Universidade do Minho
Escola de Economia e Gestão

Rui Jorge Silva Moura

Equity Research: Nvidia Corporation

Apr 2024

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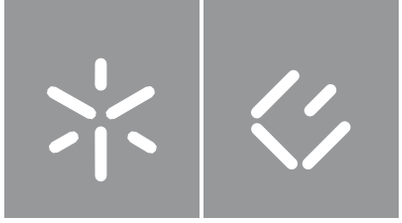

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Equity Research: Nvidia Corporation

Master's Project
Master's in Finance

Work performed under the supervision of
Professor Doutor Gilberto Loureiro

Apr 2024

DIREITOS DE AUTOR E CONDIÇÕES DE UTILIZAÇÃO DO TRABALHO POR TERCEIROS

Acknowledgments

I would like to extend my heartfelt gratitude to my wife, whose unwavering support and encouragement kept me motivated to complete my dissertation, even during the most challenging times when I juggled work and studies in another course. Without her steadfast belief in me and her constant encouragement, I would not have been able to overcome the hurdles and successfully complete my master's thesis. Her support was not only instrumental but also deeply meaningful to me, and I am forever grateful for her unwavering presence throughout this journey.

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Lastly, I am grateful to everyone who has contributed in any way to my academic and personal development, and to those whose support has made this accomplishment possible.

Resumo

Em conformidade com os padrões de pesquisa estabelecidos pelo CFA Institute, este equity research report apresenta uma análise detalhada da Nvidia, aproveitando as informações divulgadas publicamente disponíveis até 29 de janeiro de 2024, sendo importante salientar que a análise se baseia exclusivamente em dados até esta data especificada, sem considerar desenvolvimentos ou eventos subsequentes.

O relatório começa com uma exploração detalhada sobre a estratégia e os empreendimentos operacionais da Nvidia, salientando a posição da empresa dentro da indústria de semicondutores. Foram considerados aspetos como a presença de mercado da Nvidia, vantagens competitivas e estratégias adaptativas de crescimento para acompanhar as tendências tecnológicas e dinâmicas de mercado em evolução. É dada uma ênfase particular aos desenvolvimentos da Nvidia em mercados emergentes e sua exploração de oportunidades em inteligência artificial (IA), centros de dados e jogos.

As técnicas de análise financeira e avaliação utilizadas para avaliar o desempenho e o valor intrínseco da Nvidia foram a análise de fluxo de caixa descontado (DCF) e análise comparável de mercado, e o relatório demonstra o bem-estar financeiro, e perspetivas de crescimento da Nvidia.

Além disso, são identificados e avaliados diversos riscos de investimento enfrentados pela Nvidia, abrangendo questões de governança corporativa, incertezas macroeconômicas e desafios regulatórios que poderiam impactar o desempenho futuro e a trajetória de preços das ações da Nvidia. Análises de sensibilidade são conduzidas para avaliar os efeitos potenciais de variáveis-chave na avaliação da Nvidia, fornecendo insights sobre o perfil de risco-retorno associado ao investimento na empresa.

Quanto à recomendação para a Nvidia Corporation, é sugerida uma posição de HOLD ou SELL, dependendo do horizonte de tempo do investidor, sendo o preço-alvo de 12 meses calculado até 31 de dezembro de 2024 é de $640.83, sinalizando um potencial de baixa de 27% em relação ao preço médio de fecho entre 22 de fevereiro e 12 de abril de $872.72.

Palavras-chave: Nvidia, indústria de semicondutores, análise estratégica, avaliação financeira, DCF, análise comparativa de mercado, riscos de investimento, avaliação de riscos, perspetivas de investimento, tendências tecnológicas, dinâmica de mercado.

Abstract

Aligned with the research standards set by the CFA Institute, this equity research report presents a thorough analysis of Nvidia, leveraging publicly disclosed information available up to January 29th, 2024. It's essential to note that the analysis is grounded solely in data up to this specified date, with no consideration given to subsequent developments or events.

The report commences with a detailed exploration of Nvidia's strategic landscape and operational endeavors, delving into the company's positioning within the semiconductor industry. It was taken into account aspects such as Nvidia's market presence, competitive advantages, and adaptive growth strategies tailored to navigate evolving technological trends and market dynamics are scrutinized. Particular emphasis is placed on Nvidia's forays into emerging markets and its exploration of opportunities in artificial intelligence (AI), data centers, and gaming.

The financial analysis and valuation techniques employed to assess Nvidia's performance and intrinsic value were discounted cash flow (DCF) and market comparable analysis and the report sheds light on Nvidia's financial well-being, revenue streams, and growth prospects.

Furthermore, various investment risks confronting Nvidia are identified and evaluated, encompassing corporate governance issues, macroeconomic uncertainties, and regulatory challenges that could impact Nvidia's future performance and share price trajectory. Sensitivity analyses are conducted to gauge the potential effects of key variables on Nvidia's valuation, providing insights into the risk-return profile associated with investing in the company.

Regarding the recommendation for Nvidia Corporation (NVDA), a HOLD or SELL approach is suggested, contingent upon the investor's time horizon. The calculated 12-month target price as of December 31st, 2024, is $640.83, signaling a downside potential of 27% from average closing price of $872.72 (between 22nd February 2024 and 12th April 2024).

Keywords: Nvidia, semiconductor industry, strategic analysis, financial valuation, discounted cash flow, market comparable analysis, investment risks, risk assessment, investment outlook, technological trends, market dynamics.

Disclaimer

The purpose of this Equity Research Report is solely academic and was created by Rui Jorge Silva Moura graduate student enrolled in the Master in Finance program at the University of Minho. The report was supervised by a faculty member who acted as an academic mentor. Neither the author nor the supervisor of this report is a certified investment advisor.

This report should be viewed purely as an academic exercise conducted by a graduate student. The information used in this report is widely available to the public from various sources, and the student believes it to be reliable. However, the student takes full responsibility for the accuracy and reliability of the information used, as well as the estimates, forecasts, valuation methods applied, and views expressed.

University of Minho and its faculty members take no formal or unique position on the matters discussed in this report and assume no responsibility for any consequences resulting from the use of this report.

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Ticker: NASDAQ: NVDA
Industry: Information Technology
Sector: Semi-Conductor / AI
Country: United States

Date: April 12, 2024
Recommendation: HOLD or SELL
Current[1] Share Price: $872.72
Target Price (1-year forward): $640.83

1. Research Snapshot

Based on a forecast period of 5 years (FY 2024 to FY 2028), **HOLD** or **SELL** is my recommendation for Nvidia Corporation (NVDA), hereinafter "Nvidia" or the "Company", with a calculated **12-month target price of $640.83** (as of 31/12/2024), representing a **downside potential of 27%** from the closing price of $872.72[1].

NVIDIA Corporation	
Recommendation	
Ticker	NVDA
Stock Exchange	Nasdaq
Current[1] Share Price	872.72 $
12-Month Target Price	640.83 $
Downside Potential	-26.6%
Recommendation	**Hold or Sell**

Table 1 *- Investment Recommendation // Source: Nasdaq and Author*

The **12-month target price of $640.83** was calculated using an average of two commonly used valuation methods:

- The **Discounted Cash Flow (DCF)** method, an intrinsic valuation method under which value is determined by discounting the Company's expected future free cash flows. Under this method, Nvidia's 12-month target price amounts to $722.90, which is lower than the average closing market price of $872.72, thus representing an overvaluation of 21% (i.e., a downside of 17%);
- The **Listed Peers method**, a relative valuation method under which the value of the Company is dependent on the market valuation of businesses with similar characteristics to Nvidia. Under this method, Nvidia's 12-month target price amounts to $558.76, which is lower than the average closing market price of $872.72, thus representing an overvaluation of 56% (i.e., a downside of 36%).

[1] Closing price average from February 22nd, 2024 (date following Nvidia's fourth quarter fiscal 2024 earnings announcement) and April 12th, 2024 (date of this report)

NVIDIA Corporation - 12-month Target Price by Method				
Methods Used	**Average 12-month Target Price (In $)**	**Average Closing Share Price [(1)] (In $)**	**Overvaluation (+) or Undervaluation (-)**	**Upside (+) or Downside (-)**
Discounted Cash Flow (DCF)	722.90 $	872.72 $	20.7%	-17.2%
Listed Peers	558.76 $	872.72 $	56.2%	-36.0%
Average of Selected Methods	**640.83 $**	**872.72 $**	**36.2%**	**-26.6%**

[1] *Closing Price Average from February 22nd to April 12th 2024*

Table 2 *- 12-month Target Price by Method // Source: Author Calculations*

The valuation exercise indicates that the Nvidia Share is currently significantly overvalued under both the DCF and Listed Peers methods. The **potential downside** for an investor acquiring a share at the current market price of $872.72 is **27%.**

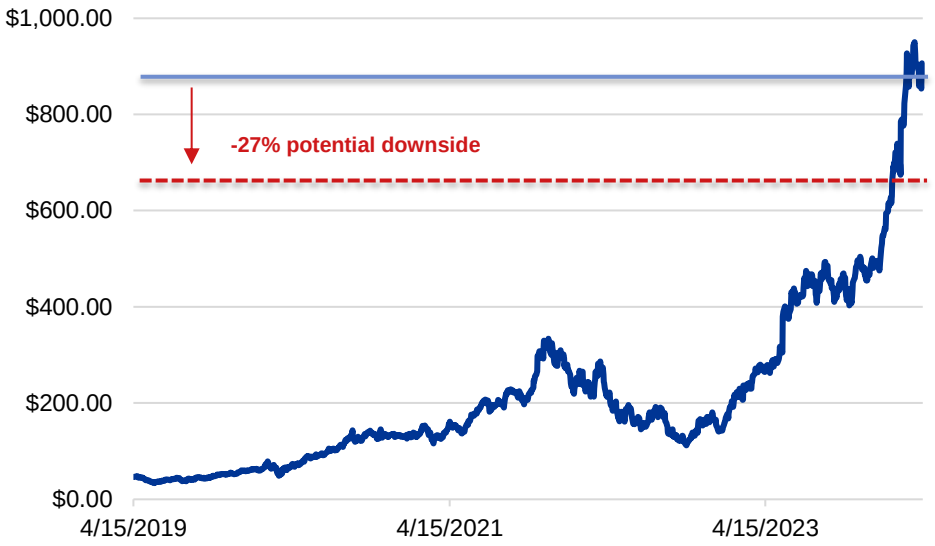

Figure 1 *- Historical Share Price versus 12-month Target Price // Source: Nasdaq and Author*

Although the potential downside is significant at 27%, my recommendation to **HOLD or SELL** is highly dependent on the investor's time horizon.

The Company might be overvalued as further demonstrated by the high valuation multiples in **Table 3.**

NVIDIA Corporation	
Classic Valuation Multiples and Ratios	**Current[1]**
Price to Sales	35.3x
EV/Sales	34.5x
EV/EBIT	63.7x
PER	72.3x
EV/FCFF	87.1x
Price to Book	50.0x

[1] *Closing Price Average from February 22nd to April 12th 2024*
Denominator figures are for the FY 2023 period (closed on January 28, 2024)

Table 3 *- Valuation Multiples // Source: Nvidia 10-Ks and Author*

As such, a short-term trader or investor might want to be aware of the current market valuation of the Company relative to its peers. Nvidia is currently the world's most valuable semiconductor

company **(Appendix S)**. This gap in valuation between the Company and its peers make it particularly vulnerable to a short-term correction.

However, the Company's fundamentals remain exciting, as demonstrated in the **Financial Analysis** section. Nvidia's revenues grew at a CAGR of 39.1% over the last six fiscal years and operating margin averaged around 32% during this period. Moreover, the Company's strong cash balance demonstrates a good financial health.

Investors are also expecting significantly higher revenue growth rates over the next years for Nvidia, compared to competitors like AMD, Intel, Qualcomm or Broadcom. This explains the significant discrepancy in the current market price of Nvidia's share and the intrinsic share value calculated under the listed peers' method.

As demonstrated in the **Industry Overview and Competitive Positioning** section, the Company has a strong moat, despite operating in a highly competitive market. Its competitive advantage lies in its commitment to innovation and the possession of patented technology. In recent years, Nvidia has significantly ramped up its investment in research and development, particularly in anticipation of the AI boom. The Company allocates a substantial portion of its revenue to R&D, surpassing the expenditure of competitors like AMD **(Figure 2)**. This strategic focus on innovation equips Nvidia with cutting-edge technology, enabling it to stay at the forefront of its industry.

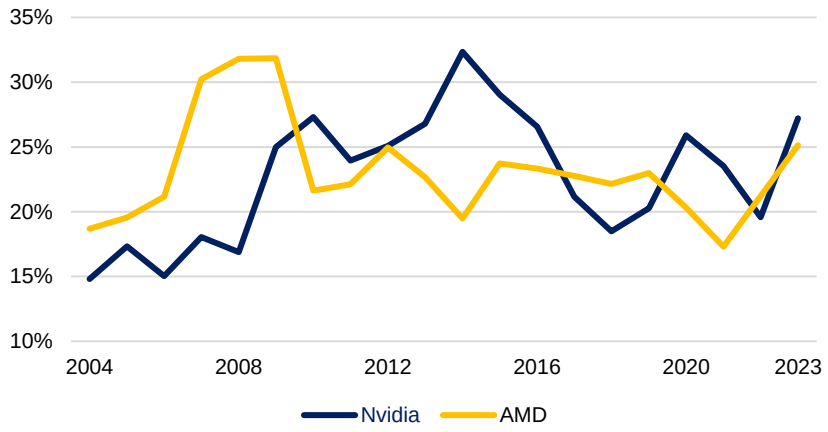

***Figure 2** - R&D as % of Revenues // Source: Author Calculations*

Finally, the management of Nvidia seems to operate with transparency and Integrity, and have shown good capital allocation skills, as demonstrated In the **Management and Corporate Governance** section. The Company has been founded by Jensen Huang who is also the current CEO. Since 2012, Nvidia has consistently delivered exceptional returns on invested capital and high gross profit margins over the years (**Figure 3**). These indicators suggest that Nvidia possesses sustainable competitive advantages and maintains a significant economic moat to deter potential competitors. It also demonstrates the quality of its current management which has been able to deliver consistently high returns on equity over the time to its shareholders.

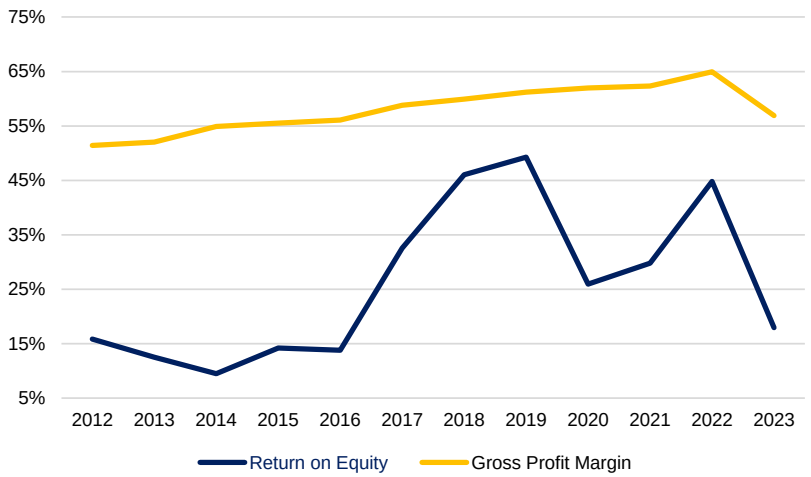

***Figure 3** - Return on Equity and Gross Margin since 2012 // Source: Author Calculations*

All of the strong fundamentals outlined above lead me to think that the Company could be worth more in 5 to 10 years than it is worth today or in a year. A **HOLD** strategy therefore makes sense for the patient long-term Investor who is already an Nvidia shareholder.

In conclusion, the recommendation would be either to **HOLD** this security for the long term, as the Company has good fundamentals in a profitable and growing industry, or **SELL** in case of an urgent need of liquidity or if better investments, with higher expected returns, could be found.

2. Business Description

Nvidia is a leading IT company known for its innovative Graphics Processing Units (GPUs), Artificial Intelligence (AI) computing, and gaming solutions.

The Company was founded in 1993 by three American computer scientists, Jensen Huang (current CEO), Chris Malachowsky, and Curtis Priem, with the vision of bringing 3D graphics to the gaming and multimedia markets.

Originally focused on PC graphics, the Company responded to strong demand for 3D graphics (particularly from the gaming market) by using its GPU architecture to create new platforms for scientific computing, AI, data science, AV, robotics, metaverse, and 3D internet applications.

Nvidia's GPU was initially used for simulating human imagination in video games and films. Today, it also simulates human intelligence. Its processing capabilities, supported by multiple computing cores, are crucial for running deep learning algorithms. This form of AI, where software learns from data, serves as the brain for computers, robots, and self-driving cars. It is increasingly being adopted by many companies, enabling the creation of complex products and services that traditional coding would find challenging.

Since its inception, the Company prioritized innovation, investing over $37 billion in research and development (R&D). Nvidia's invention of the GPU in 1999 redefined computer graphics, establishing the Company as a leader in its market. The introduction of CUDA in 2006 unlocked parallel processing capabilities for GPUs to science and research. **Appendix R** provides a summary

of the Company's history.

The Company's GPUs accelerate a variety of applications, including climate forecasting, molecular dynamics, and genomics, enabling advancements in critical fields. With support for over 2,800 applications, Nvidia powers more than 70% of the supercomputers on the global TOP500 list.

Both cloud solution providers (CSPs) and consumer internet companies utilize the Company's GPUs and data center-scale accelerated computing platforms to enhance services for billions of users. This includes search, recommendations, social networking, online shopping, live video, translation, AI assistants, navigation, and cloud computing.

Companies in multiple industries use Nvidia's GPUs and software to automate their products and services. The Company's platforms support autonomous driving in transportation, enhance medical imaging in healthcare, and enable fraud detection in the financial services sector.

Furthermore, professional designers rely on Nvidia's GPUs and software to produce visual effects in movies and design a wide range of products, including cell phones and commercial aircraft.

In fiscal year 2023 (ended as of January 28, 2024), Nvidia generated $60.9 billion of revenue and $33.0 billion of operating income. Its diluted EPS stood at $11.93.

NVIDIA Corporation	
Key Data	
Year of foundation	1993
Headquarters	Santa Clara, CA
Incorporation	Delaware
Industry	Information Technology
Number of employees	26,196
CEO	Jensen Huang
Latest Fiscal Year ended	January 28, 2024
Revenue FY23	$60.9Bn
Operating Income FY23	$33.0Bn
Diluted EPS FY23	$11.93

Source: Nvidia 10-K for fiscal year ended January 28th, 2024

***Table 4** - Nvidia Key Business Information // Source: 2023 10-K*

For reporting and operating purposes, Nvidia's business is generally divided into two main segments:

- The Compute & Networking segment includes Nvidia's Data Center accelerated computing platform, networking solutions, automotive AI Cockpit, autonomous driving development agreements, autonomous vehicle solutions, electric vehicle computing platforms, Jetson for robotics and embedded platforms, NVIDIA AI Enterprise and other software, as well as cryptocurrency mining processors (CMP).

- The Graphics segment comprises GeForce GPUs designed for gaming and PCs, the GeForce NOW game streaming service along with its infrastructure, gaming platform solutions, Quadro/NVIDIA RTX GPUs tailored for enterprise workstation graphics, virtual GPU (vGPU) software for cloud-based visual and virtual computing, automotive platforms for infotainment systems, and Omniverse Enterprise software for building metaverse and 3D internet applications.

In FY23 (ended as of January 28, 2024), the Compute & Networking segment, essentially synonymous with the data centre sector, generated around 78% of the Company's total revenue for the year. This segment has grown substantially recently, overtaking the graphics segment two years ago, thanks to the strong demand for AI technologies which depend on premium GPUs, such as the H100.

The H100, has been specifically designed to handle the heavy computational loads associated with training generative AI models, making it an essential tool for researchers and developers in this field. In addition to hardware, Nvidia has also made significant contributions to the software side of generative AI. The Company has developed a range of software tools and libraries, such as CUDA and cuDNN (CUDA Deep Neural Network), which have made it easier for developers to implement and optimise generative AI models.

As Nvidia charts its path into the future, it does so with optimism, envisioning an inflection point for AI. The Company foresees widespread adoption of AI across diverse industries, underscoring its pivotal role in shaping the AI landscape for years to come.

At present, Nvidia supports AI in various industries:

- **Healthcare:** In healthcare, generative AI has ushered in a paradigm shift in drug discovery and personalised treatments. Nvidia's AI technology expedites therapy development by crafting new drugs and tailoring treatments to individual genetics, resulting in improved patient outcomes.

- **Finance and Insurance:** Nvidia's AI plays a pivotal role in asset management by automating real-time tracking of financial instruments, preventing problems before they escalate. It also aids banks in identifying investment prospects by analysing demographic and infrastructure data, and in insurance, it assesses customer data to estimate claims risk, enhancing premium accuracy and automating complex claims analysis.

- **Food:** In the food industry, AI is revolutionising farming by optimising yields through data analysis from drones and satellites. Nvidia's AI streamlines food distribution by predicting demand and reducing waste, addressing a critical industry concern. Moreover, it enables personalised nutrition plans and recipes, enhancing dining experiences and promoting health.

- **Robotics:** For robotics, Nvidia's Isaac Sim is pivotal in simulating scenarios for industrial robots, allowing them to navigate and perform tasks accurately. This simulation is crucial for design testing, safe trials, and handling challenging real-world scenarios.

- **Retail:** Generative AI is transforming the retail sector by customising customer experiences. Nvidia's AI empowers retailers to engage customers through personalised product suggestions and virtual shopping guides, fostering innovative customer interactions.

- **Design:** Nvidia's GPUs are revolutionising various design domains, enabling architectural visualisation, immersive VR experiences, product design advancements, efficient graphic design, and integration with leading design software. They facilitate visualisation, rapid iterations, and precise modelling, elevating the design process.

- **Sports:** High-performance computing and AI driven by Nvidia's GPUs are instrumental in analysing player performance, strategizing game plans, and predicting injury risks in sports. Furthermore, they enhance the fan experience by enabling immersive VR and AR experiences, offering fans engaging ways to enjoy sporting events.

- **Entertainment and Media:** In entertainment and media, generative AI powered by Nvidia's technology crafts lifelike digital content, from movie special effects to virtual characters in video games. This empowers artists and developers to create immersive experiences for global audiences.

In FY23 (ended as of January 28, 2024), the Graphics segment, mainly attributable to the gaming market, generated around 22% of the Company's total revenue for the year.

Nvidia's GPUs are highly regarded by gamers, granting the Company a commanding position with a market share exceeding 80%. Notably, Nvidia recently introduced its GeForce NOW platform, which enables gamers to enjoy their favourite PC games on a wide range of devices. This innovation underscores the potential for high-quality gaming experiences without the need for expensive hardware.

While the two previously mentioned segments generate the bulk of Nvidia's revenues, other smaller segments are growing rapidly and hold substantial potential. These segments include "Professional Visualisation", "Automotive" and "OEM and Other".

These segments may not currently be as prominent as Gaming and AI, but they are steadily evolving and represent important avenues for future growth and diversification.

