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Financial Planning and Budgeting
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Nvidia Corporation

Company Overview

Nvidia Corporation is an american based company dedicated to the manufacturing of mainly Graphic processing Units (GPU). It was founded in 1983 by an AMD's ex-employee, said company is their main competitor today. Their first 3D graphic core was launched in 1995, making their way into the internals of SEGA's Virtual Fighter. In the upcoming years they managed to launch drivers compatible with Microsoft's DirectX, and launched the world's first 128 bit 3D processor.

In 1999, one of their most important years, Nvidia launched its Initial Public Offering (IPO) at $12 a share. "NVIDIA launched its next-generation graphics accelerator in August 1999. Dubbed the GeForce256, the 256-bit graphics processing unit (GPU) was the industry's first GPU; it was able to offload the entire graphics processing operation from a computer's central processing unit (CPU)." (Reference for Business).

It became a staple in the tech industry, selling more than 100 million units by 2002 and being named the fastest growing company in America. They were already integrated in devices such as the original XBOX. Later on they also developed the processor for the Playstation 3 from Sony, and helped with the development of one of the most iconic video games out there, World of Warcraft.

By 2007 they had reached a billion dollars in revenue and by 2011 they had sold 1 billion processors. Every year their products have the highest ranking in performance of the market, they keep adding technology such as artificial intelligence and machine learning to achieve better results.

They are also responsible for innovation in the field of software, providing new alternatives to supercomputing and sparking a trend to achieve "photo-realistic" results in graphics.

Today Nvidia is the biggest company in the GPU market, having the biggest presence in gaming solutions for PCs and also topping the supply for crypto currency mining parts.

Sector Overview

Nvidia manufactures processors and GPUs, these products utilize semiconductors in their chips and electrical circuits. The market for semiconductors therefore has a huge impact on Nvidia's production.

In the past few years, following the worldwide hit of Coronavirus, there has been a shortage and price shift in the semiconductor market. As explained by Deloitte, the outlook is favorable but in the long run with recurring shortages in the short term:

“We expect the global industry to grow 10% in 2022 to over US$600 billion for the first time ever. Chips will be even more important across all industries, driven by increasing semiconductor content in everything from cars to appliances to factories, in addition to the usual suspects—computers, data centers, and phones.

We expect shortages and supply chain issues to remain front and center for the first half of the year, hopefully easing by the back half, but with longer lead times for some components stretching into 2023, possibly well into 2023.

The ongoing talent shortage will be made even more severe by the addition of increased semiconductor manufacturing facilities outside Taiwan, China, and South Korea. The higher demand for software skills required to program and integrate chips into fast-growing markets will further exacerbate the shortage.

Finally, we expect the digital transformation within the industry to continue and accelerate. Nearly three out of five chip companies have already begun their transformation journey. Still, over half of those are modifying their transformation process as they go, in response to various pressures.” (Deloitte)

Prices in gaming tech and PC parts in general have risen substantially everywhere. The manufacturing issue caused by high demand and lowered supplies for production have affected the market, parts are extremely coveted. There is also an imminent problem regarding computer programmed bots whose function is to massively purchase all new online sold stock. This effect is mainly caused by Crypto Mining factories and “scalpers”.

Competition has also become more intense with Nvidia's competitor AMD catching up to their standards, and at some comparisons even offering more performance for a lower price. This competition started gaining more importance in the last 5 years.

Additionally Intel, one of tech Industry’s biggest companies announced this year the introduction of their own GPUs.

It is not all negative however, the gaming industry is growing at a considerable rate.

“The video game sector is immensely large. In fact, it is larger than the movie and music industries combined, and it is only growing. Though it doesn't get the same attention that the movie and music industry does, there are over two billion gamers across the world. That is 26% of the world's population.

It's no surprise that companies want a piece of the pie. In 2020, the gaming industry generated $155 billion in revenue, By 2025, analysts predict the industry will generate more than $260 billion in revenue.[1] As such, tech companies are looking to get involved in this revenue stream. Tech giants such as Google (GOOGL), Meta (FB), formerly Facebook, and Apple (AAPL), have all made plans to enter the video game industry.” (Andrew Beattie,2021)

Company Financials

Nvidia has proven to be a very profitable organization. They are publicly traded and their stock has had good performance. They continue to invest in new technology as well to keep their lead in the industry.

The following information regarding their financials was taken from Yahoo Finance:

Income Statement (In thousands)

