Revenue	$96,307	
Operating Margin	67.02%	16.32%
Operating Income	$64,544	
EBIT (1-t)	$19,216	

Growth Story (Revenue)

Even as gaming and other chip businesses mature, NVIDIA"s investments in the AI and Auto chip businesses will deliver healthy growth over the next decade.

Profitability Story (Margin)

Margins are astronomically high, sustained by unit economics (Design costs little, chips are cheap) and pricing power, especially in AI. Over time, both will ease, as chipmakers (TSMC) and big customers push back.

Growth Efficiency Story

Sales to capital stays higher than industry aveage, as company continues to get growth off past R&D, and focuses research on new AI and auto chips.

Terminal Value	
Growth Rate	3.73%
Cost of capital	8.49%
Return on capital	20.00%
Reinvestment Rate	18.65%

Value of Rest	$458,684
Value of AI	$1,517,730
Value of Auto	$127,524
Probability of failure =	0.00%
Value of operating assets =	$2,103,937
- Debt	$9,765
- Minority interests	$0
+ Cash	$34,800
+ Non-operating assets	$1,546
Value of equity	$2,130,518
- Value of options	$0
Value of equity in common sto	$2,130,518
Number of shares	24,578.00
Estimated value /share	**$86.68**
Price per share	$106.00
% Under or Over Valued	22.28%

	1	2	3	4	5	6	7	8	9	10	Terminal year
Revenue (Gaming/Other)	$ 35,773	$ 41,139	$ 47,310	$ 54,406	$ 62,567	$ 70,542	$ 77,943	$ 84,364	$ 89,413	$ 92,748	$ 96,207
Revenue (AI)	$ 101,712	$ 137,408	$ 171,088	$ 202,752	$ 232,400	$ 248,608	$ 263,472	$ 276,992	$ 289,168	$ 300,000	$ 311,190
Revenue (Auto)	$ 3,036	$ 5,304	$ 8,004	$ 11,136	$ 14,700	$ 17,328	$ 20,172	$ 23,232	$ 26,508	$ 30,000	$ 31,119
Revenues (Total)	$ 140,521	$ 183,851	$ 226,402	$ 268,294	$ 309,667	$ 336,478	$ 361,587	$ 384,588	$ 405,089	$ 422,748	$ 438,516
R&D Adj Operating Margin	65.00%	63.00%	62.00%	61.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
Operating Income	$ 91,339	$ 115,826	$ 140,369	$ 163,660	$ 185,800	$ 201,887	$ 216,952	$ 230,753	$ 243,053	$ 253,649	$ 263,110
EBIT (1-t)	$ 79,191	$ 100,421	$ 121,700	$ 141,893	$ 161,089	$ 170,312	$ 177,944	$ 183,864	$ 187,977	$ 190,237	$ 197,332
Reinvestment	$ 16,757	$ 16,549	$ 10,724	$ 10,044	$ 9,200	$ 8,200	$ 7,064	$ 6,307	$ 6,543	$ 6,787	$ 36,802
FCFF	$ 62,434	$ 83,872	$ 110,976	$ 131,849	$ 151,889	$ 162,112	$ 170,881	$ 177,557	$ 181,435	$ 183,450	$ 160,530
										$ 3,372,476.11	
Cost of Capital	10.52%	10.52%	10.52%	10.52%	10.52%	10.11%	9.71%	9.30%	8.90%	8.49%	
Cumulated WACC	0.9049	0.8188	0.7409	0.6704	0.6066	0.5509	0.5021	0.4594	0.4219	0.3889	
Sales to Capital	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	
ROIC	136.71%	134.46%	133.40%	139.17%	143.83%	140.52%	137.51%	134.73%	131.66%	127.41%	20.00%

Risk Story

Initial cost of capital computed based upon industry((semiconductors) and Nvidia's low debt mix and geographic exposure. Over time, Nvidia's cost of capital will drift down but will remain higher (third quartile) of all companies in market.

Competitive Advantages

Strong competitive edges allow NVIDIA to earn well above its cost of capital for the next decade and beyond.

AI and Auto Business: Market Size and Market Share				
	AI		*Auto*	
	Current	*In 2034*	*Current*	*In 2034*
Total Market ($ M)	$80,000	$500,000	$20,000	$200,000
Market Share	80%	60%	$0	$0
NVIDIA revenues	$64,000	$300,000	$1,200	$30,000

Caveats… Buyer and Seller beware!

- I value companies for myself, and while my valuations animate my decisions to buy or sell stocks, they should not determine your choices. That is why my spreadsheet is available not just for download, but for modification, to allow you to tell your own story for Nvidia, yielding a different value.
- The second is that this is a tool for investors, not traders, and if you are playing the trading game, you will have to reframe the analysis and think in terms of mood and momentum.
- All in all, looking back, I am at peace with the decision made in the summer of 2023 to shed half my Nvidia shares, and hold on to half. While I left money on the table, with the half that I sold, I have been richly compensated for holding on to the other half. I am going to count that as a win and move on!