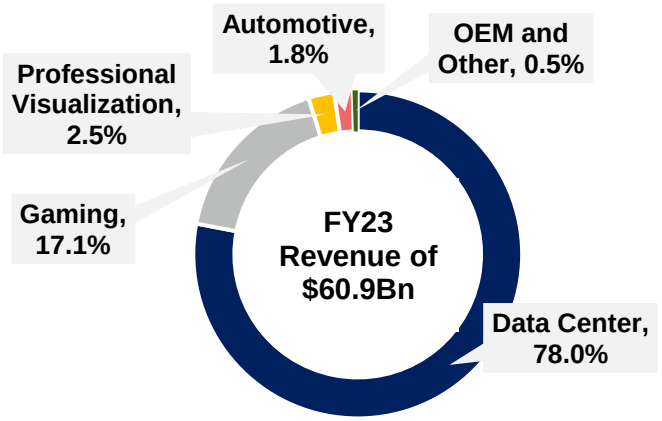

Figure 4 *- FY23 Revenue by Operating Segment // Source: 2024 10-K*

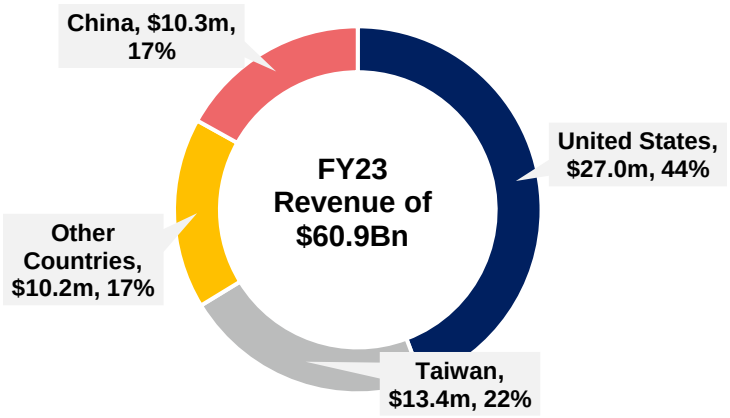

Figure 5 - FY23 Revenue by Geographic Region // Source: 2024 10-K

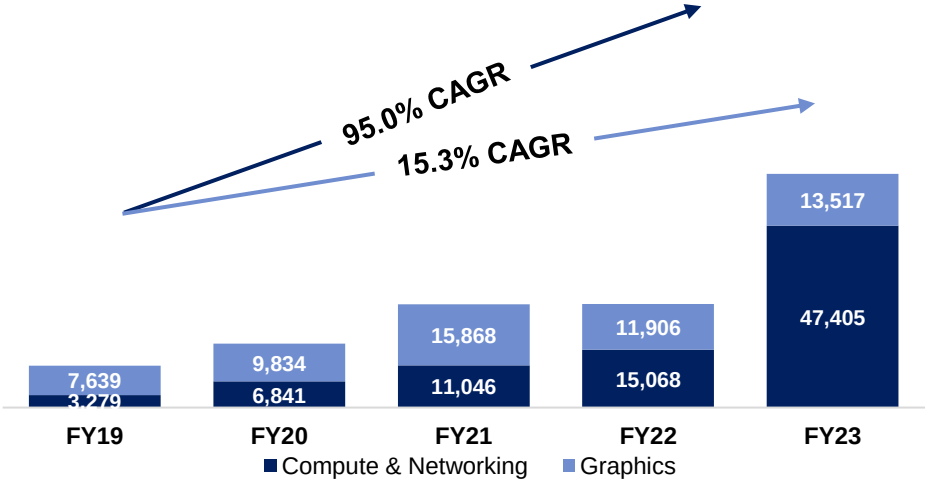

Figure 6 - Revenue Growth by Business Segment // Source: 2024 10-K

Nvidia Stock "NVDA"

Nvidia stock is currently traded under the “NVDA” symbol on the Nasdaq Stock Exchange. The Company’s market capitalization has surpassed the $1 trillion market cap which includes companies like Apple, Microsoft, Alphabet or Amazon.

Following the announcement of fourth quarter fiscal 2024 financial results on February 21, 2024 (after market closing), Nvidia’s stock increased by 16.4% the following day, reaching $785.38 by the close on February 22, 2024.

The average stock price since the day after the announcement of fourth quarter earnings (February 22, 2024) until April 12, 2023 (date of this report) amounts to $872.72. This average price will serve as the basis for comparison against the average 12-month Price Target calculated in this report, using commonly used valuation methods.

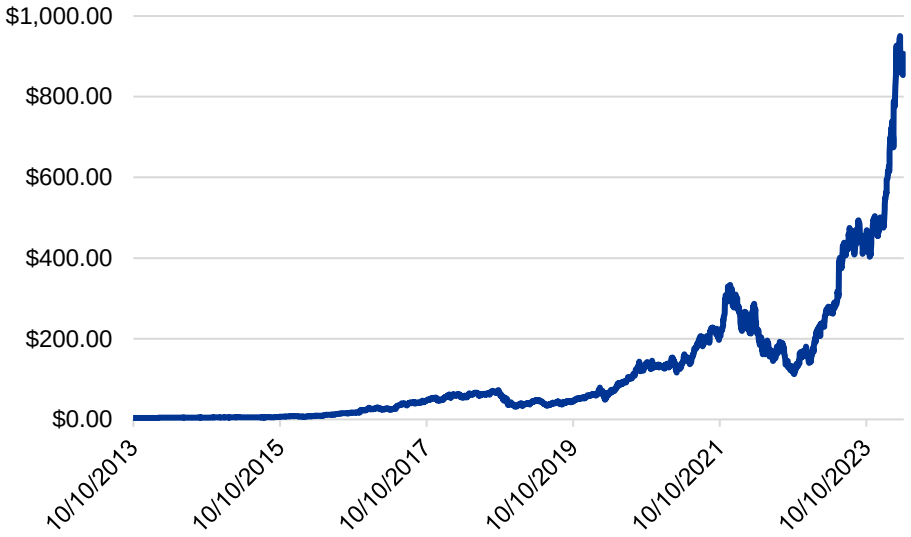

Figure 7 *- Nvidia Stock Price (at Close) Evolution // Source: Nasdaq*

The Company's stock is relatively liquid with an average of 55 million shares traded daily from February 22, 2024 (date following Nvidia's fourth quarter fiscal 2024 earnings announcement) and April 12, 2024 (date of this report). Nvidia's float stands at 96.0%.

3. Environmental, Social and Corporate Governance

Nvidia is dedicated to developing computing technologies that have a positive impact on society and tackle global challenges. The Company tries to incorporate Environmental, Social, and Corporate Governance (ESG) principles and practices throughout all of its operations.

The Nominating and Corporate Governance Committee of its Board of Directors oversees the review and discussion of the Company's ESG practices with management.

Annual assessments of the programs are usually conducted, taking into account stakeholder expectations, market trends, and business risks and opportunities. These issues align with the concerns of Nvidia and all its stakeholders.

Since the last full update on September 7, 2023 by Morningstar Sustainalytics department, Nvidia's ESG Risk Rating was 13.6 (Low Risk), ranking the Company as 5th out of its industry group composed of 344 Semiconductors companies **(Table 5).**

ESG Rating			
Company	**ESG Rating**	**Risk Level**	**Industry Ranking**
Nvidia Corp.	**13.6**	**Low**	**5/344**
AMD, Inc.	15.0	Low	16/344
Qualcomm, Inc.	15.6	Low	20/344
Marvell Technology, Inc.	16.9	Low	32/344
Intel Corp.	19.0	Low	62/344
Texas Instruments, Inc.	20.7	Medium	87/344

Table 5 *- Nvidia and its peers ESG Rating // Source: Morningstar Sustainalytics*

Environmental

Nvidia prioritizes sustainability throughout its product lifecycle, addressing climate impacts and evaluating risks from regulations and market changes.

The Company set a goal for FY25 to achieve 100% renewable energy usage for all its offices and data centers.

Energy efficiency is a key focus in Nvidia's R&D processes. The Company's GPUs are optimized for performance per watt and AI workloads, leading to the recognition of Nvidia's systems on the Green500 list of energy-efficient systems **(Figure 8).**

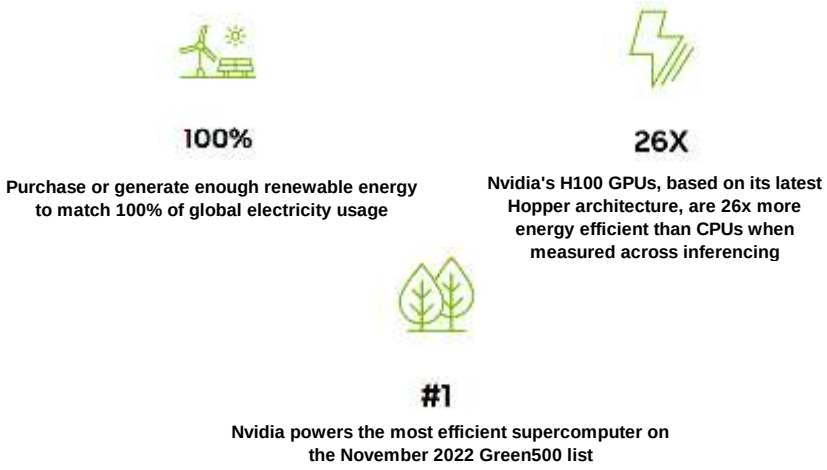

Figure 8 *- Nvidia Renewables and Efficiency // Source: Nvidia.com*

Furthermore, The Company has plans to create Earth-2, a digital twin of the Earth, using Nvidia AI and Omniverse platforms. This initiative will enable scientists, companies, and policymakers to make high-resolution predictions of climate change impacts and explore strategies for mitigation and adaptation.

Within the realm of environmental considerations, Nvidia's strategic positioning aligns with the growing emphasis on sustainability and energy efficiency in the gaming industry. Key points to note include:

- Nvidia's commitment to sustainability and energy efficiency mirrors the increasing trend towards eco-conscious gaming. The development of energy-efficient GPUs and advocacy for responsible computing practices underscores Nvidia's alignment with the broader movement for sustainable technology.
- In the field of climate science, Nvidia's generative AI technology enhances the precision of climate models. This contribution leads to more accurate simulations, ultimately improving predictions related to climate change.
- Nvidia's AI capabilities extend to learning from historical weather patterns, enhancing the accuracy of weather forecasts. This proficiency includes early warnings for severe weather events such as hurricanes or tornadoes.
- Nvidia actively supports climate research initiatives through partnerships with academic institutions, providing advanced resources to facilitate comprehensive studies in the field.

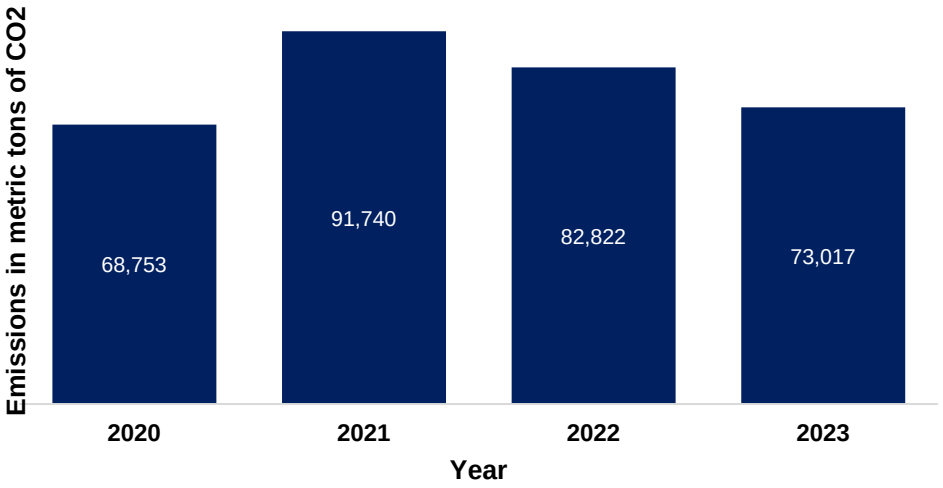

Figure 9 *- Nvidia greenhouse gas emissions from 2020 to 2023 // Source: Statista.com*

Social

In 2023, Nvidia had a bit more than 26 thousand employees, and the number of its employees grew at a CAGR of 23.9% between 2020 and 2023 **(Figure 10).** Around half of its employees in 2023 were located in the Americas (mainly the US). The remaining half is roughly divided equally between three regions: EMEA, APAC and India **(Figure 11).**

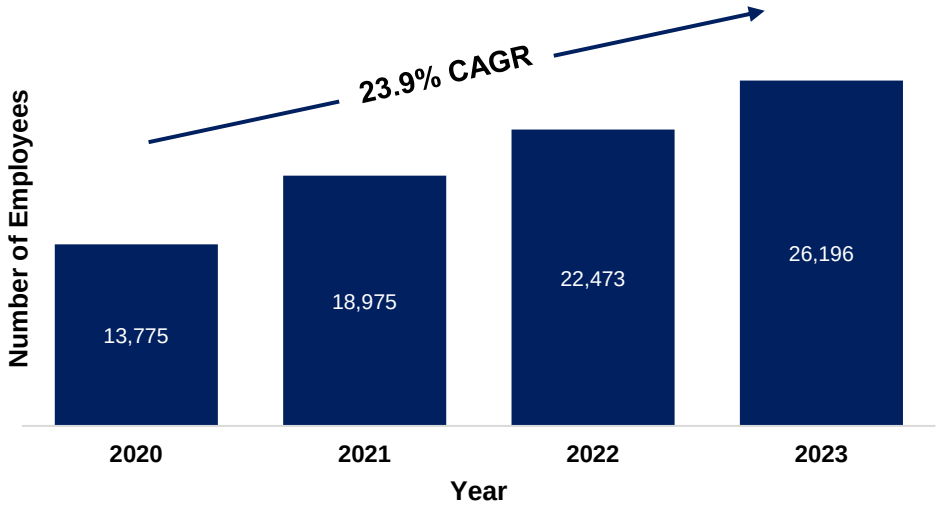

Figure 10 *- Number of Employees from 2020 to 2023 // Source: Statista.com*

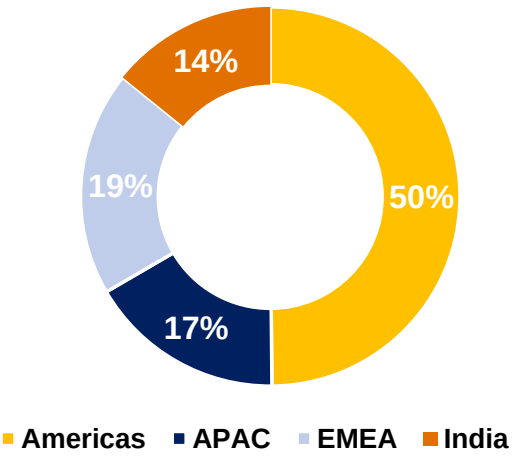

Figure 11 - Employees by Region in 2023 // Source: Statista.com

As of the conclusion of 2023, Nvidia's global workforce was 80% male, 19% female, and 1% not declared. Throughout the course of 2023, Nvidia implemented promotions for 14% of its workforce, with both women and men experiencing nearly equal promotion rates.

Moreover, Nvidia obtained in 2023 several certifications from "Great Place to Work" and "Fortune" boasted by impressive rankings **(Table 6)** with 97% of the Company's employees saying that Nvidia is a great place to work compared to an average of 57% at a typical US-based company. This can partially be explained by the benefits accorded to its employees **(Table 7).**

Great Place to Work and Fortune Awards	
Award	**Ranking**
Best Workplaces for Parents™ 2023 (Large)	#4
Fortune Best Workplaces for Women™ 2023 (Large)	#32
Fortune Best Workplaces in Technology™ 2023 (Large)	#2
2023 PEOPLE® Companies that Care	#13
Fortune Best Workplaces for Millennials™ 2023 (Large)	#2
Fortune Best Workplaces in the Bay Area™ 2023 (Large)	#2
Fortune 100 Best Companies to Work For® 2023	#6

Table 6 - Social Awards in 2023 // Source: Great Place to Work and Fortune

Fortune - Nvidia's Benefits Overview	
Benefit	**Comment**
100% health coverage	yes
Subsidized childcare	no
Compressed work weeks	no
Option to work remotely	yes
Minimum requirement in-office attendance (days per week)	none
Percentage of health care premiums covered	91
Mental health coverage	yes
Free mental health sessions (per year)	8
Maximum $ amount covered for fertility services	unlimited
Fully paid maternal leave (days)	110
Fully paid paternal leave (days)	60
Fully paid adoptive leave (days)	60
Maternal leave in addition to regular time off (days)	110
Paid days off for volunteering	yes

***Table 7** - Benefits Overview as of August 1, 2022 // Source: Fortune*

Furthermore, in the most recent year, only 5.3% of the Company's workforce departed, which stands in stark contrast to the technology industry's average attrition rate of 13.2%. This notable retention rate underscores Nvidia's ability to provide enticing employment opportunities and signifies high employee morale, as well as the perception of meaningful and well-rewarded work.

Notably, in FY 2022, over 37% of the new hires were sourced through employee referrals, a considerably higher figure than the industry standard.

Moreover, Nvidia facilitates a stock purchase plan that allows employees to allocate 15% of their compensation toward purchasing company stock at a 15% discount relative to the market value. This initiative aligns employees' interests with those of shareholders and fosters collaborative engagement between the two groups.

The Board of Directors is composed of 13 members and is recognized for its diversity, boasting a balanced composition of both younger and more seasoned members. In terms of gender representation, the board comprises three women and seven men. Additionally, there is commendable inclusivity as the board includes three members classified as "persons of colour", representing various ethnic backgrounds **(Figure 12).**

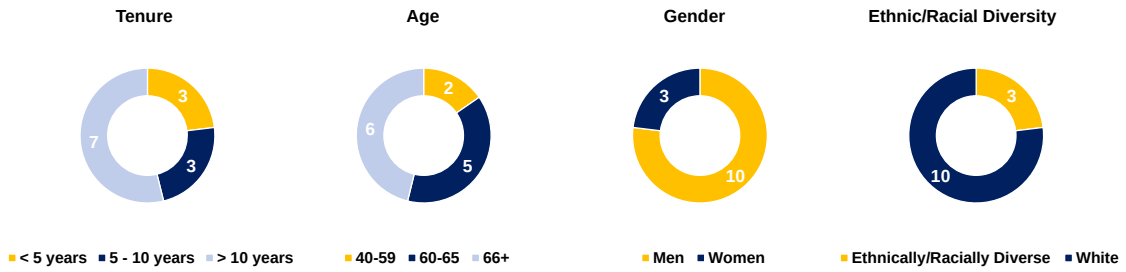

***Figure 12** - Board Composition // Source: 2023 Annual Report*

In terms of customer satisfaction, consumers appear to express a high level of satisfaction with Nvidia's products and services, contributing significantly to the Company's substantial growth and

the establishment of a strong brand reputation. An illustrative metric of this satisfaction is evident in the average customer review score on Amazon, which stands at an impressive 4.6 out of 5.

Corporate Governance

Ownership and Shares Outstanding

Nvidia is a public company with **2,464 million** common shares outstanding as of January 28, 2024. This number of shares will be used in the "Valuation" section to convert the calculated Equity Value of Nvidia to a Share Value.

Number of Shares	
In millions	January 28th, 2024
Number of Common Shares Outstanding	2,464

Table 8 - Common Shares Outstanding // Source: Nvidia 10-K at January 28, 2024

The Company main shareholders include:

- Institutions (mainly traditional investment managers), owning around 67% of total shares outstanding,
- Public (mainly retail investors), owning around 29% of total shares outstanding,
- Individuals (mainly insiders), owning around 4% of total shares outstanding. Jensen Huang (founder and current CEO) owns more than 86 million common shares as of today, thus owning around 3.5% of Nvidia's total shares.

The relatively low level of insider ownership can be viewed as a negative factor from an investor's perspective. It suggests that a significant portion of the Company's shares is not held by those intimately involved in its operations and management. Consequently, there may be a perceived misalignment of interests between insiders and external shareholders, potentially impacting decision-making and the Company's overall governance. **Appendix Q** provides more background on Nvidia's insider transactions in 2023.

Board of Directors

The Board of Directors is appointed and removed at each shareholders meeting. The last annual meeting was held on June 22, 2023.

While the Board benefits from the experience and institutional knowledge that its longer-serving directors bring, it has also brought in new perspectives and ideas through the appointment of two new directors since 2020. The Board also regularly rotates committee membership and chairpersons to promote a diversity of viewpoints on the Board committees. **Appendices M** and **N** provide a summary of key information including tenure, independency and skills of the current 13 Directors of the Company.

Figure 13 below breakdowns Nvidia's Directors compensation in 2022 (fiscal year ending in January 29, 2023). Each Director received approximately $354k, with roughly ¾ of the compensation in Stock Awards and ¼ in Cash.

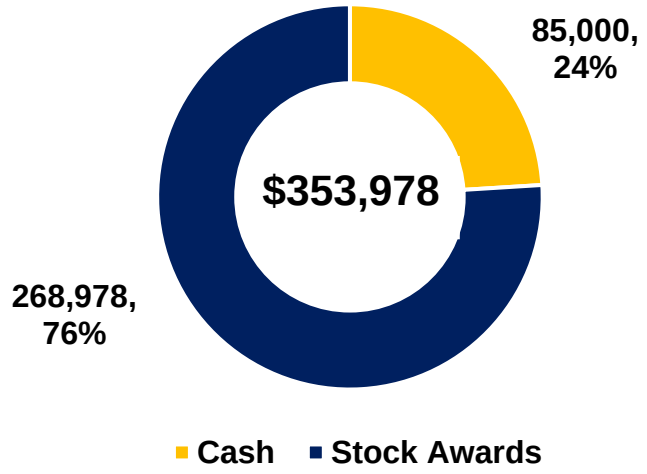

Figure 13 *- Directors Compensation in 2022 // Source: 2023 Annual Report*

Executive Compensation

Nvidia's executive compensation program is designed to pay for performance. The Company uses compensation elements that align its executive interests with those of its shareholders to create long-term value.

The Executives pay is heavily weighted toward performance-based, "at-risk" variable cash and long-term equity awards that are only earned if the Company achieves pre-established corporate financial metrics, but capped at a maximum of 200% of target (or 150% of target for its CEO's PSUs).

In 2022, Nvidia's main Executive Officers comprised of 5 key people **(Figure 14 / Appendix O).**

Figure 14 *- Main Executive Officers // Source: 2023 Annual Report*

Appendix P summarizes the compensation earned by Nvidia's top main Executive Officers during fiscal years 2023, 2022 and 2021[2].
A substantial portion of compensation within the Company is performance-based and vests over a specified period. Given Nvidia's remarkable growth trajectory, the overall compensation package appears to be well-justified.

[2] In this report, Fiscal 2024 is referred to as FY 2023, as the period covered (ending in January 28, 2024) mainly covers the 2023 calendar year (11 months in 2023 and 1 month in 2024). The same logic was applied to Fiscal 2023 (referred to as FY 2022 in this report) and Fiscal 2022 (referred to as FY 2021)

It is noteworthy that Nvidia has ascended to the rank of the third-largest company globally in terms of market capitalisation. A mere five years ago, its market value stood at $87 billion, while today, it surpasses the two trillion-dollar mark. Managing such an expansive operation requires attracting and retaining top-tier leadership talent. As such, Nvidia acknowledges the necessity of offering competitive, market-related compensation to secure the services of the best individuals for these pivotal roles.

Succession Planning and Leadership Experience

Three members of the board have held directorship positions since the Company's inception in 1993. Accumulating over three decades of industry-specific experience, their long-standing collaboration has proven to be synergistic, with each member bringing a distinct skill set to the table.

Collectively, this seasoned management team has successfully navigated the Company through challenging periods, ultimately contributing to the exceptional growth observed today.

Additionally, the Company benefits from the continued leadership of its founder, Jen-Hsun Huang, who serves as the CEO. Huang is widely regarded as a brilliant and visionary leader with a profound strategic acumen. Given his remarkable qualities, it is expected that he will continue in his role as CEO for the foreseeable future.

However, it's worth noting that the Company lacks an official succession plan, which may be a consideration for stakeholders.

Management Integrity

Finally, a significant emphasis should be placed on the quality of the Company’s management, especially its integrity (see **Appendix L** for Code of Conduct), as reflected in their handling of financial statements. A meticulous forensic examination of financial reports can uncover signs of deception or accounting manipulation. In the case of Nvidia, several factors contribute to the management's integrity:

- During the years ending in January 2009 and 2010, management had the opportunity to employ accounting manoeuvres to shift from a minor loss to a small profit. However, they chose not to pursue such tactics, demonstrating a primary focus on operational performance rather than artificially managing share price declines.
- Management's decision not to classify certain costs as exceptional items when they may be recurring and integral to normal business operations, underscores their commitment to transparency.
- Nvidia has consistently received clean audit reports, free from major reinstatements, further enhancing confidence in the Company's financial integrity.
- The Company's accounting policies adhere to standard practices, devoid of any red flags or irregularities.

4. Industry Overview and Competitive Positioning

Global Semiconductor, Gaming and AI Markets Overview

Nvidia operates in the semi-conductor industry and is mainly specialized in AI via data centers and in high performance graphics cards (GPUs), mainly for the gaming market.