Breakdown	TTM	1/31/2022	1/31/2021	1/31/2020	1/31/2019
> Total Revenue	26,914,000	26,914,000	16,675,000	10,918,000	11,716,000
Cost of Revenue	9,439,000	9,439,000	6,279,000	4,150,000	4,545,000
Gross Profit	17,475,000	17,475,000	10,396,000	6,768,000	7,171,000
> Operating Expense	7,434,000	7,434,000	5,864,000	3,922,000	3,367,000
Operating Income	10,041,000	10,041,000	4,532,000	2,846,000	3,804,000
> Net Non Operating Interest Inc...	-207,000	-207,000	-127,000	126,000	78,000
> Other Income Expense	107,000	107,000	4,000	-2,000	14,000
Pretax Income	9,941,000	9,941,000	4,409,000	2,970,000	3,896,000
Tax Provision	189,000	189,000	77,000	174,000	-245,000
> Net Income Common Stockhold...	9,752,000	9,752,000	4,332,000	2,796,000	4,141,000
Diluted NI Available to Com Stock...	9,752,000	9,752,000	4,332,000	2,796,000	4,141,000
Total Operating Income as Reported	10,041,000	10,041,000	4,532,000	2,846,000	3,804,000
Total Expenses	16,873,000	16,873,000	12,143,000	8,072,000	7,912,000
Net Income from Continuing & Dis...	9,752,000	9,752,000	4,332,000	2,796,000	4,141,000
Normalized Income	9,752,000	9,752,000	4,332,000	2,796,000	4,141,000
Interest Income	29,000	29,000	57,000	178,000	136,000
Interest Expense	236,000	236,000	184,000	52,000	58,000
Net Interest Income	-207,000	-207,000	-127,000	126,000	78,000
EBIT	10,177,000	10,177,000	4,593,000	3,022,000	3,954,000
EBITDA	11,351,000	-	-	-	-
Reconciled Cost of Revenue	9,439,000	9,439,000	6,279,000	4,150,000	4,545,000
Reconciled Depreciation	1,174,000	1,174,000	1,098,000	381,000	262,000
Net Income from Continuing Oper...	9,752,000	9,752,000	4,332,000	2,796,000	4,141,000

Cash Flow (In thousands)

Breakdown	TTM	1/31/2022	1/31/2021	1/31/2020	1/31/2019
> Operating Cash Flow	9,108,000	9,108,000	5,822,000	4,761,000	3,743,000
> Investing Cash Flow	-9,830,000	-9,830,000	-19,675,000	6,145,000	-4,097,000
> Financing Cash Flow	1,865,000	1,865,000	3,804,000	-792,000	-2,866,000
> End Cash Position	1,990,000	1,990,000	847,000	10,896,000	782,000
Income Tax Paid Supplemental Data	396,000	396,000	249,000	176,000	61,000
Interest Paid Supplemental Data	246,000	246,000	138,000	54,000	55,000
Capital Expenditure	-976,000	-976,000	-1,128,000	-489,000	-600,000
Issuance of Debt	4,977,000	4,977,000	4,968,000	-	-
Repayment of Debt	-1,000,000	-1,000,000	0	0	-16,000
Repurchase of Capital Stock	-	-	0	0	-1,579,000
Free Cash Flow	8,132,000	8,132,000	4,694,000	4,272,000	3,143,000

As seen by the numbers reported for the company, they show important amounts of Income for next period operations. Their Cash Flow leaves enough resources for them to keep on building their acquisitions, investments, R&D and operations. Of course it's important to mention that they’re including a sizable amount of debt in their capital structure.

Stock behaviour

As of April 6th 2022, stock price is $244 vss. $67 on april 6th 2020. That is around 264% price increase in 2 years. Taking the second quarter of 2020 as the reference point, it being the start of the pandemic. We can see how the company has continued to beat the market and continues to have an uprising trend in price.

Peer Comparison

NVIDIA

Valuation Measures[4]

Market Cap (intraday)	686.74B
Enterprise Value	677.22B
Trailing P/E	71.06
Forward P/E	49.02
PEG Ratio (5 yr expected)	3.60
Price/Sales (ttm)	25.77
Price/Book (mrq)	25.81
Enterprise Value/Revenue	25.16
Enterprise Value/EBITDA	59.66

AMD

Valuation Measures[4]

Market Cap (intraday)	179.87B
Enterprise Value	176.93B
Trailing P/E	43.01
Forward P/E	27.25
PEG Ratio (5 yr expected)	1.41
Price/Sales (ttm)	8.27
Price/Book (mrq)	23.99
Enterprise Value/Revenue	10.77
Enterprise Value/EBITDA	42.47

AMD's stock price in April 2022 is $104 vss. $48 on april 6th 2020. Growing 117% in the past two years.

INTEL

Valuation Measures[4]	
Market Cap (intraday)	201.16B
Enterprise Value	210.85B
Trailing P/E	10.12
Forward P/E	14.27
PEG Ratio (5 yr expected)	2.85
Price/Sales (ttm)	2.55
Price/Book (mrq)	2.11
Enterprise Value/Revenue	2.67
Enterprise Value/EBITDA	6.18

INTCs stock price in April 2022 is $48 vss. $57 on april 6th 2020. Growing -16% in the past two years.

Risks and Opportunities

The risks that Nvidia faces are :

- Semiconductor shortage
- Community backlash given lack of supply to market and overpriced parts
- High P/E ratio could indicate that at some point the market might realize they are “overpaying” for stock
- High competition is starting to form

The opportunities are:

- Increased demand from the Mining and Gaming industries
- Technological innovation
- Brand recognition
- Investment in R&D is high
- Technology industry is requiring processors outside the traditional tech markets

Conclusion

Nvidia is currently the world leader in the GPU market, with a strong lead. They have the highest market share and presence all the way from consumers' homes to industrial applications. They have had a great trajectory from the invention of their main products to the innovation surrounding their development.

They have faced growing competition in recent years, however they have managed to gain the strong position through the addition of new technologies and exploration of new markets. Catering different income level markets and industries.

Financially, they are quite profitable and constantly increase sales and revenue. Their profits remain stable and high. The investment in their company is solid. The stock price has kept an upwards trend ever since their IPO with significant growing rates.

With the expansion of their customer base, it is expected they keep expanding as well. Analyzing their ratios, it can be considered a high priced stock when compared to their competitors, however this market valuation is not expected to go anywhere in the upcoming years, more so with them stepping forward into data center technologies and software solutions.

I believe Nvidia is a good investment in the short to mid term.

References:

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