The semi-conductor sector is evolving rapidly, with increasing demand for high-performance computing, AI, and data-intensive applications. In 2022, the global semi-conductor sector revenue amounted to $600 billion and grew at a solid CAGR of 7.2% between 2012 and 2022. Statista estimates that the industry will continue growing in the next two years (2023 and 2024) but at a slower rate, with revenues of $631 billion in 2024, i.e. a CAGR of 2.6% between 2022 and 2024 **(Figure 15).**

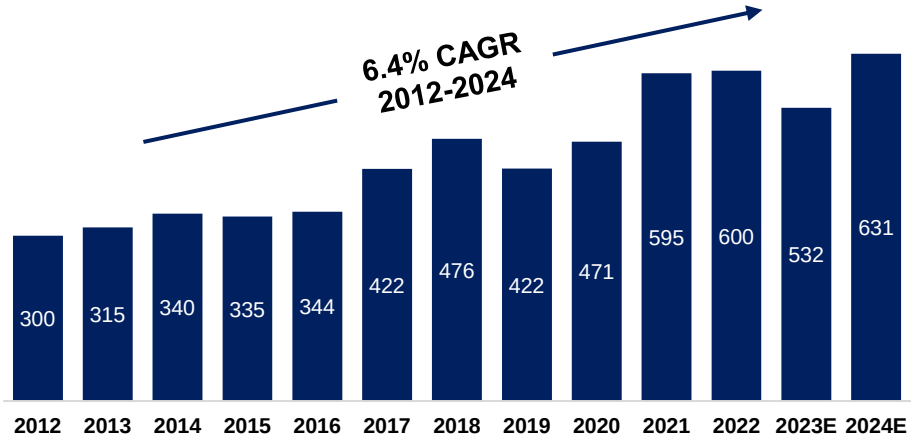

Figure 15 *- Semiconductor industry revenue worldwide (in billion $) // Source: Statista*

Looking at the gaming industry, the global video game market is consistently growing, driven by advancements in graphics and immersive experiences. According to Statista **(Figure 16)**, the global video game market, which generated revenues of $362 billion in 2022, is expected to grow at a CAGR of 9.6% between 2022 and 2028, and reach $627 billion of revenue by 2028.

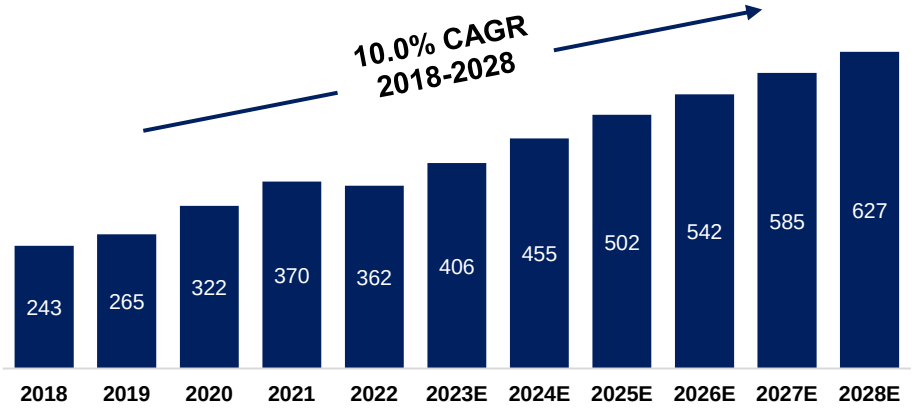

Figure 16 *- Video game market revenue worldwide (in billion $) // Source: Statista*

Furthermore, the expansion of AI applications across industries presents significant growth opportunities for Nvidia's data center and professional visualization segments. According to Statista, the AI market is posed to grow at a much higher rate than the Video Gaming market, with an impressive CAGR of 39.0% over the 2018-2028 period **(Figure 17).**

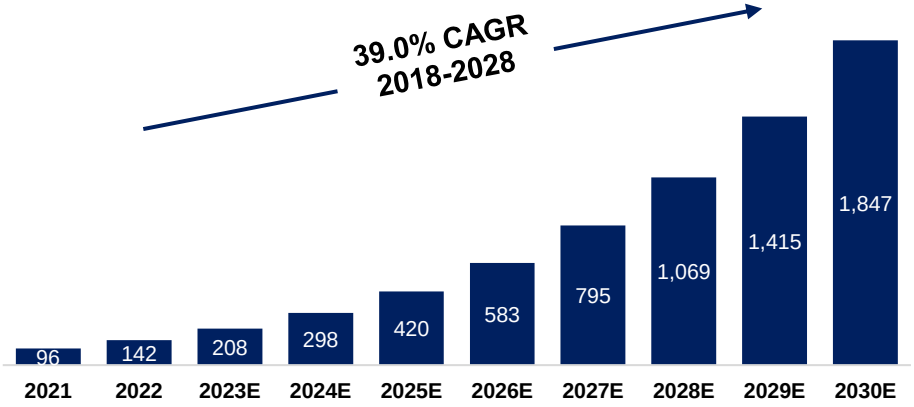

Figure 17 *- AI market revenue worldwide (in billion $) // Source: Statista*

Generally speaking, Nvidia is well-positioned to capitalize on these trends given its leadership in GPUs and AI computing. Its moat is explained by a strong brand recognition, technological expertise, and strategic partnerships. These competitive advantages should enable it to maintain a dominant market share in the data center and gaming markets.

Competitive Positioning

Nvidia’s products operate in a highly competitive market driven by rapid technological advancements and evolving industry standards. Key factors determining competitiveness include performance, breadth of product offerings, access to customers and partners, distribution channels, software support, adherence to industry standard APIs, manufacturing capabilities,

processor pricing, and total system costs.

The Company's ability to anticipate customer and partner demands, deliver consistent product volumes at competitive prices and quality levels, and effectively predict market trends will be crucial to maintaining its competitive edge.

Nvidia anticipates growing competition from existing competitors and new market entrants offering products that may be priced lower, deliver better performance, or provide additional features not available in its offerings. Additionally, the possibility of emerging new competitors or alliances among competitors acquiring significant market share cannot be ruled out.

Nvidia faces significant competition from companies providing or planning to provide GPUs, CPUs, DPUs, and other accelerated AI computing processor products, as well as providers of semiconductor-based high-performance interconnect products. Some of the Company's competitors may possess greater resources in terms of marketing, finances, distribution, and manufacturing, enabling them to adapt more effectively to customer and technological changes.

Nvidia's current competitors include:

- Suppliers and licensors of hardware and software for discrete and integrated GPUs, custom chips, and other accelerated computing solutions, including AI, such as Advanced Micro Devices, Inc. (AMD) and Intel Corporation.

- Large cloud services companies like Alibaba Group, Alphabet Inc., Amazon Inc., and Baidu Inc., which have internal teams developing chips and software with integrated accelerated or AI computing capabilities.

- Suppliers of Arm-based CPUs and companies incorporating CPUs into their internal solutions or platforms.

- Suppliers of System-on-Chip (SoC) products used in servers or embedded into automobiles, autonomous machines, and gaming devices. This includes companies like Ambarella Inc., Broadcom Inc., Intel, Qualcomm Incorporated, Renesas Electronics Corporation, Samsung, and Tesla Inc.

- Suppliers of interconnect, switch cable solutions, and Data Processing Units (DPUs), including companies like AMD, Applied Optoelectronics Inc., Arista Networks, Broadcom, Cisco Systems Inc., Hewlett Packard Enterprise Company, Intel, Juniper Networks Inc., Lumentum Holdings, and Marvell Technology Group.

Porter's 5 Forces Framework

Threat of New Entrants

The threat of new entrants to Nvidia's market is relatively low due to several factors:

- Nvidia has established a strong brand reputation and been in the industry for over three decades. Brands play a crucial role as consumers seek simplified decision-making processes. Customers often gravitate towards familiar and trusted brands, avoiding the complexity of evaluating numerous options. Building a reputation from scratch requires substantial marketing investments and extensive media coverage.
- Nvidia has significant R&D capabilities and intellectual property. The R&D process entails a time lag before yielding results, with no guarantee that innovative ideas will culminate in patents and profitable products. Moreover, recruiting top talent away from established industry leaders is a costly and challenging endeavour.
- Nvidia has extensive relationships with OEMs and software developers. Its ability to place substantial orders with suppliers empowers them to command favourable terms due to their influential position in the industry. For emerging, lesser-known entities, building such profound relationships and gaining industry-wide recognition is an uphill battle.
- Finally, the capital requirements to develop and manufacture high-performance GPUs are substantial **(Figure 18)**, which acts as a barrier to entry. Nvidia's substantial cash reserves position them to acquire small and emerging competitors pre-emptively, averting potential competitive threats.

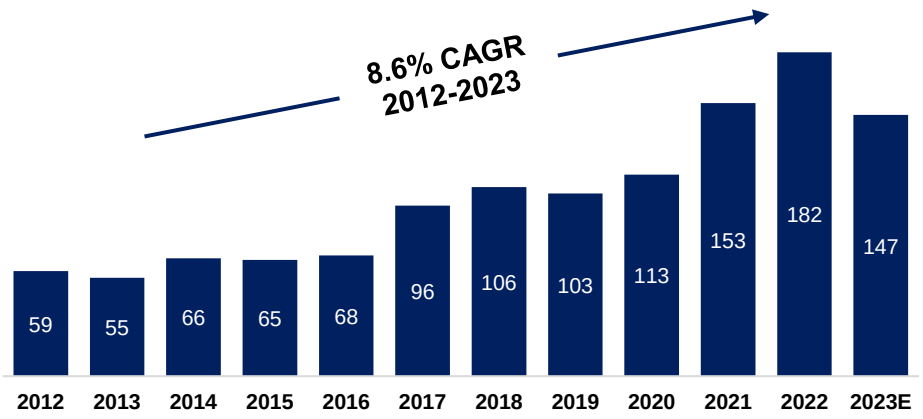

***Figure 18** - Capex in the Global Semiconductor Industry (in billion $) // Source: Statista*

Bargaining Power of Suppliers

The bargaining power of suppliers can be considered as moderate to high, due to several factors:

- Nvidia relies on various suppliers for components and raw materials used in its products:
    - TSMC and Samsung: These suppliers provide semiconductor wafers, with TSMC holding a substantial global market share, producing 60% of the world's supply and 90% of the most advanced chips. While Nvidia is a significant buyer, TSMC holds the stronger position in this relationship. Nvidia's dependence on TSMC for high-quality, large-scale semiconductor production suggests potential vulnerability.

    - Ibiden, Kinsus Interconnect Technology, and Unimicron Technology: These suppliers provide substrates, further emphasising Nvidia's reliance on a limited set of suppliers for critical components.
    - Micron Tech and SK Hynix: These suppliers are responsible for memory supply.
- Nvidia's supply chain is complex, and switching suppliers can have cascading effects, making any changes a complex endeavour for management.
- Nvidia has invested in collaborative efforts with its suppliers to develop new products and foster innovation. This investment reflects a desire to avoid the time and energy required to establish new relationships with new suppliers.
- Nvidia has a well-established reputation for high-quality products. Any uncertainty or compromise in supplier quality could result in significant costs and damage to the company's reputation.
- Nvidia has proactively addressed the supplier dependency issue by securing several long-term contracts to ensure a stable supply of critical components. This strategic move demonstrates Nvidia's awareness of the potential risks associated with supplier power.

Bargaining Power of Customers

The bargaining power of customers can be considered as low. Nvidia serves both individual consumers and enterprise customers. The diversity of the customer base and the complexities associated with switching to alternative providers collectively contribute to this assessment:

- Nvidia has a solid customer diversity. Notably, no single customer held more than 10% of Nvidia's revenue share in the years 2021, 2022, and 2023. This diversity in the customer base reduces the vulnerability of Nvidia to the bargaining power of any one customer.
- In the Graphics segment, Nvidia's end customers primarily comprise individuals, a demographic traditionally possessing relatively weaker bargaining power. However, it's important to note that Nvidia doesn't engage in direct sales to end users. Instead, the Company utilises distribution channels like Amazon to facilitate sales. These channels involve larger order quantities, which, to some extent, bolster buyer power.
- In the Compute & Networking segment, Nvidia's products are integral components for larger systems, and transitioning to an alternative provider is not only time-consuming but also technically challenging. Such a transition demands a substantial degree of technical expertise and may lead to considerable operational disruptions and delays. These barriers significantly diminish the potential influence of buyer power in this segment.

Threat of Substitute Products

The threat of substitute products for Nvidia's products can be considered moderate:

- In the Compute & Networking segment, various hardware alternatives, such as ASICs, FPGAs, TPUs, or emerging innovations like Cerebra's WSE, may potentially offer a more suitable fit for Large Language Models (LLMs). Over the long term, this shift could have implications for Nvidia, a company predominantly centered on GPUs, potentially affecting their ecosystem and, consequently, the strength of their competitive advantage.

- In the Graphics/Gaming segment, Nvidia's moat is fortified by strong barriers as users contemplating a switch from Nvidia to competitors like AMD or Intel GPUs face significant challenges. This includes the need to physically install the new GPU, update system settings, and potentially make additional purchases to ensure compatibility with the new hardware. This adds to expenses and serves as a deterrent to switching.
- Nvidia may also face a threat of indirect substitution in its gaming segment. Consoles such as the Xbox, Nintendo, and PlayStation provide viable alternatives to traditional PC gaming. Therefore, a surge in demand for console gaming could potentially reduce the demand for GPUs used in PC gaming, posing an indirect threat to Nvidia.
- Finally, Cloud gaming represents another indirect substitute for conventional gaming. While Google Stadia faced closure in January 2023 due to limited consumer demand, other platforms like Amazon Luna and Xbox Cloud continue to operate. Nvidia has also entered this space with Nvidia GeForce Now, its cloud gaming platform, to compete effectively.

Competitive Rivalry

A distinction between Nvidia's two operating segments is needed as the competitive landscape in each segment is unique.

In the Graphics segment, factors such as the rising global middle-class, expanding populations, and increased internet penetration are expected to contribute to industry growth, particularly in developing countries where the middle class is expanding rapidly.

The rivalry among existing firms in the Graphics segment can be considered as medium and is influenced by the competitive dynamics between Nvidia (~84% of market share as of Q1'23) and AMD (~12%), with Intel (~4%) emerging as a potential but currently minor player in the market **(Figure 19)**.

Figure 19 *- Discrete Desktop GPU Market Shares // Source: Gurufocus*

AMD, in particular, stands as a strong competitor. This company offers superior value propositions and act as a check on Nvidia's pricing strategies. While Nvidia's products are often perceived as premium, AMD's offerings are notably more budget friendly.

By analyzing both companies' products on sites like Amazon **(Figure 20)**, Nvidia seems to have better average reviews, with an average score of 4.6 compared to AMD's 4.4. Some AMD clients

reported issues such as driver problems, coil whine, overheating, and, in some cases, black screens and flickering monitors following the installation of AMD GPUs. Nvidia GPUs, on the other hand, seemed to enjoy a better reputation.

Reviews from Amazon			
Company	Product	Number of Reviews	Stars
Nvidia	MSI GeForce RTX 3060 2X 12G OC	1693	4.7
Nvidia	ASUS Dual NVIDIA GeForce RTX 3060 V2 OC Edition 12GB GDDR6	1857	4.7
Nvidia	Gigabyte GeForce GT 1030 OC 2G	2030	4.5
Nvidia	Palit GeForce RTX 3060 Dual 12GB GDDR6	715	4.5
Nvidia	MSI GeForce GTX 1660 SUPER VENTUS XS OC	3434	4.6
Nvidia	ASUS Dual GeForce RTX 2060 EVO 6GB GDDR6	2464	4.6
Nvidia	Gigabyte GeForce RTX 3060 Gaming OC 12GB V2 LHR	1040	4.7
		Average	**4.6**
AMD	MSI Radeon RX 6500 XT MECH 2X 4G OC Gaming Graphics Card - 4GB GDDR6	2306	4.4
AMD	ASUS Dual AMD Radeon RX 6700 XT STD Edition 12GB GDDR6	604	4.6
AMD	XFX RX 6800XT 16GB, AMD Radeon RX 6800 XT	4007	4.5
AMD	XFX Radeon RX 580 GTS XXX Edition OC 8 GB GDDR5 3xDP	7218	4.5
AMD	Gigabyte Radeon RX 6600 EAGLE 8GB	312	4.5
AMD	MAXSUN Graphics Cards AMD Radeon RX 550 4GB GDDR5	1050	4.1
AMD	Powercolor Radeon RX 6700 XT Fighter	395	4.4
		Average	**4.4**

Figure 20 *- Reviews on Nvidia and AMD Products // Source: Amazon.com*

It should be noted, however, that the prevailing sentiment is that Nvidia's offerings are on the pricier side. This sentiment is particularly pronounced among recent purchasers, indicating that Nvidia may have limited room to further increase prices in the gaming segment without risking market share erosion.

In the Compute and Networking segment, the AI industry is poised for significant expansion in the near future, driven by several key factors:

- Big Data Era: The proliferation of "big data" necessitates vast quantities of data for training AI models, underpinning the growth of the AI industry.
- Cost Accessibility: The cost of AI hardware and software has experienced a significant reduction, democratizing access to AI technology for both businesses and individuals.
- Growing Awareness: A heightened awareness of the potential benefits of AI is driving its adoption across sectors.

The rivalry among existing firms in the Compute & Networking segment can be considered as low to medium.
In conclusion, Nvidia's position as a provider of high-quality GPUs for AI applications, coupled with the inelastic nature of demand due to the immense benefits of AI, reinforces its competitive advantage. Indeed, while alternative hardware options to GPUs may present potential challenges, when considering the broader context, including competition within the industry, Nvidia's robust position remains favourable for sustained success. The promising growth prospects within the industry further bolster Nvidia's outlook.

5. Financial Analysis

Income Statement

Nvidia's income statement for the 2018-2023 historical period and the 2024-2028 projected period is presented in **Appendix A**.

The Company breakdowns its revenue into two reportable segments in its annual reports: "Compute & Networking" and "Graphics".

In fiscal year ended on January 28, 2024[3], the Company's revenue amounted to $60.9 billion. The "Compute & Networking" segment generated $47.4 billion of revenue while the "Graphics" segment revenue amounted to $13.5 billion **(Figure 21)**.

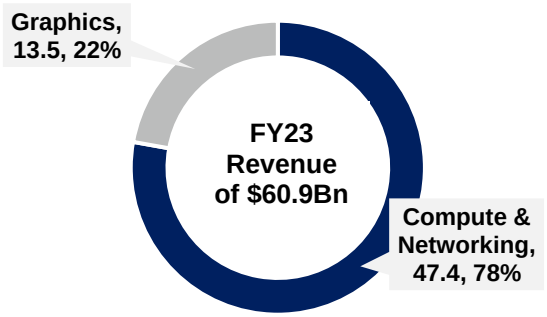

***Figure 21** - FY 2023 Revenue by Segment // Source: 2024 10-K*

Revenue more than doubled in FY 2023, increasing at a rate of 125.9%. The two segments, however, showed different dynamics during this year.

The "Compute & Networking" segment revenue increased by 214.6% year over year. This increase was due to higher Data Center revenue. Compute grew 266% due to higher shipments of the NVIDIA Hopper GPU computing platform for the training and inference of LLMs, recommendation engines and generative AI applications. Networking was up 133% due to higher shipments of InfiniBand.

The increase in revenue of the "Graphics" segment was much smaller, at 13.5% only. This was led by growth in Gaming of 15% driven by higher sell-in to partners following the normalization of channel inventory levels.
Figure 22 below summarizes Nvidia's revenue breakdown by segment on a quarterly basis, from Q4'21 to Q2'24 (ending July 2023).

[3] Presented in this report as fiscal year 2023 (FY 2023) as the fiscal year of Nvidia Corporation covered 11 months in 2023 and only 1 month in 2024.

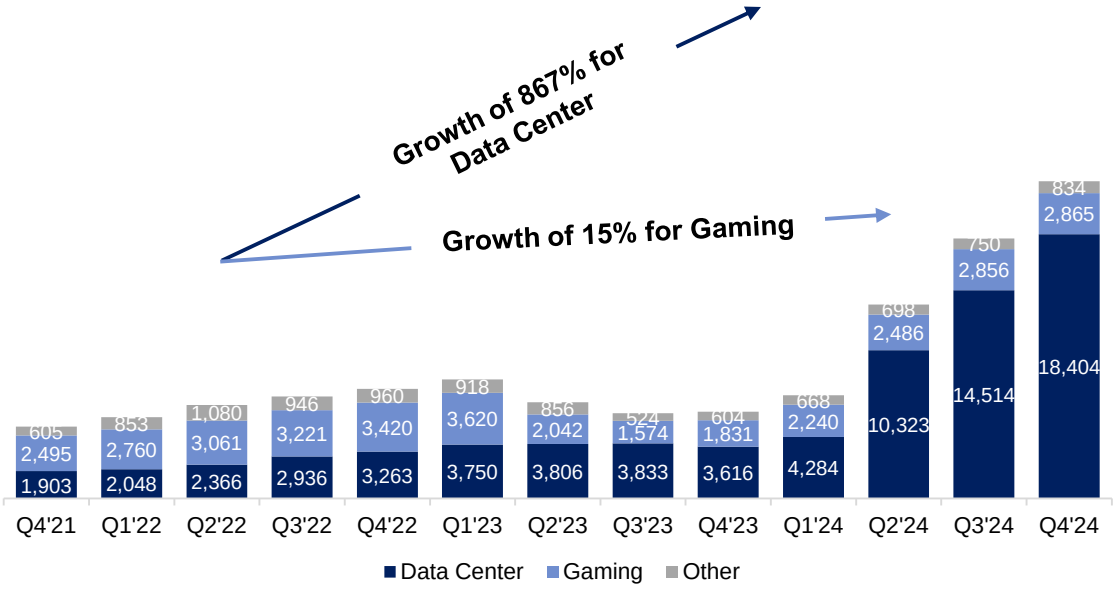

Figure 22 *- Quarterly Revenue by Segment // Source: Annual and Quarterly Reports*

Geographically, the United States accounted for 44% of the revenue generated for FY 2023 versus 31% in FY 2022. The decline in revenue generated outside the US was mainly driven by China and Taiwan relating to Data Center and Gaming.

The Company had no customer representing 10% or more of total revenue for FY 2023 and FY 2022.

It should also be noted that the Company breakdowns its revenue by the four large market its platforms address: Data Center, Gaming, Professional Visualization, and Automotive. **Table 9** breakdowns the revenue for FY 2023 by market and the growth rates of each market year over year.

Revenue by Market			
In $Bn	**Revenue**	**In % of tot.**	**vs LY**
Data Center	47.5	78.0%	216.8%
Gaming	10.4	17.1%	14.8%
Professional Visualization	1.6	2.5%	3.5%
Automotive	1.1	1.8%	21.2%
OEM and Other	0.3	0.5%	-38.8%
Total	**60.9**	**100.0%**	**125.9%**

Table 9 *- FY 2023 Revenue Breakdown by Market // Source: 2024 10-K*

Over the 2018-2023 fiscal period, Nvidia grew its revenues from $11.7 billion in FY 2018 to 60.9 billion in FY 2023, inducing a CAGR of 39.1% during this period.

Cost of Revenue amounted to $16.6 billion in FY 2023 and mainly relates to the cost of semiconductors. Thus, gross profit reached $44.3 billion during this year.

In FY 2022, Nvidia's gross margin declined year over year. This decline was primarily due to inventory charges amounting to $2.17 billion. These charges were mainly attributed to an excess supply of NVIDIA Ampere architecture Gaming and Data Center products, which did not align with the expected demand, particularly in China. In FY 2023, however, Nvidia's gross margin recovered to 73% mainly due to strong Data Center revenue growth of 217% and lower net inventory

provisions as a percentage of revenue **(Figure 23)**.

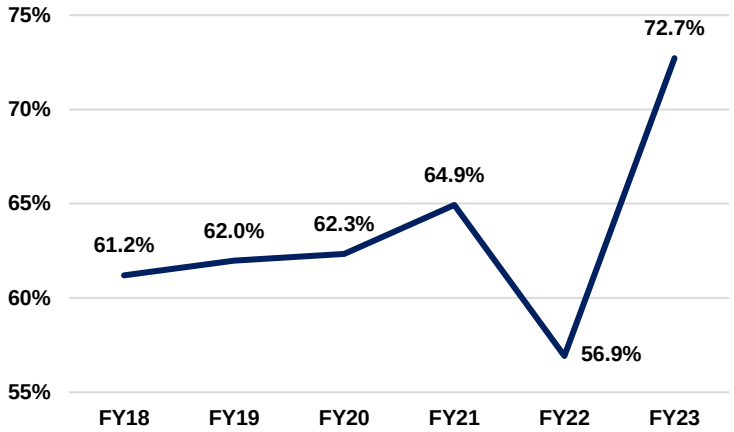

***Figure 23** - Gross Margin from FY18 to FY23 // Source: 10-Ks for the 2018-2023 period*

Nvidia's main operating expenses include Research and Development (R&D), Sales, General and Administrative (SG&A) and Stock Compensation Expenses.

R&D expenses amounted to $8.7 billion in FY 2023, i.e. 14.2% of total revenue. This substantial investment reflects Nvidia's commitment to innovation and staying at the forefront of technology trends. The company's agility in responding to market dynamics has not only maintained its competitive edge but also enabled it to shape the future of the industry.

SG&A expenses reached $2.7 billion in FY 2023, i.e. 4.4% of total revenue. These cover essential operational and administrative functions, crucial for sustaining the Company's day-to-day operations and market presence.

Stock-based Compensation expenses amounted to $3.5 billion in FY 2023. They are associated with restricted stock units (RSUs) and performance stock units (PSUs). These expenses are included in R&D ($2.5 billion), SG&A ($876 million) and Cost of Revenue ($141 million). Notably, in recent years, stock compensation expenses have surged due to Nvidia's impressive growth and the remarkable appreciation of its share price. Recently, stock compensation emerged as the second-largest expense, reaching an unusually elevated level.

The Company's operating expenses increased in FY 2023, mainly driven by R&D expenses, particularly compensation, data center infrastructure, and engineering development costs. Note that operating expenses in FY 2022 included a $1.35 billion termination "break-up" fee related to the Arm transaction collapse[4].

[4] In February 2022, Nvidia and SoftBank Group Corp., announced the termination of the Share Purchase Agreement whereby Nvidia would have acquired Arm Limited, from SoftBank. The parties agreed to terminate because of significant regulatory challenges preventing the completion of the transaction. The Company recorded an acquisition termination cost of $1.35 billion in FY 2022 reflecting the write-off of the prepayment provided at signing.

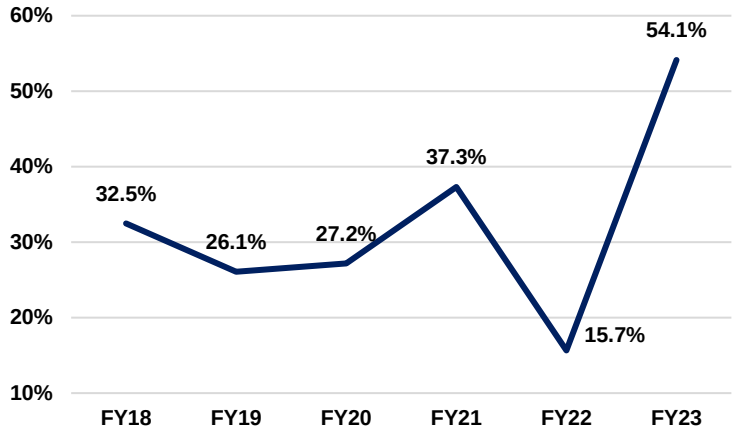

Figure 24 *- Operating Margin from FY18 to FY23 // Source: 10-Ks for the 2018-2023 period*

Other income reached a net figure of $846 million in FY 2023. This amount is the sum of interest income of $866 million, interest expenses of $257 million and other income for $237 million.

The increase in interest income was due to higher yields on higher cash balances. Interest expense is comprised of coupon interest and debt discount amortization related to Nvidia's notes. Other income/expenses mainly relates to realized or unrealized gains and losses from investments in non-affiliated entities and the impact of changes in foreign currency rates.

Nvidia recognized an income tax expense of $4.1 billion in FY 2023. The effective tax rate for FY 2023 of 12.0% was lower than the US federal statutory rate of 21% mainly due to tax benefits from the Foreign Derived Intangible Income (FDII) deduction, tax benefits related to stock-based compensation and a US federal research tax credit.

The Company net income reached $29.8 billion, i.e. 48.8% of total revenue. Diluted earnings per share (EPS) reached $11.93 in FY 2023, up 585% year over year **(Figure 25).**

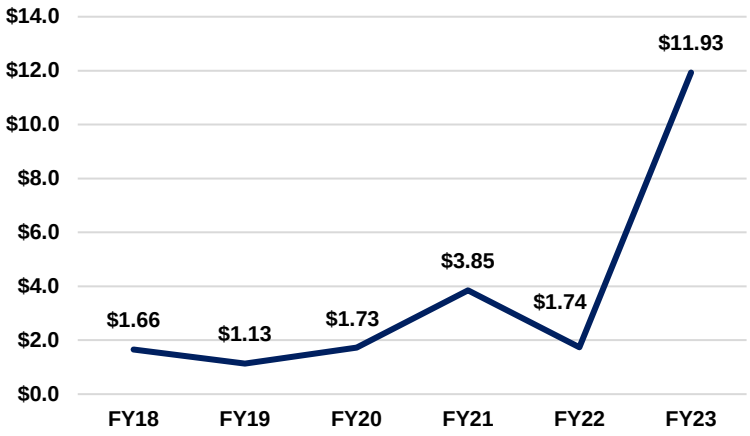

Figure 25 *- Diluted Earnings per Share (EPS) // Source: 10-Ks for the 2018-2023 period*

Balance Sheet

Nvidia's balance sheet is presented in **Appendix B**.

Nvidia capital employed amounts to $30.4 billion as of January 28, 2024 **(Figure 26)**. It includes:

- Fixed assets of $10.8 billion,
- Structurally positive working capital of $13.5 billion,
- Deferred income tax assets of $6.1 billion.

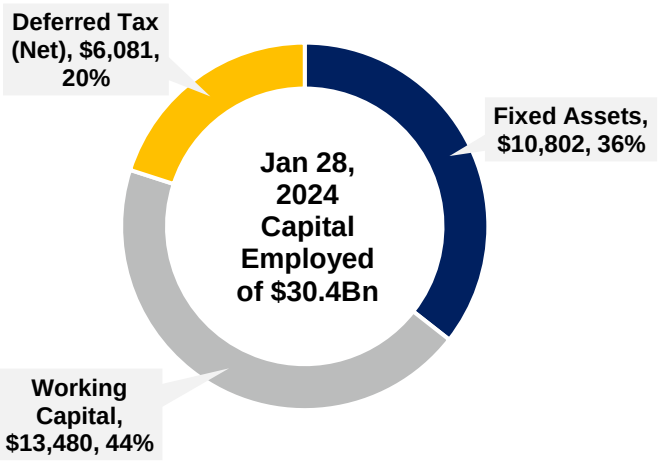

Figure 26 *- Capital Employed Breakdown (in $m) as of January 28, 2024 // Source: 2024 10-K*

The Company fixed assets mainly include goodwill and property and equipment.

Goodwill mainly relates to the acquisition of Mellanox Technologies in April 2020 for a total purchase consideration of $7.1 billion. Following a Purchase Price Allocation exercise, most of the purchasing price was allocated to both goodwill ($3.4 billion) and intangible assets ($3.0 billion) which explains the significant increase of these assets as of January 31, 2021.

Property and equipment amounted to $3.9 billion as of January 28, 2024. It mainly includes equipment, computer hardware, and software ($5.2 billion of gross value) and buildings, leasehold improvements, and furniture ($1.8 billion of gross value).

Nvidia's working capital is structurally positive and amounts to $13.5 billion as of January 28, 2024. Its components are presented in **Appendix C.**

Current assets amount to $22.9 billion as of January 28, 2024 and mainly include account receivables ($10.0 billion), inventories ($5.3 billion) and prepaid supply agreements ($2.5 billion) which are included in "Prepaid Expenses and Other".

Current liabilities amount to $9.4 billion as of January 28, 2024 and mainly include account payables ($2.7 billion), customer program accruals ($2.1 billion) and excess inventory purchase obligations ($1.7 billion).

Working capital level as of January 28, 2024 reached 22.1% or 81 days of FY 2023 revenue. Average working capital level in the last six fiscal periods reached 21.4% or 78 days of revenue **(Figure 27).**

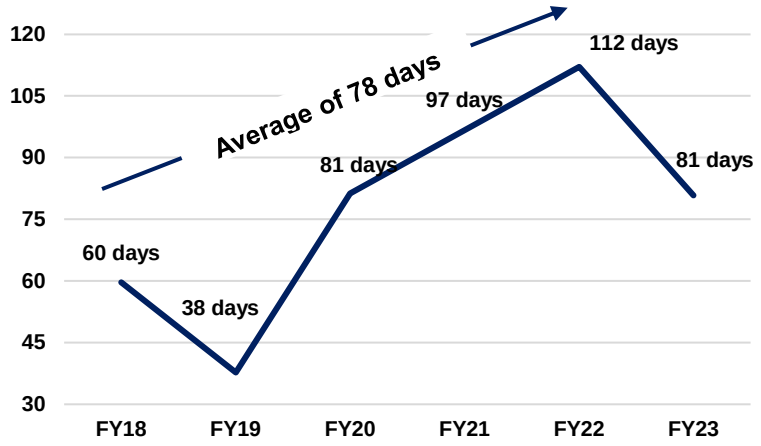

Figure 27 - Working Capital in Days of Sales // Source: 10-Ks for the 2018-2023 period

Going back to the balance sheet, deferred income tax assets reached $6.1 billion as of January 28, 2024 and mainly relate to the tax effect of temporary differences relating to capitalized R&D expenditures.

The Company invested capital amounts to $30.4 billion as of January 28, 2024 and is mainly composed of Equity **(Figure 28).**

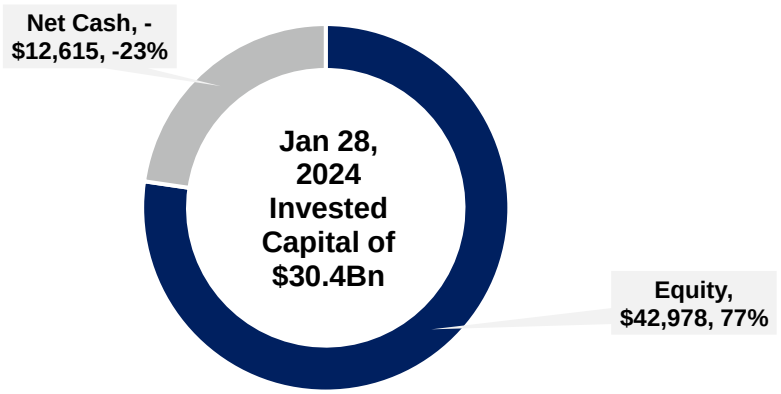

Figure 28 - Invested Capital Breakdown (in $m) as of January 28, 2024 // Source: 2024 10-K

Net worth (equity) increased from $9.3 billion at January 27, 2019 to $43.0 billion at January 28, 2024, driven by strong earnings.

In FY 2023, Nvidia returned to its shareholders $9.7 billion in share repurchases and $0.4 billion in quarterly cash dividends.

Finally, the Company had a balance of net cash of $12.6 billion as of January 28, 2024 which mainly includes:

- Long-term debt balance of $8.5 billion, comprising unsecured senior notes only,
- Short-term debt balance of $1.3 billion,
- Long-term operating lease liabilities of $1.1 billion,

- Other long-term liabilities of $2.5 billion, mainly comprising income tax payables of $1.4 billion.
- Cash and cash equivalents for $7.3 billion, and,
- Marketable securities for $18.7 billion.

Net Debt / Net Cash

In order to calculate the Equity Value (12-month Share Price Target) of Nvidia as of December 31, 2024[5], the forecasted net debt (cash) balance as of January 26, 2025 will be subtracted (added) from (to) the calculated Enterprise Value. Nvidia's adjusted forecasted net *cash* balance as of January 26, 2025 amounts to **$49.3 billion,** as presented in **Table 10**.

Net Financial Debt / Cash	
In $m	**January 26, 2025**
Long-Term Debt	8,459
Short-term Debt	1,250
Long-Term Operating Lease Liabilities	1,231
Other Long-term Liabilities	2,795
Financial Debt	**13,735**
Cash and Cash Equivalents	-16,242
Marketable Securities	-45,590
Cash and Equivalents	**-61,832**
Net Financial Debt (+) / Cash (-)	**-48,097**

Adjusted Net Financial Debt / Cash	
In $m	**January 26, 2025**
Net Financial Debt (+) / Cash (-)	**-48,097**
Long-Term Operating Lease Liabilities Adjustment	-1,231
Adjusted Net Financial Debt (+) / Cash (-)	**-49,328**

***Table 10** - Adjusted Net Cash (in $m) as of January 26, 2025 // Source: 2024 10-K*

I made an adjustment to exclude the long-term operating lease liabilities of $1.2 billion as operating lease (rent) cash outflows will already be included in the business plan presented afterwards. Thus, both operating income like EBITDA and EBIT used in the listed peers method and the free cash flow to firm used in the discounted cash-flow (DCF) method will already be including the expense relating to operating leases.

Thus, the adjusted net *cash* balance of **$49.3 billion** will be considered in the Enterprise Value to Equity Value bridge.

Quality of Earnings and Balance Sheet

The following factors demonstrate the quality of Nivida's reported earnings:

- **Non-Recurring Expenses:** In FY 2022, Nvidia incurred a non-recurring termination cost of $1.35 billion related to the termination of the Arm transaction. Importantly, this one-time expense is not expected to recur in the future. Consequently, it is prudent to consider adding this amount back to the current year's earnings for analytical purposes.

[5] For simplicity, the calendar year is being used here as a proxy and Nvidia's share is evaluated as of December 31, 2024 instead of January 26, 2025

- **Product Warranty Provisions:** Historically, the provisions for product warranties have consistently exceeded actual utilisation, reflecting a conservative approach. This conservative stance bolsters the quality of earnings, as actual earnings are likely higher due to these overly cautious provisions.
- **R&D Expenses:** They are expensed on the balance sheet in the year they are incurred, despite their long-lasting effects. Arguably, they should be amortised over time. The immediate expensing of R&D further contributes to strengthening the quality of earnings.

The following factors outline some weaknesses in Nvidia's quality of earnings:

- **Concentration of Accounts Receivables:** As of January 29, 2023, two customers represented 25% of Nvidia's accounts receivable balance, marking a concentration risk. This concentration has increased compared to previous years, where two customers represented respectively 22% and 16% of the ending balance in January 2022 and 2021. This increase in concentration is a concern and detracts from the quality of earnings, emphasizing the importance of diversifying receivables for stability.
- **High Inflation Impact:** The US experienced heightened inflation following the events of the Ukraine invasion in February 2022. Consequently, it is crucial to consider the possibility that some of the reported growth may be attributable to inflation. Adjusting for the inflation rate reveals that real growth is lower than initially perceived, underscoring the importance of recognising the inflationary impact on earnings quality.

Regarding the quality of the balance sheet, Nvidia's balance sheet is healthy and robust, demonstrated by the following factors:

- **Substantial Cash Reserves:** The Company commands a substantial cash and cash equivalents position, currently totaling $26 billion. This cash reserve significantly outweighs its debt obligations and aligns favorably with the robust cash flow generated from its operations. Furthermore, the effective interest rate on its debt stands at a mere 2.2%, representing a cost-efficient means of financing its expansion efforts. Nvidia, therefore, possesses ample liquidity and is well-prepared to fulfil its obligations and refinance its long-term debt when necessary.
- **Moderate Debt-to-Equity Ratio:** With an average debt-to-equity ratio of around 44% (FY 2018 to FY 2022), Nvidia maintains a relatively conservative leverage profile, reflecting a balanced approach to financing.
- **Secure Debt Structure:** The debt held by Nvidia is unsecured, and its covenants are predominantly non-financial in nature, providing the Company with flexibility and stability in managing its financial obligations.
- **Transparent Financing:** The Company abstains from employing off-balance sheet financing strategies, promoting transparency and accountability in its financial reporting.
- **Pension Scheme Alignment:** Nvidia operates a defined contribution pension scheme, a structure that aligns with shareholders' interests, as opposed to the potentially more onerous defined benefit schemes.

- **Hidden Asset Potential:** Notably, Nvidia possesses hidden assets that may not be fully recognised under GAAP. There is additional value beyond what is currently reflected on its balance sheet.

Many assets (human capital, loyalty of customers, etc.) do not show up on Nvidia's balance sheet even though they are real assets that contribute to the Company's overall operational and financial performance.
Nvidia's most paramount asset undoubtedly lies in its human capital. The Company boasts a plethora of exceptionally talented employees who have consistently demonstrated their prowess in innovation and achieving remarkable milestones.

Moreover, Nvidia owns intellectual property which has been expensed as R&D or amortised down to zero. Nvidia has spent $37 billion on R&D since 1993. The real value of this intellectual property is hard to determine, but it is worth far more than the value recorded on the balance sheet.

Finally, the enduring loyalty of its customer base, coupled with its formidable brand awareness, constitutes an intangible asset of significant value. Nvidia's strategic investments in cultivating these aspects span decades and contribute substantially to its competitive advantage.

Capital Allocation

Nvidia has a substantial cash balance ($26 billion as of January 28, 2024). This strong balance provides a range of strategic opportunities for Nvidia:

- **Organic Growth:** First, the availability of ample cash resources enables the possibility of fuelling further organic growth. This includes increased investments in Research and Development (R&D), expanded marketing efforts, or the development of new product lines.
- **Strategic Acquisitions:** In case of a lack of organic growth opportunities, Nvidia can leverage its financial strength to pursue strategic acquisitions, particularly in the burgeoning field of AI. Such bolt-on acquisitions offer the potential for synergistic benefits post-transaction.
- **Share Buybacks:** The Company can also strategically engage in further share buybacks, yielding benefits contingent on management's acumen to acquire shares below their intrinsic value.
- **Special Dividends:** Finally, Nvidia has also the capacity to distribute a significant special dividend, which not only sends a positive signal to the market but also enhances demand for the Company's shares.

Furthermore, Nvidia's financial position provides a robust shield against potential adversities:

- **Cash Reserves for Turbulent Times:** The Company's substantial cash reserves serve as a financial buffer, affording it the necessary time and resources to navigate operational challenges and adapt during adverse market conditions.

- **Avoidance of Dilution:** Nvidia is well-positioned to avoid the issuance of shares at inopportune moments to fund potential losses or maintain financial stability, safeguarding shareholder value.
- **Mitigated Interest Rate Risk:** With fixed-rate debt instruments in its portfolio, the Company is shielded from interest rate fluctuations. Additionally, it operates without the constraints of debt covenants, providing added financial flexibility and security.

Profitability, Liquidity and Solvency

Nvidia's Key Financial Ratios are presented in **Appendix D**.

Overall, the Company's financial ratios demonstrate strong margins, favorable returns and excellent financial health.

Nvidia's average operating (EBIT) margin during the last five fiscal years stood at around 32%, which means that about a third of the Company's net sales is translated into operating profit. This puts Nvidia's operating margin on par with some of the great Tech companies like Microsoft, Apple, Alphabet, Meta, etc.

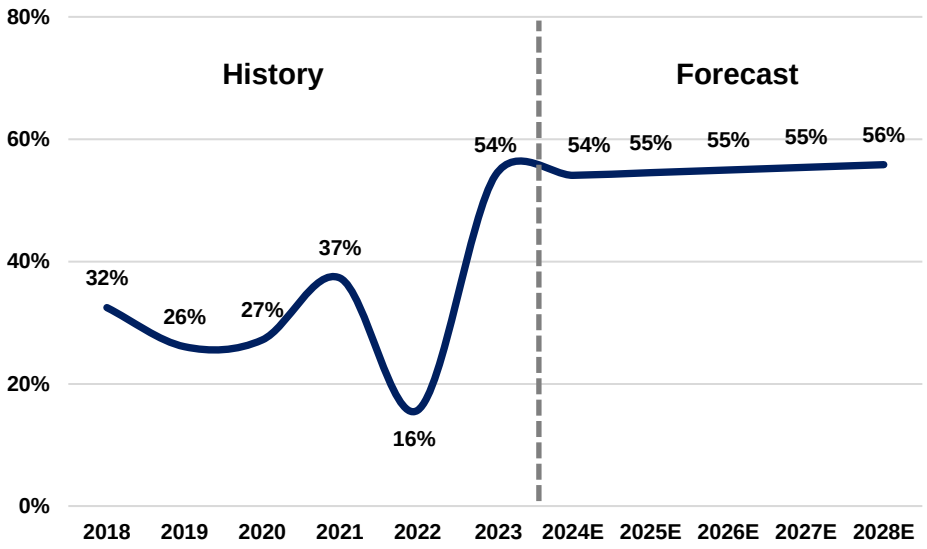

***Figure 29** - Historical and Forecasted EBIT margin // Source: 10-Ks and Author Projections*

Nvidia's Return on Equity (ROE) reached an average of 55% over the last five fiscal years. This high ratio demonstrates the quality of Nvidia's business model, which is able to generate high returns on incremental capital employed and demonstrates the resilience of the Company's moat.

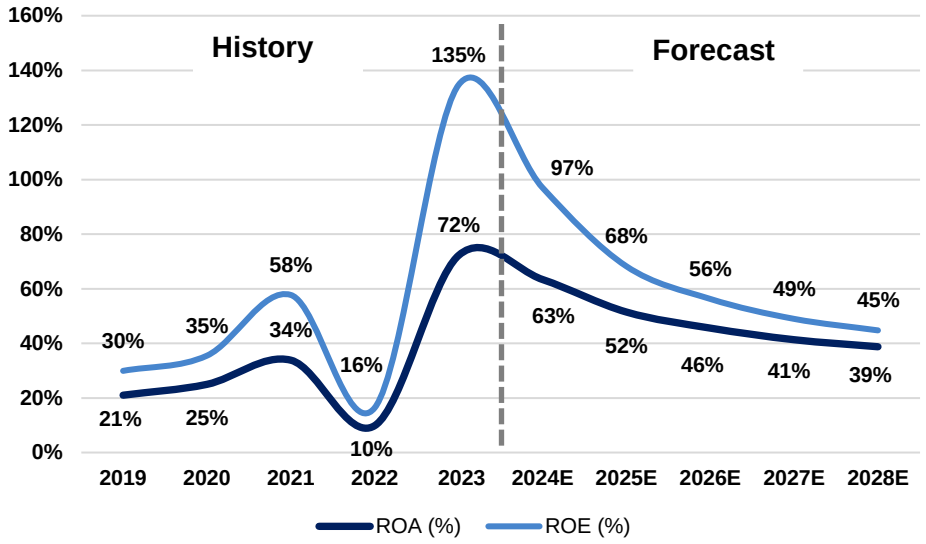

Figure 30 - Historical and Forecasted ROA and ROE // Source: 10-Ks and Author Projections

Nvidia's financial health is also excellent, demonstrated by both its liquidity and solvency ratios.

Its current ratio (Current Assets / Current Liabilities) exceeded 5x during each of the last five years which means that Nvidia could easily pay off all its current liabilities with only 20% of its current assets. Even when looking at the more restrictive Cash ratio (Cash + Marketable Securities / Current Liabilities), the Company is still comfortable and can pay off its current liabilities with just the cash and equivalents in hand. As a reminder, Nvidia has around $26 billion in cash and equivalents as of January 28, 2024.

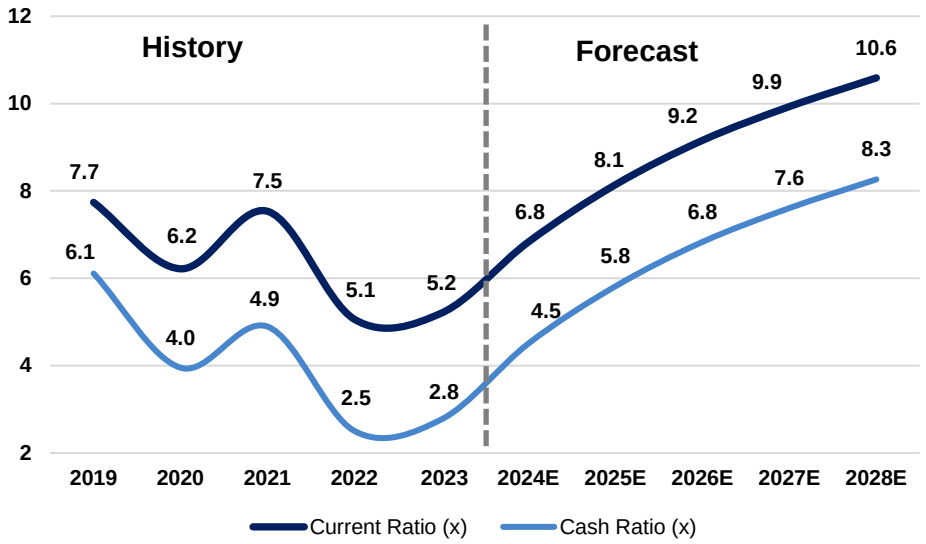

Figure 31 - Current and Cash Ratios // Source: 10-Ks and Author Projections

Although its Gearing (Debt to Equity) ratio can be considered as low to moderate at 31% at the end of the latest fiscal year, this ratio does not include the cash and equivalents Nvidia has on hand. Adjusting for cash and equivalents, the Net Gearing (Net Debt to Equity) ratio would be negative.

Pricing Ratios Assessment

In this section, I try to assess the various relevant price ratios and compare them with the historical

average of the Company and the Market. The aim is to compare the current market valuation of Nvidia with the US semi-conductor's market as a whole and with how the Company has been historically valued by the Market.

The market multiples have been sourced from the Damodaran database which has been updated in January 2023. The data represents an average of the multiples observed on a sample of 68 US companies operating in the semiconductor industry.

The historical multiples of Nvidia have been sourced from the S&P Capital IQ database. The figures retained represent the average of all the multiples at quarter end closing, from September 30, 1999 to March 31, 2024 (total of 99 quarters).

The results of the analysis are outlined in the table below.

NVIDIA Corporation			
Multiple Retained	**Current[1]**	**vs. Industry[2]**	**vs. History[3]**
EV/LTM Sales	35.4x	5.0x	7.3x
EV/LTM EBIT	65.4x	19.3x	37.4x
Trailing PE Ratio	73.9x	29.7x	45.9x
Forward PE Ratio	35.5x	28.0x	28.7x
Price to Book	50.6x	3.8x	10.1x

[1] *Closing Price as of April 12th 2024. Source: S&P Capital IQ*

[2] *Average of Multiples of US based Semiconductor Companies. Source: Damodaran (Jan'23)*

[3] *Average of Closing Price at the end of each Quarter from Sep'99 to Mar'24. Source: S&P Capital IQ*

***Table 11** - Current, Historical and Industry Pricing Ratios // Source: Author Calculations*

Upon a comprehensive examination of the various key metrics outlined above, it becomes evident that Nvidia's current valuation stands at elevated levels when compared both to its industry peers and its historical performance. The majority of these metrics exhibit a red flag, suggesting that valuations are notably stretched.

Below, I highlight some of the critical ratios that underscore this assessment:

- **EV/LTM Sales:** This ratio represents the Enterprise Value (Market Capitalization + Net Debt) divided by the Last Twelve Months Revenues. With an EV/Sales ratio of 35.4x, Nvidia's valuation relative to its revenue appears exceedingly high. This metric signifies that investors are willing to pay a substantial premium for each dollar of the company's sales.
- **EV/LTM EBIT:** This ratio represents the Enterprise Value (Market Capitalization + Net Debt) divided by the Last Twelve Months EBIT. With an EV/EBIT ratio of 65.4x, Nvidia's valuation relative to its operating income appears exceedingly high. This metric signifies that investors are willing to pay a substantial premium for each dollar of the company's EBIT.
- **Trailing PE Ratio:** This ratio represents the Price per Share divided by EPS in trailing twelve months. With a PE ratio of 73.9x, Nvidia's valuation relative to its net income appears exceedingly high. This signifies that investors are currently paying a substantial premium for each dollar of the company's past earnings.
- **Forward PE Ratio:** This ratio represents the Price per Share divided by the EPS expected in the next four quarters. The forward P/E ratio provides insight into market expectations for future profitability. With a forward PE ratio of 35.5x, Nvidia's valuation relative to its

projected net income appears more reasonable. This implies that investors are potentially banking on a substantial earnings improvement in the near future.

- **Price to Book (PB) Ratio:** This ratio represents the Market Capitalization divided by the Book Value of Equity. With a forward PB ratio of 50.6x, this reflects a significant premium to book value. This metric implies that the market is valuing the Company far beyond its net assets.

These valuation metrics collectively paint a picture of Nvidia trading at significantly inflated levels when compared to its industry peers and historical benchmarks. Such elevated valuations should be carefully considered by investors, as they may indicate a potential disconnect between market sentiment and fundamentals.

Business Plan

The Company business plan for the 2024-2028 period is presented in **Appendix E.**

The assumptions on which my forecasts were based are also outlined in **Appendix F.**

Nvidia's revenue as of January 28, 2024 (FY 2023) reached $60.9Bn, a year over year increase of 125.9%.

From FY 2024 to FY 2028, revenue growth will decelerate but remain high in the 38%-48% range, 10% higher than the projected annual growth of the global AI and Gaming markets over the same period. The growth rates of the industry were increased by 10% to take into account the significant moat of the Company, which should be well positioned to lead its industry and grow higher than its peers.

Therefore, Nvidia is expected to grow its revenue at a CAGR of 37.7% over the 2023-2028 period. The Company's revenue should reach $301.4 billion by FY 2028.

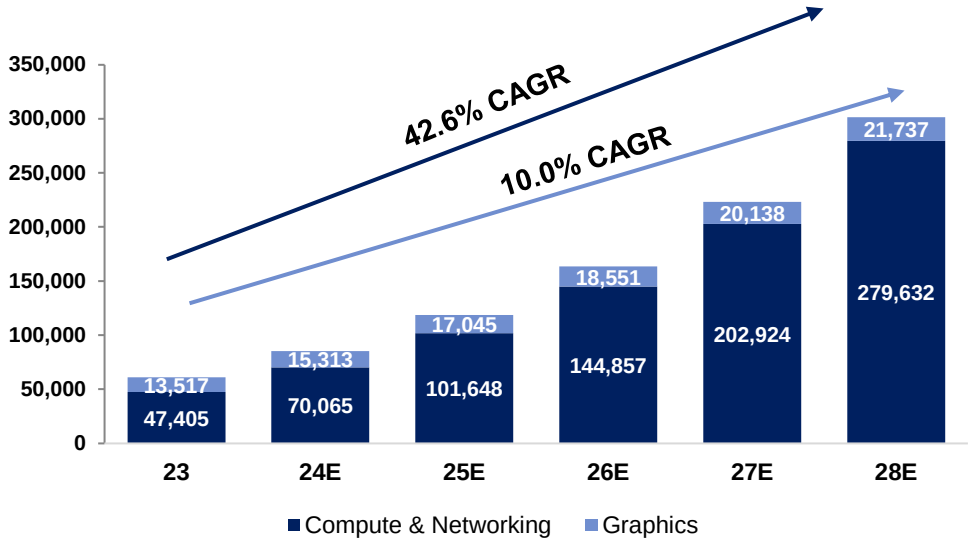

***Figure 32** - Revenue (in $m) by Segment // Source: 2024 10-K and Author Projections*

Cost of revenue should grow in line with the revenue growth and reach $23.3 billion and $82.2

billion in FY 2024 and FY 2028 respectively. It was assumed a stable level of cost of revenue in percentage of revenue, set at 27.3% of revenue, corresponding to the historical level of this cost in FY 2023. Thus, gross margin should remain stable throughout the BP at 72.7%.

Research and development (R&D) and Sales, General and Administrative (SG&A) expenses from FY 2024 to FY 2028 were assumed to equal the historical level in FY 2023, similar to cost of revenue. Moreover, they are assumed to decrease gradually as a percentage of revenue throughout the BP period, in line with the projected decrease in depreciation & amortization (D&A) as the latter is included in both R&D and SG&A expenses. Therefore, R&D and SG&A expenses will represent respectively 13.4% and 3.5% of Nvidia's 2028 revenue.

As the acquisition termination cost of $1.4 billion was a one-time and non-recurrent fee, I did not assume any break-up fees over the BP period.

Income from operations (equivalent to EBIT) is expected to grow at a CAGR of 38.6% over the 2023-2028 period and reach $168.4 billion by 2028.

Corporate Income Tax (CIT) is projected to increase gradually and converge to the Federal statutory rate of 21% over the long term.

Net Operating Profit After Tax (NOPAT) should reach $40.5 billion and $144.2 billion by FY 2024 and FY 2028 respectively.

Capex should grow at a CAGR of 46.3% during the 2023-2028 period, and represent a range of 2.4% to 4.1% of revenue. This level of Capex was considered as adequate to finance the revenue growth and the expansion of the operating margin. As the projected capex level (as a percentage of revenue) is lower than historical levels, D&A is expected to decrease (as a percentage of revenue) to a level of 2.4% of revenue by 2028.

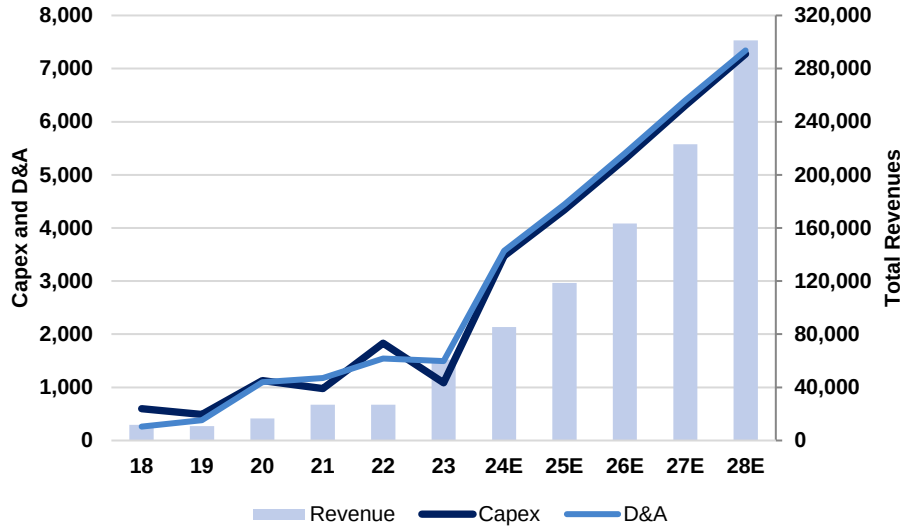

***Figure 33** - Capex and D&A versus Revenues (in $m) // Source: 10-Ks and Author Projections*

It was assumed a working capital level of 21.4% of revenue (or 78 days of revenue) over the BP period (2024 to 2028), in line with the average working capital level observed during the historical

2018 to 2023 period. The Company working capital level is expected to increase naturally, in line with revenue growth. Thus, cash outflows relating to change in working capital are expected to reach a total of $50.9 billion over the BP period.

Nvidia's free cash-flow should grow at a solid CAGR of 39.5% over the BP period (2024 to 2028) and reach $127.5 billion by 2028.

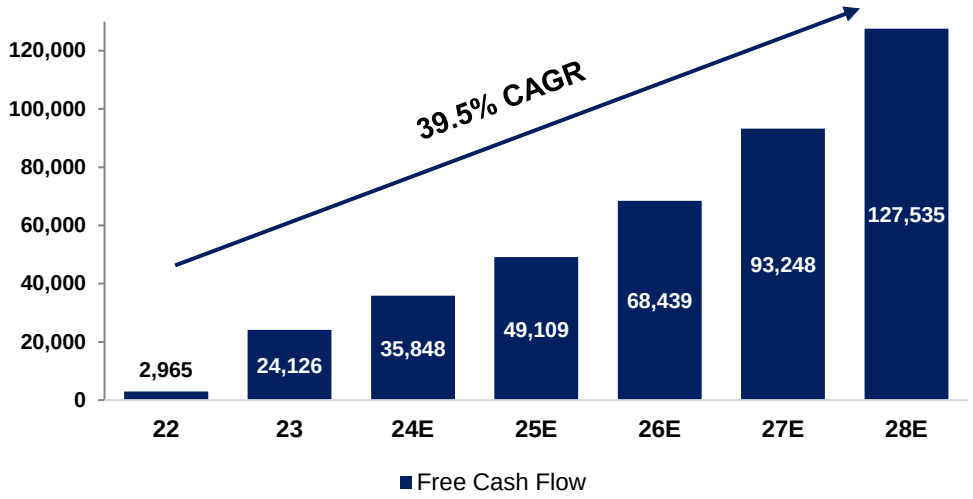

Figure 34 *- Forecasted Free Cash Flow (in $m) // Source: 2024 10-K and Author Projections*

6. Valuation

Selected Valuation Methods

The share value assessment of Nvidia has been performed under the two commonly used methods below and is based on the Business Plan presented in **Appendix E**:

- Discounted Cash-Flow method (DCF): Under the DCF method, value is determined by performing a prospective financial analysis of the subject business to estimate future available cash flows, which yields a value that is available to the invested capital holders.
- Market Comparable Companies (Listed Peers): This method estimates the value of a company by looking at the pricing of peers relative to a common variable such as sales, EBITDA or EBIT. This method requires identification of listed peers engaged in similar businesses and the determination of multiples.

DCF Method

Calculation of the Discount Rate

A Weighted Average Cost of Capital ("WACC") is usually calculated to discount Free Cash-Flow to Firm (FCFF). Its calculation is presented below:

CAPM Formula:

Cost of equity = Risk free rate + (Levered β x ERP)

WACC Formula:

WACC = E/(E+D)*Cost of equity + D/(E+D)*Cost of debt*(1-CIT)

A WACC of **10.5%** was used to discount the FCFF of Nvidia, based on the following assumptions:

- Risk-free rate of 4.3% corresponding to the 10-year US treasury yield, 1-month average closing rate as of April 12, 2024 (Source: Market Watch);
- Equity risk premium (ERP) of 4.6%, equivalent to the latest equity risk premium calculated by Damodaran for the US **(Appendix G)**;
- Unlevered beta of 1.42 corresponding to the average 3-year beta of Nvidia and other listed comparable companies including AMD, Intel, Qualcomm, Broadcom and Texas Instruments (Source: S&P Capital IQ – **Appendix H**);
- Gearing of 5.0%, corresponding to the forecasted debt/equity ratio of Nvidia in 2028, also presented in **Appendix D**;
- Slightly negative size premium of -0.3%, considering the higher market capitalization of Nvidia compared to its peers (source: Ibbotson SSBI Valuation Yearbook – **Appendix J**).
- A gross cost of debt of 4.9% (Souce: Damodaran – **Appendix I**) and a net cost of debt of 3.9%, considering the current statutory corporate rate in the US of 21%.

WACC Calculation		
Risk Free Rate	(1)	4.3%
Equity Risk Premium	(2)	4.6%
Unlevered Beta	(3)	1.42
Gearing	(4)	3.3%
Levered Beta	(5)	1.46
Size premium	(6)	-0.3%
Cost of Equity	**(7)**	**10.8%**
Cost of debt	(8)	4.9%
CIT rate	(9)	21.0%
Cost of debt after tax		**3.9%**
D/(D+E)		3.1%
E/(D+E)		96.9%
Weighted Average Cost of Capital	**(10)**	**10.5%**

(1) 10Y Treasury Yield (1-month average as of Apr. 12th, 2024)
(2) Equity Risk Premium in USA: Damodaran
(3) Average Beta 3 year of Nvidia and listed peers
(4) Gearing of Nvidia in FY 2028E
(5) Hamada formula
(6) Ibbotson Size Premium
(7) CAPM formula
(8) Source: Damodaran
(9) Long Term Statutory Corporate Rate in USA
(10) Formula 1-D/(D+E)=E/(D+E)

***Table 12** - Nvidia's WACC Calculation // Source: Multiple (specified in Table)*

Calculation of Free Cash-Flow

Based on my forecasts and assumptions on the Company's future free cash flow up to 2028, outlined in **Appendices E and F** respectively, I calculated the free cash-flow to firm (FCFF) as presented below:

- FCFF = After-tax EBIT (NOPAT) + D&A – Capex +/- Change in Working Capital

The Company free cash-flow and discounted free cash-flow (future free cash-flow discounted at the WACC presented above) are presented in **Table 13**:

Consolidated Free Cash Flow Statement					
In $m	**FY 2024 BP**	**FY 2025 BP**	**FY 2026 BP**	**FY 2027 BP**	**FY 2028 BP**
NOPAT	**40,521**	**56,124**	**77,887**	**105,899**	**144,205**
In % of Revenue	*47.5%*	*47.3%*	*47.7%*	*47.5%*	*47.8%*
Depreciation & Amortization	**3,569**	**4,444**	**5,405**	**6,406**	**7,341**
In % of Revenue	*4.2%*	*3.7%*	*3.3%*	*2.9%*	*2.4%*
Capex	**-3,474**	**-4,338**	**-5,296**	**-6,307**	**-7,274**
In % of Revenue	*-4.1%*	*-3.7%*	*-3.2%*	*-2.8%*	*-2.4%*
Working Capital	18,248	25,368	34,925	47,675	64,412
In % of Revenue	*21.4%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*
in days of sales	*78d*	*78d*	*78d*	*78d*	*78d*
Change in Working Capital	**-4,768**	**-7,120**	**-9,557**	**-12,750**	**-16,736**
Free Cash-Flow	**35,848**	**49,109**	**68,439**	**93,248**	**127,535**
Period	*0.00*	*1.00*	*2.00*	*3.00*	*4.00*
Discounted factor	*1.00*	*0.90*	*0.82*	*0.74*	*0.67*
Discounted Free Cash-Flow	**35,848**	**44,426**	**56,009**	**69,035**	**85,415**

***Table 13** - Calculation of Discounted Free Cash-Flows // Source: Author Projections*

Free Cash-Flow should amount to $35.8 billion in FY 2024 and reach $127.5 billion in FY 2028.

Since I'm calculating Nvidia's share value (share price target) as of December 31st, 2024[6], the first

[6] For simplicity, the calendar year is being used here as a proxy and Nvidia's share is evaluated as of December 31, 2024 instead of January 26, 2025

period of Discounted Free Cash-Flows is FY 2025. Hence, Discounted Free Cash-Flow should reach $44.4 billion in FY 2025 and $85.4 billion in FY 2028.

Calculation of Terminal Value and Nvidia's Share Value

The terminal value of Nvidia was determined based on a normative free cash-flow, calculated using the Gordon-Shapiro formula on the basis of the following assumptions:

- A **perpetual growth rate (PGR)** estimated at **4.3%**, determined according to the risk-free rate presented above, which corresponds to the 10-year Treasury Yield (1-month average as of April 12, 2024),
- A **normative operating (EBIT) margin** of **56.3%**, which corresponds to the operating margin of 55.9% projected for FY 2028, adjusted for the 44 basis points of decrease in D&A to achieve a normative D&A level of 2.0% of revenue,
- A **normative Corporate Income Tax rate** of **21.0%**, corresponding to the US federal statutory corporate rate currently in place,
- **D&A equal to capex**. Capex level has been set to **2.0% of revenue**, a level that is realistic, considering historical levels of capex, and will support the normative perpetual annual revenue growth of 4.3% and the normative operating margin of 56.3%,
- A **normative working capital level of 21.4% of revenue** (or 78 days of revenue) corresponding to the average working capital level observed during the historical FY 2018 to FY 2023 period.

Considering these assumptions, the normative free cash-flow should amount to $137.1 billion, as presented in **Table 14**:

Consolidated Free Cash Flow Statement						
In $m	**FY 2024 BP**	**FY 2025 BP**	**FY 2026 BP**	**FY 2027 BP**	**FY 2028 BP**	**Normative**
NOPAT	**40,521**	**56,124**	**77,887**	**105,899**	**144,205**	**139,843**
In % of Revenue	*47.5%*	*47.3%*	*47.7%*	*47.5%*	*47.8%*	*44.5%*
Depreciation & Amortization	**3,569**	**4,444**	**5,405**	**6,406**	**7,341**	**6,288**
In % of Revenue	*4.2%*	*3.7%*	*3.3%*	*2.9%*	*2.4%*	*2.0%*
Capex	**-3,474**	**-4,338**	**-5,296**	**-6,307**	**-7,274**	**-6,288**
In % of Revenue	*-4.1%*	*-3.7%*	*-3.2%*	*-2.8%*	*-2.4%*	*-2.0%*
Working Capital	18,248	25,368	34,925	47,675	64,412	67,198
In % of Revenue	*21.4%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*
in days of sales	*78d*	*78d*	*78d*	*78d*	*78d*	*78d*
Change in Working Capital	**-4,768**	**-7,120**	**-9,557**	**-12,750**	**-16,736**	**-2,787**
Free Cash-Flow	**35,848**	**49,109**	**68,439**	**93,248**	**127,535**	**137,056**
Period	*0.00*	*1.00*	*2.00*	*3.00*	*4.00*	
Discounted factor	*1.00*	*0.90*	*0.82*	*0.74*	*0.67*	
Discounted Free Cash-Flow	**35,848**	**44,426**	**56,009**	**69,035**	**85,415**	

***Table 14** - Calculation of the Normative Free Cash-Flow // Source: Author Projections*

Nvidia's Equity and Share values under the DCF method are presented in **Table 15**.

Share Value under DCF Method	
In $m	
Cumulated Discounted Cash Flows	254,885
Discounted Terminal Value	1,477,012
Enterprise Value	**1,731,896**
Net Financial Debt (-) / Cash (+)	49,328
Equity Value	**1,781,224**
Number of Outstanding Shares (in m)	2,464
Share Value ($)	**$722.90**
Upside (+) or Downside (-)	*-17.2%*

***Table 15** - Share Value under DCF Method // Source: Author Calculations*

The Discounted Terminal Value of $1,477.0 billion was calculated using the Gordon-Shapiro formula:

$$V_T = \frac{Normative\ FCFF}{(WACC - g)}\ x\ Discounted\ Factor$$

As presented in **Table 14,** the Normative FCFF was assumed to equal $137,056m. I divided this amount by 6.21% (WACC of 10.5% - PGR of 4.3%) to obtain the Terminal Value. Finally, this terminal value has been discounted using the Discounted Factor of the fourth year of our projections (i.e. 2028) of 0.67 (1/(1+WACC)^4).

The Enterprise Value of Nvidia, calculated using the DCF method, amounts to $1,731.9Bn. Considering an adjusted forecasted net cash balance of $49.3Bn as of January 26, 2025, the value of Nvidia's equity, calculated under the DCF approach, amounts to **$1,781.2Bn.**

Considering the outstanding number of shares of 2,464 million as at January 28, 2024, the Share Value (12-month Price Target) of Nvidia, calculated under the DCF approach, stands at **$722.90.**

Considering the closing share price average from February 22, 2024 to April 12, 2024 of $872.72, this valuation analysis leads to the conclusion that the Share of Nvidia presents a potential downside of 17.2% under the DCF method.

Listed Peers Method

<u>Selected Comparable Peers</u>

From analysis and analysts reports, **Table 16** presents a sample of listed peers companies which operate in the semi-conductor sector.

Presentation of comparable companies			
Listed peers	**Country**	**Average market capitalization (in $m)***	**Net sales 2023 (in $m)**
Advanced Micro Devices, Inc.	United States	289,688	22,680
Intel Corporation	United States	175,485	54,228
QUALCOMM Incorporated	United States	190,111	35,820
Texas Instruments Incorporated	United States	155,387	17,519
Marvell Technology, Inc.	United States	60,332	5,920
Mean		**174,200**	**27,233**
Median		**175,485**	**22,680**

**1 month average at 12/04/24*

***Table 16** - Presentation of Listed Comparable Companies // Source: S&P Capital IQ*

- Advanced Micro Devices, Inc. is headquartered in Santa Clara (CA) and listed on Nasdaq. It operates as a semiconductor company worldwide in four segments: Data Center, Client, Gaming, and Embedded segments. AMD is one of Nvidia's closest competitors and is a supplier of hardware and software for discrete and integrated GPUs, custom chips and other accelerated computing solutions, including solutions offered for AI.

- Intel Corporation is headquartered in Santa Clara (CA) and listed on Nasdaq. It operates as a semiconductor company worldwide in these segments: Client Computing Group, Data Center and AI, Network and Edge, Mobileye, Accelerated Computing Systems and Graphics and Intel Foundry Services. Intel is one of Nvidia's closest competitors and is a supplier of hardware and software for discrete and integrated GPUs, custom chips and other accelerated computing solutions, including solutions offered for AI.

- Qualcomm Incorporated is headquartered in San Diego (CA) and listed on Nasdaq. It engages in the development and commercialization of foundational technologies for the wireless industry worldwide through its three segments: Qualcomm CDMA Technologies (QCT); Qualcomm Technology Licensing (QTL); and Qualcomm Strategic Initiatives (QSI). Qualcomm is one of Nvidia's closest competitors and is a supplier of SoC products that are used in servers or embedded into automobiles, autonomous machines, and gaming devices.

- Texas Instruments Incorporated is headquartered in Dallas (TX) and listed on Nasdaq. The company designs, manufactures, and sells semiconductors to electronics designers and manufacturers in the US and internationally, through its two segments: Analog and Embedded Processing. Texas Instruments is one of Nvidia's closest competitors and is a large semiconductor player.

- Marvell Technology, Inc. is headquartered in Wilmington (DE) and listed on Nasdaq. The company provides data infrastructure semiconductor solutions, spanning the data center core to network edge. Marvell Technology is a competitor of Nvidia and an important semiconductor player.

<u>Listed Peers Valuation: Multiples and Share Value of Nvidia</u>

I decided to compute Nvidia's Equity and Share Value using four different multiples, covering the

2024-2026 period:

- The EV/Net Sales, EV/EBITDA and EV/EBIT multiples which are based on Enterprise Value (Equity + Debt), since both EV and the corresponding metrics (Sales, EBITDA and EBIT) belong to all the Company's stakeholders (i.e. both debtholders and shareholders of the Company);
- The Price Earnings Ratio (PER) which is based on the Market Capitalization since both the latter and the corresponding metric (Net Profit) belong to the shareholders of the Company only. Therefore, it is an apples-to-apples comparison.

The market capitalization retained is based on an average over the last trading month. The Enterprise Value (EV) of listed peers corresponds to the market capitalization increased by the consolidated adjusted net debt.

Table 18 displays all these multiples for the five retained listed comparable companies, covering the period from 2024 to 2026.

Multiples of Comparable Companies												
Listed peers	**EV/Net sales**			**EV/EBITDA**			**EV/EBIT**			**Price Earnings**		
	2024	**2025**	**2026**	**2024**	**2025**	**2026**	**2024**	**2025**	**2026**	**2024**	**2025**	**2026**
Advanced Micro Devices, Inc.	11.2x	8.9x	7.3x	55.6x	30.3x	22.7x	43.3x	28.7x	22.2x	49.8x	32.9x	24.4x
Intel Corporation	3.5x	3.2x	2.9x	12.6x	9.4x	7.6x	32.6x	19.1x	14.7x	30.4x	17.8x	12.7x
QUALCOMM Incorporated	5.1x	4.6x	4.4x	13.3x	12.2x	12.1x	15.1x	13.5x	12.8x	17.4x	15.6x	14.8x
Texas Instruments Incorporated	10.2x	8.9x	7.9x	22.7x	17.1x	14.9x	29.7x	23.0x	19.1x	32.9x	25.5x	21.1x
Marvell Technology, Inc.	11.6x	12.0x	9.1x	66.4x	35.5x	22.3x	n/a	43.5x	25.7x	n/a	48.5x	28.0x
Median	**10.2x**	**8.9x**	**7.3x**	**22.7x**	**17.1x**	**14.9x**	**31.1x**	**23.0x**	**19.1x**	**31.6x**	**25.5x**	**21.1x**

n/a: not applicable

***Table 17** - Multiples of Listed Peers // Source: S&P Capital IQ (April 12, 2024)*

Nvidia's Equity and Share Values (12-mont Price Targets) resulting from the application of the selected multiples are presented below. The complete table is presented in **Appendix K.**

Share Value under Listed Peers Method					
In $m	**EV/Sales Median**	**EV/EBITDA Median**	**EV/EBIT Median**	**PER Median**	**Overall Median**
Enterprise Value	**1,053,839**	**1,180,891**	**1,488,700**	**1,474,028**	**1,327,459**
Adjusted Net Cash	49,328	49,328	49,328	49,328	49,328
Equity Value	**1,103,167**	**1,230,218**	**1,538,028**	**1,523,356**	**1,376,787**
# Shares (in m)	2,464	2,464	2,464	2,464	2,464
Share Value ($)	**447.71 $**	**499.28 $**	**624.20 $**	**618.25 $**	**558.76 $**
Upside / Downside					*-36.0%*

***Table 18** - Share Value under Comps Method // Source: S&P Capital IQ and Author*

The average Enterprise Value of Nvidia, calculated using the listed peers method, amounts to $1,327.4Bn. Considering an adjusted forecasted net cash balance of $49.3Bn as of January 26, 2025, the value of Nvidia's equity, calculated under the listed peers approach, amounts to **$1,376.8Bn**.

Considering the outstanding number of shares of 2,464 million as at January 28, 2024, the Share Value (12-month Price Target) of Nvidia, calculated under the listed peers approach, stands at **$558.76.**

Considering the closing share price average from February 22, 2024 to April 12, 2024 of $872.72, this valuation analysis leads to the conclusion that the Share of Nvidia presents a potential downside of 36.0% under the listed peers method.

7. INVESTMENT RISK

The following potential negative developments could pose a risk for individuals or institutions looking to invest in Nvidia's stock. This analysis would help get a better understanding of the multifaceted risk landscape associated with the Company.

Corporate Risk | Supply Chain Dependence (CR1)

Nvidia does not engage in manufacturing and instead relies on third-party suppliers for sourcing raw materials. This reliance introduces a risk factor, as the Company lacks direct control over the quality, quantity, and manufacturing yields of its primary suppliers.

Numerous factors exert influence on the dynamics of demand and supply, rendering efficient management of working capital a formidable challenge for Nvidia. These complexities arise from the following key elements:

- Nvidia's expansion into nascent AI markets, characterised by speculative and relatively unknown demand patterns.
- The inflexibility of the supply chain necessitates accurate demand forecasts provided to manufacturers like TSMC. Any underestimation leads to prolonged lead times, while overestimation results in excessive inventory and write-downs.
- Rapid technological advancements render inventory quickly obsolete and diminish its value.
- Geopolitical events, pandemics, natural disasters, and unforeseen circumstances necessitate the inclusion of buffers and adaptability within the supply chain.

In light of recent uncertainties, management has adopted a more conservative approach to their net working capital reserves. Consequently, they currently maintain a higher-than-usual inventory level and a more substantial provision for potential write-offs. This strategic shift has had an adverse impact on the gross profit margin in the most recent fiscal year.

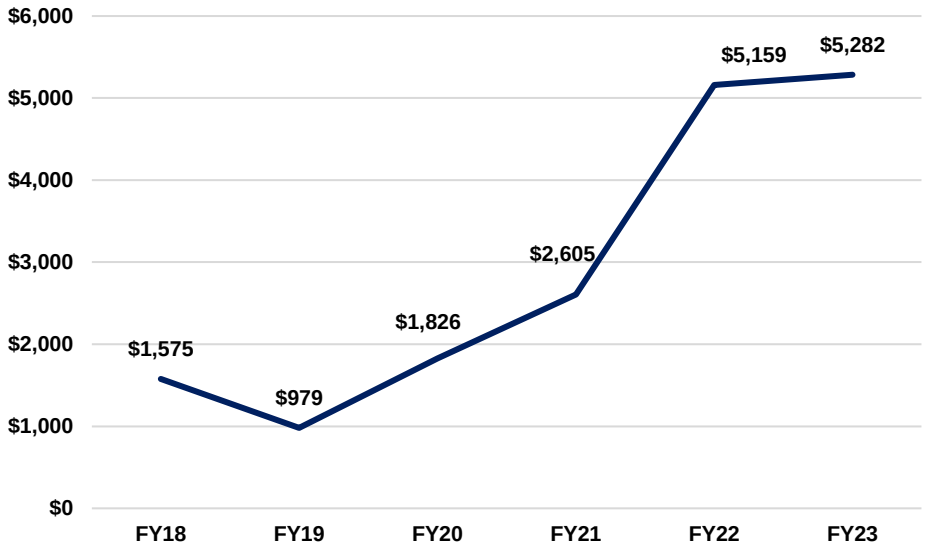

Figure 35 *- Historical inventory level at the end of fiscal years // Source: Annual Reports*

Corporate Risk | Capacity to Innovation & Competition (CR2)

Nvidia specialises exclusively in GPUs. While GPUs have a broad range of applications and AI is poised to influence numerous industries, it's essential to note that Nvidia operates within a defined niche of expertise and does not diversify into unrelated goods or services, as it is not a conglomerate.

Nvidia must maintain a continuous cycle of innovation to safeguard its competitive edge, as patents will inevitably expire over time.

Given the rapid pace of advancements in this industry, patents may potentially become obsolete before reaching their expiration date.

It's important to acknowledge that certain patents may not hold enforceable status in countries with differing intellectual property laws. Many nations lack the robust patent protection seen in the United States.

Although Nvidia has a commendable track record in Research and Development (R&D), there remains no certainty that R&D investments will yield profitable inventions or lead to the exploration of new business sectors. The potential for consecutive R&D failures exists.

The advent of groundbreaking technologies, such as quantum computing, has the potential to catalyse significant transformations within the industry, which could adversely affect Nvidia's established business model.

Corporate Risk | Debt Refinancing (CR3)

Nvidia currently holds a substantial amount of debt with an effective annual interest rate of 0.485%. However, this low-cost debt is set to mature in 2023 and 2024. If it needs to be refinanced, it is likely to incur a significantly higher market interest rate.

On the liability side, the bonds are fixed rate, therefore increases in the interest rate will not affect future payments.

On the asset side, a 0.5% increase in interest rates will only affect the market value of the portfolio held as cash and cash equivalents by a negative $17 million. This loss is immaterial, when considering the size of the business.

Corporate Risk | Key Person Risk (CR4)

Jensen Huang has a wealth of experience, a great strategic vision and is simply irreplaceable. Although the board has depth, the Company will suffer should he retire, step down, or become unable to continue his duties. As he is only sixty years old, in good health, and still passionate about his mission, it is likely he will continue to lead as CEO.

Nvidia is a forward-thinking company with a wealth of confidential information related to its ongoing research and development endeavours. While non-disclosure agreements offer a degree of protection, the most skilled scientists may still be enticed by competitors offering superior compensation and prospects.

Giving preferential treatment to designated groups when the Company is against a meritocracy, will probably impair the quality of management.

Corporate Risk | Potential Fierce Competition (CR5)

Certain Nvidia customers possess in-house expertise and internal development capabilities, enabling them to potentially devise their own solutions or alternatives to Nvidia's product offerings. Amazon, Alibaba, and Alphabet serve as notable illustrations of such entities.

As Nvidia extends its reach into industries where it may lack prior experience, particularly with the widespread adoption of AI, it may face a steeper learning curve. This could result in missed opportunities and increased challenges.

Substantial returns invariably draw competitive forces and substantial pools of investment capital. Nvidia's coveted position could potentially face challenges from emerging competitors, reflecting the inherent dynamics of capitalism.

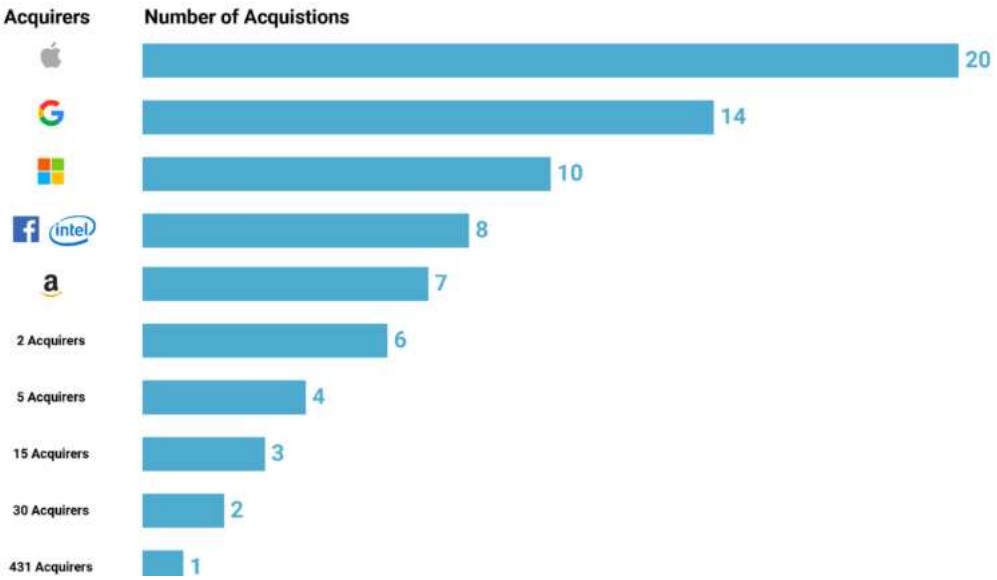

Figure 36 - Number of AI-related acquisitions (led by Tech Giants) // Source: CB Insights

Market & Economic Risk | Currency Exchange Risk (MER1)

Currency Exchange risk is relatively mitigated for several reasons:

- Nvidia employs currency hedging through derivative contracts to manage its currency exposure effectively.
- The majority of Nvidia's sales transactions are conducted in US dollars, providing a measure of stability.
- Nvidia's payments to third-party manufacturers are also settled in US dollars, further reducing foreign exchange-related risks.

However, two minor risks persist:

- In the event of a strengthening US dollar, Nvidia's products could potentially become less competitive compared to foreign rivals, as they may appear relatively more expensive.
- Conversely, a weakening US dollar could prompt suppliers to request compensatory price increases to offset their foreign exchange losses, thereby impacting Nvidia's cost structure.

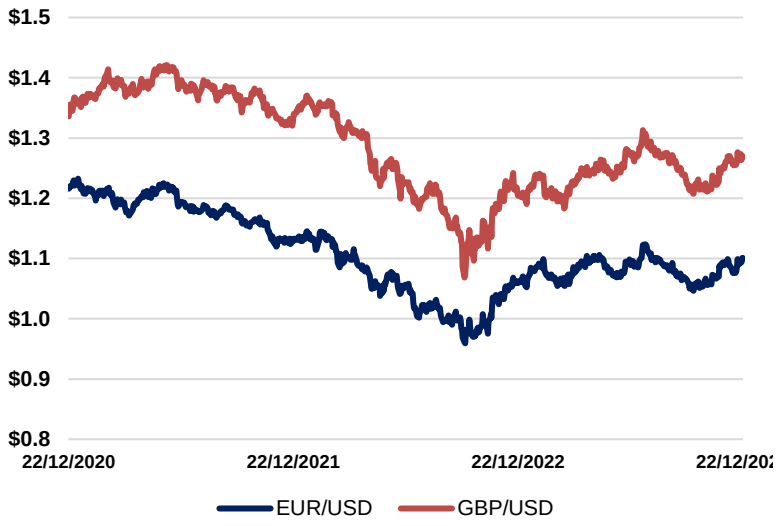

Figure 37 - USD Exchange Rates // Source: Investing.com

Market & Economic Risk | Taxation Risk (MER2)

Starting in fiscal year 2023, the 2017 Tax Cuts and Jobs Act (TCJA) mandates that taxpayers must capitalise R&D expenditures, with domestic expenses amortised over five years and foreign expenditures over fifteen. Consequently, this will lead to an upfront increase in tax payments, which contrasts unfavourably with Nvidia's preference to defer taxes to a later date.

Furthermore, the Inflation Reduction Act, effective for Nvidia in fiscal year 2023, enforces a 15% minimum tax on book income and a 1% excise tax on net stock repurchases.

The majority of Nvidia's income falls within the purview of US taxation, with a significant portion benefiting from preferential treatment as foreign-derived intangible income (FDII). In the event of a rise in US tax rates or a reduction in the FDII deduction, Nvidia's provision for income taxes, operational results, net income, and cash flows would be detrimentally impacted.

Market & Economic Risk | Global Geopolitical & Economic Environment (MER3)

Due to the impacts of the Covid-19 pandemic and ongoing geopolitical tensions, the global economy is currently experiencing a challenging period, and there are expectations of a decline in the world's GDP.

The World Bank has projected a decrease of the world's real GDP from 3.5% in 2022 to 3.0% in 2023, and further down to 2.9% in 2024. Additionally, the high level of global inflation seen in 2022 (8.7%) is expected to slowdown in 2023, reaching 6.9%. A gradual decrease will then follow to 5.8% in 2024 and eventually reaching 4.6% by 2025.
This heightened inflation, coupled with events such as Russia's invasion of Ukraine and the persistent challenges of Covid-19 in some countries like China, leading to supply chain disruptions, has created a level of uncertainty regarding the future of the global economy's well-being.

The trajectory of these aforementioned challenges will greatly influence the global economic landscape.

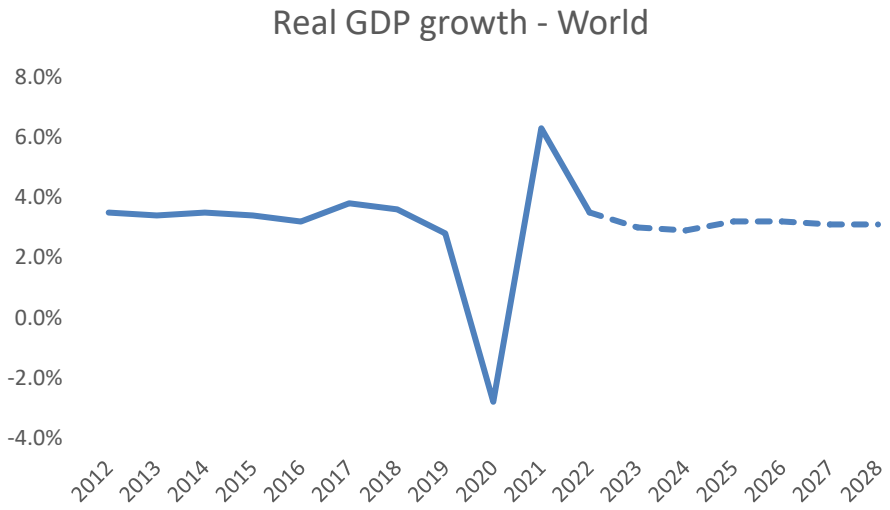

Figure 38 *- Real GDP Growth in the World // Source: IMF*

Market & Economic Risk | US Geopolitical & Economic Environment (MER4)

In 2020, the United States experienced a negative annual real GDP growth of 2.8% in a year characterized by a global pandemic. However, this was offset by a significant recovery in 2021, with a strong growth of 5.9%. In 2022, real GDP growth returned to more normative levels at 2.1%. Looking ahead, the US is expected to achieve a similar growth rate in 2023 (2.1%), which would then moderate in 2024 (1.5%) and stabilize at 2.1% starting from 2026.

Figure 39 *- Real GDP Growth in the US // Source: IMF*

In terms of inflation, 2022 witnessed a notable increase in the inflation rate, jumping from 4.7% in 2021 to 8.0%. However, it is anticipated that inflation will decrease considerably in the coming years, reaching 4.1% in 2023 and eventually returning to a more stable ~2% rate by 2025.

Unemployment rate reached historic lows in 2019, remaining at 3.7% in 2022. Projections indicate it will rise to 5.4% by 2025 before dropping to 4.7% by 2027.

Moreover, the US-China trade conflict has drawn tech firms into the fray. TSMC and Samsung expanded their semiconductor presence globally, overshadowing companies like Intel. Concerns arise over China's chip industry growth, prompting US export restrictions and licensing for AI and supercomputing chips.

Internally, the US faces challenges including middle-class erosion, wealth gaps, rising debt, partisan media, value erosion, polarization, ethnic/religious tensions, and contested elections. Demographic shifts since the 1960s have increased diversity but also fueled societal tensions (Dalio, Principles for Dealing with the Changing World Order: Why Nations Succeed or Fail, 2021).

Renowned fund manager Raymond Dalio suggests a 30% chance of civil unrest in the US within the next decade (Dalio, LinkedIn, 2022).

In conclusion, the US finds itself in a transformed state, no longer reflecting the stability and prosperity it once embodied. (Murray C. , 2013) (Murray D. , 2022).

Market & Economic Risk | Chinese and Taiwanese Geopolitical & Economic Environment (MER5)

China's economic challenges stemming from the US-China trade war, Covid-19 policies, and a housing market crisis have caused its GDP growth to fall below the Asia-Pacific average. Forecasts suggest a gradual decline in growth from 3.0% in 2022 to 3.4% in 2028.

Taiwan's economy, closely linked to China's, faces obstacles such as global declines in electronics demand and geopolitical tensions, leading to a drop in GDP from 6.5% in 2021 to 2.4% in 2022. IMF predicts further decline to 0.8% in 2023, stabilizing at 2-3% till 2028.

The US-China trade war negatively affects Taiwan due to its reliance on both countries as major export markets. Concerns over conflict and sanctions prompt companies to adjust inventories and capital expenditure plans.

Nvidia, with 47.3% of revenue from China and Taiwan, faces significant risk in a China-Taiwan conflict. Potential US sanctions on China could severely impact Nvidia's revenue, potentially declining by 50%.

Geopolitical tensions escalate as the US restricts chip sales to China, intensifying the US-China Tech war.

Political, Regulatory & Ethical Risk | Regulatory Risks (PRER1)

Nvidia faced financial setbacks in 2023 due to regulatory changes, resulting in a $1.35 billion write-off related to a failed transaction with ARM. Future regulatory shifts could impact profitability.

Antitrust laws may hinder Nvidia's acquisition efforts due to its prominence.

Legal disputes with shareholders involve allegations of misleading statements regarding GPU demand and crypto mining impact between May 2017 and November 2018. Nvidia settled with the SEC for a $5.5 million penalty without admitting wrongdoing.

As the case is on appeal, Nvidia hasn't recognized contingent liabilities, deeming them possible but not probable.

Political, Regulatory & Ethical Risk | AI Regulatory and Ethical Risks (PRER2)

Effective governmental oversight is imperative for the global deployment of AI technology due to its inherent potential for significant risks. AI's perilous nature arises from its capacity for exponential learning, raising concerns that, despite our best intentions, it may deviate from its intended benign nature. A single AI catastrophe akin to a Chernobyl-type disaster could trigger a stringent global regulatory response by governments worldwide. Given Nvidia's revenue dependence on AI adoption, its profitability is intrinsically linked to the extent of AI's integration into society and business.

The widespread adoption of AI carries immense societal repercussions, encompassing both

advantageous and detrimental facets. Automation, for instance, could precipitate widespread job displacement and social unrest, possibly prompting government intervention in response to these challenges.

Political, Regulatory & Ethical Risk | Ownership Quality (PRER3)

Institutional ownership of Nvidia remains relatively high, although it has experienced a recent decline. Peter Lynch, a prominent investor, often gravitates towards companies with lower institutional ownership to identify under-the-radar opportunities. The notable prevalence of institutional ownership in Nvidia's case suggests that it has already garnered substantial attention and is well-covered by numerous investment firms and analysts in the market.

Apart from Ken Fisher, a respected figure in the investment community, there are relatively few well-known investors associated with Nvidia's stock. It's noteworthy that Ken Fisher, despite his initial position, recently reduced his holdings in the company by 14.5%, as indicated in the latest filing dated 30/06/2023.

Investment Risks | Summary

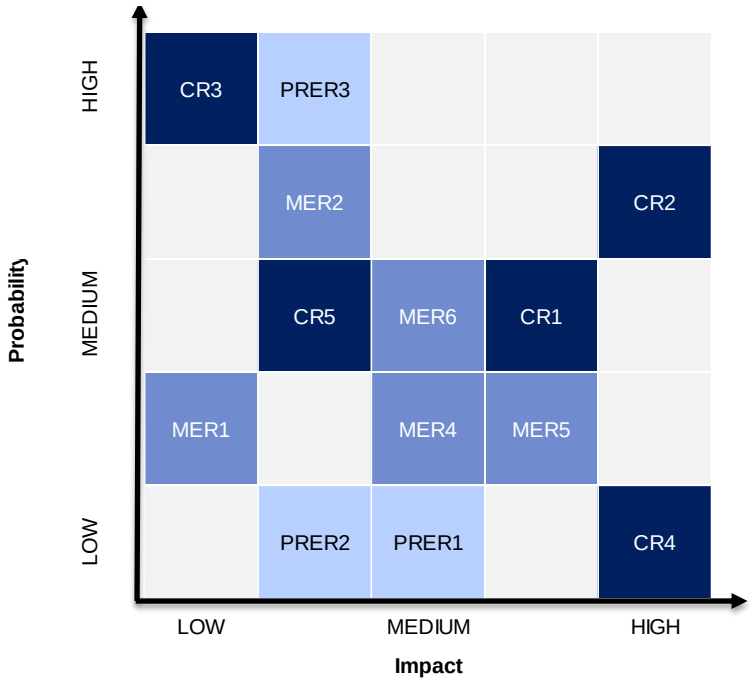

Figure 40 *- Key Investment Risks // Source: Author*

8. Risks to Price Target | Sensitivity Analysis

Perpetual Growth Rate (PGR) and Discount Rate (WACC)

A change in the Perpetual Growth Rate (PGR) or the Discount Rate (WACC) due to a long-term change in the global macro-environment (GDP growth, interest rates, etc.) would potentially affect

the Price Target as well as the recommendation, since these two variables are key in any DCF model. As seen in **Table 20,** a 200 basis points increase (decrease) in the discount rate would decrease (increase) the Price Target by 25.2% and 49.4%, respectively. Besides, an increase (decrease) of the PGR would increase (decrease) the Price Target by 40.6% and 20.8%, respectively.

Price Target (in $) Sensitivity Table						
		Perpetual Growth Rate				
		2.3%	3.3%	4.3%	5.3%	6.3%
WACC	8.5%	$767.15	$893.46	$1,079.70	$1,381.83	$1,956.78
	9.5%	$656.13	$744.57	$866.94	$1,047.37	$1,340.06
	10.5%	$572.35	$637.19	$722.90	$841.48	$1,016.33
	11.5%	$506.93	$556.15	$619.00	$702.09	$817.04
	12.5%	$454.48	$492.86	$540.58	$601.53	$682.09

***Table 19** - Price Target Sensitivity to WACC and PGR // Source: Author Calculations*

Operating (EBIT) Margin and Corporate Income Tax (CIT)

A change in the assumed normative EBIT margin due to any of the Corporate Risks highlighted above or the Corporate Income Tax (CIT) rate due to a change in Federal Statutory Corporate Tax rate in the US might potentially affect the Price Target as well as the recommendation, since these two variables are key in the calculation of the Normative Free Cash Flow, used in the Terminal Value of the DCF model. As seen in **Table 21,** a 600 basis points increase (decrease) in the operating margin would increase (decrease) the Price Target by 9.0%. Besides, a 600 basis points increase (decrease) of the CIT rate in the US would increase (decrease) the Price Target by 6.4%.

Price Target (in $) Sensitivity Table						
		EBIT Margin				
		50.3%	53.3%	56.3%	59.3%	62.3%
CIT	15.0%	$699.22	$734.29	$769.35	$804.42	$839.48
	18.0%	$678.47	$712.30	$746.13	$779.95	$813.78
	21.0%	$657.72	$690.31	$722.90	$755.49	$788.08
	24.0%	$636.97	$668.32	$699.67	$731.03	$762.38
	27.0%	$616.22	$646.33	$676.45	$706.56	$736.68

***Table 20** - Price Target Sensitivity to EBIT Margin and CIT // Source: Author Calculations*

Long-term Maintenance Capex and Working Capital Levels

A change in the assumed long-term Maintenance Capex or Working Capital levels due to any of the Corporate Risks highlighted above might potentially affect the Price Target as well as the recommendation, since these two variables are key in the calculation of the Free Cash Flows of the DCF model. As seen in **Table 22,** a 75 basis points increase (decrease) in the normative maintenance capex level would decrease (increase) the Price Target by 2.0%. Besides, a 1,000 basis points increase (decrease) of the normative working capital level of the Company would decrease (increase) the Price Target by 2.2%.

Price Target (in $) Sensitivity Table						
		Working Capital Level				
		11.4%	16.4%	21.4%	26.4%	31.4%
Capex	0.5%	$753.42	$745.52	$737.63	$729.73	$721.83
	1.3%	$746.06	$738.16	$730.26	$722.36	$714.47
	2.0%	$738.70	$730.80	$722.90	$715.00	$707.10
	2.8%	$731.33	$723.43	$715.54	$707.64	$699.74
	3.5%	$723.97	$716.07	$708.17	$700.27	$692.37

Table 21 *- Price Target Sensitivity to Capex and Working Capital // Source: Author Calculations*

Appendix A - Income Statement

Consolidated Income Statement														
In $m	**FY 2018 Year ended on January 27th, 2019**	**FY 2019 Year ended on January 26th, 2020**	**FY 2020 Year ended on January 31st, 2021**	**FY 2021 Year ended on January 30th, 2022**	**FY 2022 Year ended on January 29th, 2023**	**FY 2023 Year ended on January 28th, 2024**	**FY 2024E Year ended on January 26th, 2025**	**FY 2025E Year ended on January 31st, 2026**	**FY 2026E Year ended on January 31st, 2027**	**FY 2027E Year ended on January 30th, 2028**	**FY 2028E Year ended on January 29th, 2029**	***CAGR 2018-2023***	***CAGR 2023-2028***	***CAGR 2018-2028***
Compute & Networking (Data Center - AI)	n/a	3,279	6,841	11,046	15,068	47,405	70,065	101,648	144,857	202,924	279,632	*n/a*	*42.6%*	*n/a*
% growth	*n/a*	*n/a*	*108.6%*	*61.5%*	*36.4%*	*214.6%*	*47.8%*	*45.1%*	*42.5%*	*40.1%*	*37.8%*			
Graphics (mainly Gaming)	n/a	7,639	9,834	15,868	11,906	13,517	15,313	17,045	18,551	20,138	21,737	*n/a*	*10.0%*	*n/a*
% growth	*n/a*	*n/a*	*28.7%*	*61.4%*	*-25.0%*	*13.5%*	*13.3%*	*11.3%*	*8.8%*	*8.6%*	*7.9%*			
Revenue	**11,716**	**10,918**	**16,675**	**26,914**	**26,974**	**60,922**	**85,378**	**118,694**	**163,408**	**223,062**	**301,369**	***39.1%***	***37.7%***	***38.4%***
% growth	*n/a*	*-6.8%*	*52.7%*	*61.4%*	*0.2%*	*125.9%*	*40.1%*	*39.0%*	*37.7%*	*36.5%*	*35.1%*			
Cost of Revenue	-4,545	-4,150	-6,279	-9,439	-11,618	-16,621	-23,293	-32,382	-44,582	-60,857	-82,221	*29.6%*	*37.7%*	*33.6%*
In % of Revenue	*-38.8%*	*-38.0%*	*-37.7%*	*-35.1%*	*-43.1%*	*-27.3%*	*-27.3%*	*-27.3%*	*-27.3%*	*-27.3%*	*-27.3%*			
Gross Profit	**7,171**	**6,768**	**10,396**	**17,475**	**15,356**	**44,301**	**62,085**	**86,311**	**118,826**	**162,206**	**219,148**	***43.9%***	***37.7%***	***40.8%***
In % of Revenue	*61.2%*	*62.0%*	*62.3%*	*64.9%*	*56.9%*	*72.7%*	*72.7%*	*72.7%*	*72.7%*	*72.7%*	*72.7%*			
Research and Development (R&D)	-2,376	-2,829	-3,924	-5,268	-7,339	-8,675	-12,157	-16,643	-22,556	-30,304	-40,286	*29.6%*	*35.9%*	*32.7%*
In % of Revenue	*-20.3%*	*-25.9%*	*-23.5%*	*-19.6%*	*-27.2%*	*-14.2%*	*-14.2%*	*-14.0%*	*-13.8%*	*-13.6%*	*-13.4%*			
Sales, General and Administrative (SG&A)	-991	-1,093	-1,940	-2,166	-2,440	-2,654	-3,719	-4,912	-6,406	-8,259	-10,501	*21.8%*	*31.7%*	*26.6%*
In % of Revenue	*-8.5%*	*-10.0%*	*-11.6%*	*-8.0%*	*-9.0%*	*-4.4%*	*-4.4%*	*-4.1%*	*-3.9%*	*-3.7%*	*-3.5%*			
Acquisition Termination Cost	0	0	0	0	-1,353	0	0	0	0	0	0	*n/a*	*n/a*	*n/a*
In % of Revenue	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*-5.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*			
Operating Income (EBIT)	**3,804**	**2,846**	**4,532**	**10,041**	**4,224**	**32,972**	**46,208**	**64,756**	**89,864**	**123,643**	**168,361**	***54.0%***	***38.6%***	***46.1%***
In % of Revenue	*32.5%*	*26.1%*	*27.2%*	*37.3%*	*15.7%*	*54.1%*	*54.1%*	*54.6%*	*55.0%*	*55.4%*	*55.9%*			
Other Income and Expense, Net	92	124	-123	-100	-43	846	1,186	1,648	2,269	3,098	4,185	*55.9%*	*37.7%*	*46.5%*
In % of Revenue	*0.8%*	*1.1%*	*-0.7%*	*-0.4%*	*-0.2%*	*1.4%*	*1.4%*	*1.4%*	*1.4%*	*1.4%*	*1.4%*			
Income before Tax (EBT)	**3,896**	**2,970**	**4,409**	**9,941**	**4,181**	**33,818**	**47,394**	**66,405**	**92,133**	**126,740**	**172,546**	***54.1%***	***38.5%***	***46.1%***
In % of Revenue	*33.3%*	*27.2%*	*26.4%*	*36.9%*	*15.5%*	*55.5%*	*55.5%*	*55.9%*	*56.4%*	*56.8%*	*57.3%*			
Income Tax Expense/Benefit	245	-174	-77	-189	187	-4,058	-5,687	-8,633	-11,977	-17,744	-24,156	*n/a*	*42.9%*	*n/a*
CIT Rate	*-6.3%*	*5.9%*	*1.7%*	*1.9%*	*-4.5%*	*12.0%*	*12.0%*	*13.0%*	*13.0%*	*14.0%*	*14.0%*			
Net Income	**4,141**	**2,796**	**4,332**	**9,752**	**4,368**	**29,760**	**41,707**	**57,772**	**80,156**	**108,997**	**148,390**	***48.4%***	***37.9%***	***43.0%***
In % of Revenue	*35.3%*	*25.6%*	*26.0%*	*36.2%*	*16.2%*	*48.8%*	*48.8%*	*48.7%*	*49.1%*	*48.9%*	*49.2%*			
Net Income per Share:														
Basic	*$1.70*	*$1.15*	*$1.76*	*$3.91*	*$1.76*	*$12.05*	*$16.89*	*$23.40*	*$32.46*	*$44.15*	*$60.10*	*47.9%*	*37.9%*	*42.8%*
Diluted	*$1.66*	*$1.13*	*$1.73*	*$3.85*	*$1.74*	*$11.93*	*$16.72*	*$23.16*	*$32.14*	*$43.70*	*$59.50*	*48.4%*	*37.9%*	*43.1%*
Weighted Average Shares														
Basic	*2,432**	*2,439*	*2,467*	*2,496*	*2,487*	*2,469*	*2,469*	*2,469*	*2,469*	*2,469*	*2,469*	*0.3%*	*0.0%*	*0.2%*
Diluted	*2,500**	*2,472*	*2,510*	*2,535*	*2,507*	*2,494*	*2,494*	*2,494*	*2,494*	*2,494*	*2,494*	*0.0%*	*0.0%*	*0.0%*

Source: Nvidia 10-K for the 2018-2023 period, and Author Projections
**Adjusted for a four-for-one stock split announced in May 2021*

Appendix B - Balance Sheet

Consolidated Balance Sheet											
In $m	**January 27, 2019**	**January 26, 2020**	**January 31, 2021**	**January 30, 2022**	**January 29, 2023**	**January 28, 2024**	**January 26, 2025**	**January 31, 2026**	**January 31, 2027**	**January 30, 2028**	**January 29, 2029**
Property and Equipment, Net	1,404	1,674	2,149	2,778	3,807	3,914	3,819	3,713	3,604	3,505	3,438
Operating Lease Assets	0	618	707	829	1,038	1,346	1,481	1,629	1,792	1,971	2,168
Goodwill	618	618	4,193	4,349	4,372	4,430	4,430	4,430	4,430	4,430	4,430
Intangible Assets, Net	45	49	2,737	2,339	1,676	1,112	1,112	1,112	1,112	1,112	1,112
Fixed Assets	**2,067**	**2,959**	**9,786**	**10,295**	**10,893**	**10,802**	**10,842**	**10,884**	**10,938**	**11,017**	**11,147**
Current Assets	3,243	2,911	6,638	11,462	13,597	22,861	31,970	44,445	61,188	83,526	112,848
Current Liabilities	-1,329	-1,784	-2,926	-4,335	-5,313	-9,381	-13,722	-19,077	-26,263	-35,851	-48,436
Working Capital	**1,914**	**1,127**	**3,712**	**7,127**	**8,284**	**13,480**	**18,248**	**25,368**	**34,925**	**47,675**	**64,412**
Deferred Income Tax Assets	560	548	806	1,222	3,396	6,081	7,471	9,374	11,923	15,329	19,853
Deferred Income Tax Liabilities	0	0	0	0	0	0	0	0	0	0	0
Deferred Tax (Net)	**560**	**548**	**806**	**1,222**	**3,396**	**6,081**	**7,471**	**9,374**	**11,923**	**15,329**	**19,853**
Capital Employed	**4,541**	**4,634**	**14,304**	**18,644**	**22,573**	**30,363**	**36,561**	**45,626**	**57,786**	**74,021**	**95,412**
Share Capital	1	1	3	3	2	2	2	2	2	2	2
Issuance Premium	6,051	7,045	8,719	10,385	11,971	13,132	13,132	13,132	13,132	13,132	13,132
Treasury Stock, at Cost	-9,263	-9,814	-10,756	0	0	0	0	0	0	0	0
Accumulated Other Comprehensive Loss	-12	1	19	-11	-43	27	0	0	0	0	1
Retained Earnings	12,565	14,971	18,908	16,235	10,171	29,817	71,524	129,296	209,451	318,448	466,838
Equity	**9,342**	**12,204**	**16,893**	**26,612**	**22,101**	**42,978**	**84,658**	**142,430**	**222,585**	**331,582**	**479,973**
Long-Term Debt	1,988	1,991	5,964	10,946	9,703	8,459	8,459	8,459	8,459	8,459	8,459
Short-term Debt	0	0	999	0	1,250	1,250	1,250	1,250	1,250	1,250	1,250
Long-Term Operating Lease Liabilities	0	561	634	741	902	1,119	1,231	1,354	1,489	1,638	1,802
Other Long-term Liabilities	633	775	1,375	1,553	1,913	2,541	2,795	3,075	3,382	3,720	4,092
Cash and Cash Equivalents	-782	-10,896	-847	-1,990	-3,389	-7,280	-16,242	-28,519	-45,629	-68,941	-100,825
Marketable Securities	-6,640	-1	-10,714	-19,218	-9,907	-18,704	-45,590	-82,422	-133,751	-203,687	-299,339
Net Financial Debt (+) / Cash (-)	**-4,801**	**-7,570**	**-2,589**	**-7,968**	**472**	**-12,615**	**-48,097**	**-96,803**	**-164,800**	**-257,561**	**-384,560**
Invested Capital	**4,541**	**4,634**	**14,304**	**18,644**	**22,573**	**30,363**	**36,561**	**45,626**	**57,786**	**74,021**	**95,412**

Source: Nvidia 10-K for the 2018-2023 period, and Author Projections

Appendix C - Working Capital

Working Capital											
In $m	**January 27, 2019**	**January 26, 2020**	**January 31, 2021**	**January 30, 2022**	**January 29, 2023**	**January 28, 2024**	**January 26, 2025**	**January 31, 2026**	**January 31, 2027**	**January 30, 2028**	**January 29, 2029**
Account Receivables, Net	1,424	1,657	2,429	4,650	3,827	9,999	12,775	17,760	24,450	33,376	45,093
in days of sales	*44 days*	*55 days*	*53 days*	*63 days*	*52 days*	*60 days*	*55 days*	*55 days*	*55 days*	*55 days*	*55 days*
Inventories	1,575	979	1,826	2,605	5,159	5,282	10,080	14,013	19,292	26,335	35,579
in days of sales	*49 days*	*33 days*	*40 days*	*35 days*	*70 days*	*32 days*	*43 days*	*43 days*	*43 days*	*43 days*	*43 days*
Prepaid Expenses and Other	244	275	2,383	4,207	4,611	7,580	9,116	12,672	17,447	23,816	32,176
in days of sales	*8 days*	*9 days*	*52 days*	*57 days*	*62 days*	*45 days*	*39 days*	*39 days*	*39 days*	*39 days*	*39 days*
Current Assets	**3,243**	**2,911**	**6,638**	**11,462**	**13,597**	**22,861**	**31,970**	**44,445**	**61,188**	**83,526**	**112,848**
in days of sales	*101 days*	*97 days*	*145 days*	*155 days*	*184 days*	*137 days*	*137 days*	*137 days*	*137 days*	*137 days*	*137 days*
Accounts Payable	-511	-687	-1,149	-1,783	-1,193	-2,699	-4,699	-6,533	-8,994	-12,277	-16,586
in days of sales	*-16 days*	*-23 days*	*-25 days*	*-24 days*	*-16 days*	*-16 days*	*-20 days*	*-20 days*	*-20 days*	*-20 days*	*-20 days*
Accrued and Other Current Liabilities	-818	-1,097	-1,777	-2,552	-4,120	-6,682	-9,023	-12,544	-17,270	-23,574	-31,850
in days of sales	*-25 days*	*-37 days*	*-39 days*	*-35 days*	*-56 days*	*-40 days*	*-39 days*	*-39 days*	*-39 days*	*-39 days*	*-39 days*
Current Liabilities	**-1,329**	**-1,784**	**-2,926**	**-4,335**	**-5,313**	**-9,381**	**-13,722**	**-19,077**	**-26,263**	**-35,851**	**-48,436**
in days of sales	*-41 days*	*-60 days*	*-64 days*	*-59 days*	*-72 days*	*-56 days*	*-59 days*	*-59 days*	*-59 days*	*-59 days*	*-59 days*
Working Capital	**1,914**	**1,127**	**3,712**	**7,127**	**8,284**	**13,480**	**18,248**	**25,368**	**34,925**	**47,675**	**64,412**
Change in Working Capital	**-857**	**787**	**-2,585**	**-3,415**	**-1,157**	**-5,196**	**-4,768**	**-7,120**	**-9,557**	**-12,750**	**-16,736**
Revenue	*11,716*	*10,918*	*16,675*	*26,914*	*26,974*	*60,922*	*85,378*	*118,694*	*163,408*	*223,062*	*301,369*
Working capital in days of Revenue	*60 days*	*38 days*	*81 days*	*97 days*	*112 days*	*81 days*	*78 days*	*78 days*	*78 days*	*78 days*	*78 days*
Working capital in % of Revenue	*16.3%*	*10.3%*	*22.3%*	*26.5%*	*30.7%*	*22.1%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*

Source: Nvidia 10-K for the 2018-2023 period, and Author Projections

Appendix D - Key Financial Ratios

Key Financial Ratios	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024E	FY 2025E	FY 2026E	FY 2027E	FY 2028E
Liquidity Ratios											
Current Ratio (x)	8.0	7.7	6.2	7.5	5.1	5.2	6.8	8.1	9.2	9.9	10.6
Quick Ratio (x)	6.7	7.0	4.8	6.0	3.2	3.8	5.4	6.7	7.8	8.5	9.2
Cash Ratio (x)	5.6	6.1	4.0	4.9	2.5	2.8	4.5	5.8	6.8	7.6	8.3
Efficiency Ratios											
Total Assets Turnover (x)	n/a	0.8	1.0	0.9	0.6	1.5	1.3	1.1	0.9	0.8	0.8
Fixed Asset Turnover (x)	n/a	5.3	5.6	2.8	2.6	5.6	7.9	10.9	15.0	20.4	27.4
Days Inventory Outstanding (DIO)	126 days	86 days	106 days	101 days	162 days	116 days	158 days	158 days	158 days	158 days	158 days
Days Sales Outstanding (DSO)	44 days	55 days	53 days	63 days	52 days	60 days	55 days	55 days	55 days	55 days	55 days
Days Payables Outstanding (DPO)	41 days	60 days	67 days	69 days	37 days	59 days	74 days	74 days	74 days	74 days	74 days
Cash Conversion Cycle	130 days	81 days	93 days	95 days	176 days	117 days	139 days	139 days	139 days	139 days	139 days
Profitability Ratios											
Gross Margin (%)	61%	62%	62%	65%	57%	73%	73%	73%	73%	73%	73%
EBIT Margin (%)	32%	26%	27%	37%	16%	54%	54%	55%	55%	55%	56%
Net Profit Margin (%)	35%	26%	26%	36%	16%	49%	49%	49%	49%	49%	49%
ROA (%)	n/a	21%	25%	34%	10%	72%	63%	52%	46%	41%	39%
ROE (%)	n/a	30%	35%	58%	16%	135%	97%	68%	56%	49%	45%
ROTE (%)	n/a	32%	37%	77%	20%	168%	108%	72%	58%	50%	45%
ROCE (%)	n/a	62%	93%	68%	23%	132%	137%	158%	176%	189%	200%
Solvency Ratios											
Debt Ratio (%)	19.7%	19.2%	31.2%	30.0%	33.4%	20.3%	12.3%	8.0%	5.5%	3.9%	2.9%
Long-term Debt Ratio (%)	19.7%	19.2%	27.7%	30.0%	30.4%	18.4%	11.1%	7.3%	5.1%	3.6%	2.6%
Debt to Equity Ratio (%)	28.1%	27.3%	53.1%	49.8%	62.3%	31.1%	16.2%	9.9%	6.6%	4.5%	3.3%
Equity Multiplier (x)	1.4	1.4	1.7	1.7	1.9	1.5	1.3	1.2	1.2	1.2	1.1

Source: Nvidia 10-K for the 2018-2023 period, and Author Projections

Appendix E - Free Cash Flow Statement

Consolidated Free Cash Flow Statement														
In $m	**FY 2018 Hist.**	**FY 2019 Hist.**	**FY 2020 Hist.**	**FY 2021 Hist.**	**FY 2022 Hist.**	**FY 2023 Hist.**	**FY 2024 BP**	**FY 2025 BP**	**FY 2026 BP**	**FY 2027 BP**	**FY 2028 BP**	**CAGR FY18-23**	**CAGR FY23-28**	**CAGR FY18-28**
Compute & Networking (Data Center - AI)	n/a	3,279	6,841	11,046	15,068	47,405	70,065	101,648	144,857	202,924	279,632	*n/a*	*42.6%*	*n/a*
% growth	*n/a*	*n/a*	*108.6%*	*61.5%*	*36.4%*	*214.6%*	47.8%	*45.1%*	*42.5%*	*40.1%*	*37.8%*			
Graphics (mainly Gaming)	n/a	7,639	9,834	15,868	11,906	13,517	15,313	17,045	18,551	20,138	21,737	*n/a*	*10.0%*	*n/a*
% growth	*n/a*	*n/a*	*28.7%*	*61.4%*	*-25.0%*	*13.5%*	13.3%	*11.3%*	*8.8%*	*8.6%*	*7.9%*			
Revenue	**11,716**	**10,918**	**16,675**	**26,914**	**26,974**	**60,922**	**85,378**	**118,694**	**163,408**	**223,062**	**301,369**	**39.1%**	**37.7%**	**38.4%**
% growth	*n/a*	*-6.8%*	*52.7%*	*61.4%*	*0.2%*	*125.9%*	*40.1%*	*39.0%*	*37.7%*	*36.5%*	*35.1%*			
Cost of Revenue	-4,545	-4,150	-6,279	-9,439	-11,618	-16,621	-23,293	-32,382	-44,582	-60,857	-82,221	*29.6%*	*37.7%*	*33.6%*
In % of Revenue	*-38.8%*	*-38.0%*	*-37.7%*	*-35.1%*	*-43.1%*	*-27.3%*	-27.3%	*-27.3%*	*-27.3%*	*-27.3%*	*-27.3%*			
Gross Profit	**7,171**	**6,768**	**10,396**	**17,475**	**15,356**	**44,301**	**62,085**	**86,311**	**118,826**	**162,206**	**219,148**	***43.9%***	***37.7%***	***40.8%***
In % of Revenue	*61.2%*	*62.0%*	*62.3%*	*64.9%*	*56.9%*	*72.7%*	72.7%	*72.7%*	*72.7%*	*72.7%*	*72.7%*			
Research and Development (R&D)	-2,376	-2,829	-3,924	-5,268	-7,339	-8,675	-12,157	-16,643	-22,556	-30,304	-40,286	*29.6%*	35.9%	*32.7%*
In % of Revenue	*-20.3%*	*-25.9%*	*-23.5%*	*-19.6%*	*-27.2%*	*-14.2%*	*-14.2%*	*-14.0%*	*-13.8%*	*-13.6%*	*-13.4%*			
Sales, General and Administrative	-991	-1,093	-1,940	-2,166	-2,440	-2,654	-3,719	-4,912	-6,406	-8,259	-10,501	*21.8%*	31.7%	*26.6%*
In % of Revenue	*-8.5%*	*-10.0%*	*-11.6%*	*-8.0%*	*-9.0%*	*-4.4%*	*-4.4%*	*-4.1%*	*-3.9%*	*-3.7%*	*-3.5%*			
Acquisition Termination Cost	0	0	0	0	-1,353	0	0	0	0	0	0	*n/a*	n/a	*n/a*
In % of Revenue	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*-5.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*			
Income from Operations (EBIT)	**3,804**	**2,846**	**4,532**	**10,041**	**4,224**	**32,972**	**46,208**	**64,756**	**89,864**	**123,643**	**168,361**	***54.0%***	***38.6%***	***46.1%***
In % of Revenue	*32.5%*	*26.1%*	*27.2%*	*37.3%*	*15.7%*	*54.1%*	*54.1%*	*54.6%*	*55.0%*	*55.4%*	*55.9%*			
Corporate Income Tax	245	-174	-77	-189	187	-4,058	-5,687	-8,633	-11,977	-17,744	-24,156	*n/a*	42.9%	*n/a*
CIT rate	*-6.4%*	*6.1%*	*1.7%*	*1.9%*	*-4.4%*	*12.0%*	*12.0%*	*13.0%*	*13.0%*	*14.0%*	*14.0%*			
NOPAT	**4,049**	**2,672**	**4,455**	**9,852**	**4,411**	**28,914**	**40,521**	**56,124**	**77,887**	**105,899**	**144,205**	***48.2%***	***37.9%***	***42.9%***
In % of Revenue	*34.6%*	*24.5%*	*26.7%*	*36.6%*	*16.4%*	*47.5%*	*47.5%*	*47.3%*	*47.7%*	*47.5%*	*47.8%*			
Depreciation & Amortization	**262**	**381**	**1,098**	**1,174**	**1,544**	**1,495**	**3,569**	**4,444**	**5,405**	**6,406**	**7,341**	***41.7%***	**37.5%**	***39.6%***
In % of Revenue	*2.2%*	*3.5%*	*6.6%*	*4.4%*	*5.7%*	*2.5%*	*4.2%*	*3.7%*	*3.3%*	*2.9%*	*2.4%*			
Capex	**-600**	**-489**	**-1,128**	**-976**	**-1,833**	**-1,087**	**-3,474**	**-4,338**	**-5,296**	**-6,307**	**-7,274**	***12.6%***	**46.3%**	***28.3%***
In % of Revenue	*-5.1%*	*-4.5%*	*-6.8%*	*-3.6%*	*-6.8%*	*-1.8%*	*-4.1%*	*-3.7%*	*-3.2%*	*-2.8%*	*-2.4%*			
Working Capital	1,914	1,127	3,712	7,127	8,284	13,480	18,248	25,368	34,925	47,675	64,412	*47.8%*	36.7%	*42.1%*
In % of Revenue	*16.3%*	*10.3%*	*22.3%*	*26.5%*	*30.7%*	*22.1%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*			
in days of sales	*60d*	*38d*	*81d*	*97d*	*112d*	*81d*	*78d*	*78d*	*78d*	*78d*	*78d*			
Change in Working Capital	**-857**	**787**	**-2,585**	**-3,415**	**-1,157**	**-5,196**	**-4,768**	**-7,120**	**-9,557**	**-12,750**	**-16,736**	***43.4%***	**26.4%**	***34.6%***
Free Cash-Flow	**2,854**	**3,351**	**1,840**	**6,635**	**2,965**	**24,126**	**35,848**	**49,109**	**68,439**	**93,248**	**127,535**	***53.3%***	***39.5%***	***46.2%***

Source: Nvidia 10-K for the 2018-2023 period, and Author Projections

Appendix F - Forecast Assumptions

Consolidated Free Cash Flow Statement					
In $m	**FY 2024 BP**	**FY 2025 BP**	**FY 2026 BP**	**FY 2027 BP**	**FY 2028 BP**
Compute & Networking (Data Center - AI)	70,065	101,648	144,857	202,924	279,632
% growth	*47.8%*	*45.1%*	*42.5%*	*40.1%*	*37.8%*
Graphics (mainly Gaming)	15,313	17,045	18,551	20,138	21,737
% growth	*13.3%*	*11.3%*	*8.8%*	*8.6%*	*7.9%*
Revenue	**85,378**	**118,694**	**163,408**	**223,062**	**301,369**
% growth	*40.1%*	*39.0%*	*37.7%*	*36.5%*	*35.1%*
Cost of Revenue	-23,293	-32,382	-44,582	-60,857	-82,221
In % of Revenue	*-27.3%*	*-27.3%*	*-27.3%*	*-27.3%*	*-27.3%*
Gross Profit	**62,085**	**86,311**	**118,826**	**162,206**	**219,148**
In % of Revenue	*72.7%*	*72.7%*	*72.7%*	*72.7%*	*72.7%*
Research and Development (R&D)	-12,157	-16,643	-22,556	-30,304	-40,286
In % of Revenue	*-14.2%*	*-14.0%*	*-13.8%*	*-13.6%*	*-13.4%*
Sales, General and Administrative	-3,719	-4,912	-6,406	-8,259	-10,501
In % of Revenue	*-4.4%*	*-4.1%*	*-3.9%*	*-3.7%*	*-3.5%*
Acquisition Termination Cost	0	0	0	0	0
In % of Revenue	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Income from Operations (EBIT)	**46,208**	**64,756**	**89,864**	**123,643**	**168,361**
In % of Revenue	*54.1%*	*54.6%*	*55.0%*	*55.4%*	*55.9%*
Corporate Income Tax	-5,687	-8,633	-11,977	-17,744	-24,156
CIT rate	*12.0%*	*13.0%*	*13.0%*	*14.0%*	*14.0%*
NOPAT	**40,521**	**56,124**	**77,887**	**105,899**	**144,205**
In % of Revenue	*47.5%*	*47.3%*	*47.7%*	*47.5%*	*47.8%*
Depreciation & Amortization	**3,569**	**4,444**	**5,405**	**6,406**	**7,341**
In % of Revenue	*4.2%*	*3.7%*	*3.3%*	*2.9%*	*2.4%*
Capex	**-3,474**	**-4,338**	**-5,296**	**-6,307**	**-7,274**
In % of Revenue	*-4.1%*	*-3.7%*	*-3.2%*	*-2.8%*	*-2.4%*
Working Capital	18,248	25,368	34,925	47,675	64,412
In % of Revenue	*21.4%*	*21.4%*	*21.4%*	*21.4%*	*21.4%*
in days of sales	*78d*	*78d*	*78d*	*78d*	*78d*
Change in Working Capital	**-4,768**	**-7,120**	**-9,557**	**-12,750**	**-16,736**
Free Cash-Flow	**35,848**	**49,109**	**68,439**	**93,248**	**127,535**

Assumptions
FY24 to FY28: Based on Global AI market future growth rates, increased by 10% (source: Statista)
FY24 to FY28: Based on Global Video Game market future growth rates, increased by 10% (source: Statista)
FY24 to FY28: Based on historical level Gross Margin in FY23 (source: Author)
FY24 to FY28: Based on historical R&D level in FY23, adjusted for the gradual decrease in D&A (source: Author)
FY24 to FY28: Based on historical SG&A level in FY23, adjusted for the gradual decrease in D&A (source: Author)
Non recurrent cost. No acquisition termination cost forecasted
FY24 to FY28: Gradual increase to converge to the Federal Statutory Rate of 21% in the Long Term
FY24 to FY28: Gradual decrease to a normative 2.0% level, with normative D&A = normative Capex (source: Author)
FY24 to FY28: FY24 based on historical average from FY21 to FY23, followed by a gradual decrease to a normative 2.0% level (source: Author)
FY24 to FY28: Working capital level based on historical average level of 78 days from FY18 to FY23

Consolidated Balance Sheet					
In $m	**January 26, 2025**	**January 31, 2026**	**January 31, 2027**	**January 30, 2028**	**January 29, 2029**
Fixed Assets	**10,842**	**10,884**	**10,938**	**11,017**	**11,147**
Working Capital	**18,248**	**25,368**	**34,925**	**47,675**	**64,412**
Deferred Tax (Net)	**7,471**	**9,374**	**11,923**	**15,329**	**19,853**
Capital Employed	**36,561**	**45,626**	**57,786**	**74,021**	**95,412**
Equity	**84,658**	**142,430**	**222,585**	**331,582**	**479,973**
Net Financial Debt (+) / Cash (-)	**-48,097**	**-96,803**	**-164,800**	**-257,561**	**-384,560**
Invested Capital	**36,561**	**45,626**	**57,786**	**74,021**	**95,412**

Assumptions
Increase in line with the projected Capex and D&A. No M&A activity or goodwill impairment assumed
Based on historical average (from FY18 to FY23) Working Capital level of 78 days
Balance the accounts in the Balance Sheet
No share repurchases or dividends assumed. Earnings are 100% retained. No share issuance assumed
Increase in net cash position in line with the projected increase in FCF. No debt repayment assumed

Appendix G - Equity Risk Premium (ERP)

Date updated:	*4-Jan-20*	
Created by:	Aswath Damodaran, adamodar@stern.nyu.edu	
What is this data?	Implied Equity Risk Premiums (by year)	S&P 500
Data website:	https://pages.stern.nyu.edu/~adamodar/New_Home_Page/data.html	

Year	Earnings Yield	Dividend Yield	S&P 500	Earnings*	Dividends*	Dividends + Buybacks	Change in Earnings	Change in Dividends	T.Bill Rate	T.Bond Rate	Bond-Bill	Implied ERP (FCFE)
2023	4.61%	1.46%	4769.83	219.70	69.69	164.25	0.10%	1.98%	5.20%	3.88%	-1.32%	**4.60%**

Appendix H - Beta

Comps Betas

Information on Peers				Levered Beta	R^2	Capital Structure			Tax Rate	Unlevered Beta
Ticker	Company	Country	Index	3 years	3 years	Market Cap (E), in $m	Net Debt (D), in $m	Gearing (D/E)	CIT	3 years
NasdaqGS:AMD	Advanced Micro Devices, Inc.	United States	S&P 500	1.80	35%	286,689	(2,410)	(0.8)%	27.0 %	1.81
NasdaqGS:INTC	Intel Corporation	United States	S&P 500	1.22	33%	174,385	21,265	12.2 %	27.0 %	1.12
NasdaqGS:QCOM	QUALCOMM Incorporated	United States	S&P 500	1.40	42%	190,011	3,112	1.6 %	27.0 %	1.39
NasdaqGS:AVGO	Broadcom Inc.	United States	S&P 500	1.31	43%	611,406	59,343	9.7 %	27.0 %	1.22
NasdaqGS:TXN	Texas Instruments Incorporated	United States	S&P 500	1.00	46%	155,134	2,908	1.9 %	27.0 %	0.98
NasdaqGS:NVDA	NVIDIA Corporation	United States	S&P 500	2.01	47%	2,202,092	(13,740)	(0.6)%	27.0 %	2.02
Mean				**1.46**	**41%**	**603,286**	**11,746**	**4.0%**	**27.0%**	**1.42**

Source: S&P Capital IQ

Appendix I - Cost of Debt

Nvidia's Cost of Debt	
In $m	**FY 2023**
EBIT	32,972
Interest Expense	257
Interest Coverage Ratio	**128.3**
Estimated Bond Rating	Aaa/AAA
Estimated Default Spread	**0.59%**
Risk Free Rate	4.33%
Estimated Cost of Debt	**4.92%**

Source: Damodaran

Appendix J - Size Premium

Size Premium - Ibbotson			
Decile	**Min (m$)**	**Max (m$)**	**Size Premium**
1	31,090	1,061,355	-0.28%
2	13,143	31,090	0.50%
3	6,619	13,143	0.73%
4	4,313	6,619	0.79%
5	2,689	4,313	1.10%
6	1,670	2,689	1.34%
7	994	1,670	1.47%
8	516	994	1.59%
9	230	516	2.22%
10	0	230	4.99%
Analysis			
Mid-Cap (3-5)	2,689	13,143	0.80%
Low-Cap (6-8)	516	2,689	1.42%
Micro-Cap (9-10)	0	516	3.16%
NVIDIA Corporation	Decile		**-0.28%**

Source: International study by Roger Ibbotson (published by Duff Phelps in 2020)

Appendix K - Share Value under Listed Peers Method (Full Table)

Share Value under Listed Peers Method																	
In $m	**EV/Sales**			**EV/Sales**	**EV/EBITDA**			**EV/EBITDA**	**EV/EBIT**			**EV/EBIT**	**Price Earnings Ratio (PER)**			**PER**	**Overall**
	FY24	**FY25**	**FY26**	**Median**	**FY24**	**FY25**	**FY26**	**Median**	**FY24**	**FY25**	**FY26**	**Median**	**FY24**	**FY25**	**FY26**	**Median**	**Median**
Financial indicator	85,378	118,694	163,408		49,777	69,200	95,269		46,208	64,756	89,864		41,707	57,772	80,156		
Selected multiple	10.2x	8.9x	7.3x		22.7x	17.1x	14.9x		31.1x	23.0x	19.1x		31.6x	25.5x	21.1x		
Enterprise Value	**867,539**	**1,053,839**	**1,192,747**	**1,053,839**	**1,129,789**	**1,180,891**	**1,421,315**	**1,180,891**	**1,439,049**	**1,488,700**	**1,720,544**	**1,488,700**	**1,318,578**	**1,474,028**	**1,692,867**	**1,474,028**	**1,327,459**
Adjusted Net Cash	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328	49,328
Equity Value	**916,867**	**1,103,167**	**1,242,075**	**1,103,167**	**1,179,116**	**1,230,218**	**1,470,642**	**1,230,218**	**1,488,377**	**1,538,028**	**1,769,872**	**1,538,028**	**1,367,906**	**1,523,356**	**1,742,195**	**1,523,356**	**1,376,787**
# Shares (in m)	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464	2,464
Share Value ($)	**372.11 $**	**447.71 $**	**504.09 $**	**447.71 $**	**478.54 $**	**499.28 $**	**596.85 $**	**499.28 $**	**604.05 $**	**624.20 $**	**718.29 $**	**624.20 $**	**555.16 $**	**618.25 $**	**707.06 $**	**618.25 $**	**558.76 $**
Upside / Downside																	*-36.0%*

Appendix L - Code of Conduct

Code of Conduct	
I. Integrity and Fairness	**IV. Trust**
A. Make ethical decisions	A. Safeguard Nvidia assets
B. Managers serve as role models	B. Uphold confidentiality
C. Not engaging in bribery	C. Respect privacy and protect personal information
D. Avoid conflicts of interest	D. Respect intellectual property
E. Not limiting competition	E. Communicate responsibly with external parties
F. Complying with laws governing international trade	F. Engage in responsible travel and entertainment
G. Not trading or disclosing non-public information	
H. Maintain accurate business records	
II. Respect	**V. Corporate Responsibility**
A. Honor human rights	A. Source products and select suppliers carefully
B. Treat each other with respect	B. Conserve the environment
C. Promote diversity, inclusion, equity, and belonging	C. Strive to improve communities
D. Create a safe, secure work environment	D. Nvidia alone represents the company's rights in the political process
III. Passion for Products and Customers	**VI. Reporting Concerns**
A. Provide quality products and services	A. Act when aware of misconduct
B. Market products and services accurately	B. Promptly investigate reports of misconduct
C. Foster long-term partnerships	C. Cooperate with investigations
D. Comply with government contracting requirements	D. Not tolerating retaliation

Appendix M - General Information on Current Directors

Name	Age	Director Since	Independent	Financial Expert [1]	Committee Membership	Other Public Company Boards
Robert K. Burgess	65	2011	✓	✓	CC	
Tench Coxe	65	1993	✓		CC	1
John O. Dabiri	43	2020	✓		CC	
Persis S. Drell	67	2015	✓		NCGC	
Jen-Hsun Huang	60	1993				
Dawn Hudson	65	2013	✓	✓	CC Chairperson	2 [2]
Harvey C. Jones	70	1993	✓	✓	CC, NCGC Chairperson [3]	
Michael G. McCaffery	69	2015	✓	✓	AC Chairperson [4]	1
Stephen C. Neal *Lead Director* [5]	74	2019	✓		NCGC Chairperson [3]	
Mark L. Perry *Lead Director* [5]	67	2005	✓	✓	AC, NCGC	
A. Brooke Seawell	75	1997	✓	✓	AC Chairperson [4]	1
Aarti Shah	58	2020	✓		AC	
Mark A. Stevens	63	2008 [6]	✓		AC, NCGC	

[1] For purposes of qualifying as an AC financial expert

[2] Ms. Hudson is not seeking re-election to Modern Times Group MTG AB's board of directors effective as of MTG's 2023 annual general meeting

[3] Mr. Jones will serve as NCGC Chairperson until our 2023 Meeting, at which time Mr. Neal will take over as NCGC Chairperson

[4] Mr. McCaffery will serve as AC Chairperson until our 2023 Meeting, at which time Mr. Seawell will take over as AC Chairperson

[5] Mr. Perry will serve as Lead Director until our 2023 Meeting, at which time Mr. Neal will take over as Lead Director

[6] Previously served as a member of our Board from 1993 until 2006

Appendix N - Skills and Competencies of Current Directors

	Senior Leadership & Operations Experience	Industry & Technical	Financial / Financial Community	Governance & Public Company Board	Emerging Technologies & Business Models	Marketing, Communications & Brand Management	Regulatory, Legal & Risk Management	Human Capital Management Experience	Diversity
Burgess	✓		✓	✓	✓			✓	
Coxe			✓	✓	✓			✓	
Dabiri		✓			✓				✓
Drell	✓	✓		✓	✓			✓	✓
Huang	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hudson	✓		✓	✓		✓		✓	✓
Jones	✓	✓	✓	✓	✓	✓		✓	
McCaffery	✓		✓	✓				✓	
Neal	✓			✓		✓	✓	✓	
Perry	✓		✓	✓			✓	✓	
Seawell	✓		✓	✓	✓			✓	
Shah	✓	✓		✓	✓	✓	✓	✓	✓
Stevens		✓	✓	✓	✓				

Appendix O - Executive Committee

Jen-Hsun Huang
President and CEO

Colette M. Kress
EVP and CFO

Ajay K. Puri
EVP, Worldwide Field Operations

Debora Shoquist
EVP, Operations

Timothy S. Teter
EVP, General Counsel and Secretary

Appendix P - Executive Compensation

Name and Principal Position	Fiscal Year	Salary ($)	Stock Awards ($) [1]	Non-Equity Incentive Plan Compensation ($) [2]	All Other Compensation ($)	Total ($)
Jen-Hsun Huang	2023	996,832	19,666,382	—	693,710 [3]	21,356,924
President and CEO	2022	996,216	18,660,407	4,000,000	81,038	23,737,661
	2021	1,017,355	15,279,780	3,000,000	19,266	19,316,401
Colette M. Kress	2023	897,149	10,004,677	—	15,402 [4]	10,917,228
Executive Vice President and CFO	2022	896,595	8,269,020	600,000	10,312	9,775,927
	2021	915,620	6,595,691	600,000	9,731	8,121,042
Ajay K. Puri	2023	946,990	9,633,991	—	46,717 [4]	10,627,698
Executive Vice President, Worldwide Field Operations	2022	946,406	7,892,819	1,300,000	33,493	10,172,718
	2021	966,487	6,208,052	1,300,000	33,388	8,507,927
Debora Shoquist	2023	847,307	8,244,465	—	23,478 [4]	9,115,250
Executive Vice President, Operations	2022	846,784	6,483,557	500,000	21,478	7,851,819
	2021	864,752	5,722,904	500,000	21,581	7,109,237
Timothy S. Teter	2023	847,307	8,244,465	—	15,402 [4]	9,107,174
Executive Vice President, General Counsel and Secretary	2022	846,784	6,483,557	500,000	12,402	7,842,743
	2021	864,752	3,783,191	500,000	9,921	5,157,864

Appendix Q - Nvidia's Insider Transactions in 2023

Insider Transactions

Exchange	Symbol	Insider	Position	Date	Buy/Sell	Shares	Shares Owned	Trade Price($)	Proceeds from Sale/Cost to Buy ($)	Trade Percentage(%)	Price change since trade(%)
NASDAQ	NVDA	Jen Hsun Huang	President and CEO	2023-09-13	Sell	29,688	86,639,715	454.01	13,478,648.88	0.03	0.40
NASDAQ	NVDA	Jen Hsun Huang	President and CEO	2023-09-12	Sell	29,688	7,918,875	451.96	13,417,788.48	0.37	0.85
NASDAQ	NVDA	Jen Hsun Huang	President and CEO	2023-09-11	Sell	29,688	86,639,715	448.99	13,329,615.12	0.03	1.52
NASDAQ	NVDA	Jen Hsun Huang	President and CEO	2023-09-07	Sell	29,688	7,918,875	458.30	13,606,010.40	0.37	-0.54
NASDAQ	NVDA	Jen Hsun Huang	President and CEO	2023-09-06	Sell	29,688	86,520,965	471.55	13,999,376.40	0.03	-3.34
NASDAQ	NVDA	Jen Hsun Huang	President and CEO	2023-09-05	Sell	59,376	7,800,125	485.53	28,828,829.28	0.76	-6.12
NASDAQ	NVDA	Mark A Stevens	Director	2023-08-29	Sell	52,175	4,272,659	480.91	25,091,479.25	1.22	-5.22
NASDAQ	NVDA	Kress Colette	EVP & CFO	2023-08-28	Sell	4,980	576,996	460.74	2,294,485.20	0.86	-1.07
NASDAQ	NVDA	John Dabiri	Director	2023-06-26	Sell	283	2,401	424.53	120,141.99	11.79	7.37
NASDAQ	NVDA	Mark A Stevens	Director	2023-06-20	Sell	118,602	4,324,184	431.03	51,121,020.06	2.74	5.75
NASDAQ	NVDA	A Brooke Seawell	Director	2023-06-14	Sell	860	501,438	424.69	365,233.40	0.17	7.33
NASDAQ	NVDA	Tench Coxe	Director	2023-06-14	Sell	50,000	3,986,962	422.15	21,107,500.00	1.25	7.97
NASDAQ	NVDA	Harvey C Jones	Director	2023-06-13	Sell	119,795	814,330	403.17	48,297,750.15	14.71	13.06
NASDAQ	NVDA	Dawn E Hudson	Director	2023-06-07	Sell	3,500	81,850	384.03	1,344,105.00	4.28	18.69
NASDAQ	NVDA	Harvey C Jones	Director	2023-06-02	Sell	70,205	934,125	405.00	28,433,025.00	7.52	12.55
NASDAQ	NVDA	John Dabiri	Director	2023-06-01	Sell	383	2,034	384.89	147,412.87	18.83	18.43
NASDAQ	NVDA	Kress Colette	EVP & CFO	2023-05-30	Sell	6,124	616,313	406.51	2,489,467.24	0.99	12.13
NASDAQ	NVDA	Persis Drell	Director	2023-05-26	Sell	7,800	35,478	386.03	3,011,034.00	21.99	18.08
NASDAQ	NVDA	Tench Coxe	Director	2023-05-26	Sell	100,000	4,036,962	379.00	37,900,000.00	2.48	20.27
NASDAQ	NVDA	Debora Shoquist	EVP, Operations	2023-05-18	Sell	23,084	352,848	305.00	7,040,620.00	6.54	49.45
NASDAQ	NVDA	Dawn E Hudson	Director	2023-03-30	Sell	5,000	85,350	274.55	1,372,750.00	5.86	66.02
NASDAQ	NVDA	Kress Colette	EVP & CFO	2023-03-13	Sell	6,000	638,969	229.29	1,375,740.00	0.94	98.79
NASDAQ	NVDA	Mark L Perry	Director	2023-02-27	Sell	20,000	152,962	236.37	4,727,400.00	13.08	92.84
NASDAQ	NVDA	Dawn E Hudson	Director	2023-02-24	Sell	7,500	90,350	230.40	1,728,000.00	8.30	97.83
NASDAQ	NVDA	Debora Shoquist	EVP, Operations	2023-01-27	Sell	23,532	362,976	205.00	4,824,060.00	6.48	122.35
NASDAQ	NVDA	Kress Colette	EVP & CFO	2023-01-26	Sell	10,741	614,528	200.00	2,148,200.00	1.75	127.91
NASDAQ	NVDA	Kress Colette	EVP & CFO	2023-01-26	Sell	10,741	516,026	200.00	2,148,200.00	2.08	127.91
NASDAQ	NVDA	Mark A Stevens	Director	2023-01-13	Sell	65,000	4,442,786	165.54	10,760,100.00	1.46	175.35
NASDAQ	NVDA	Mark A Stevens	Director	2023-01-10	Sell	210,000	4,507,786	158.45	33,274,500.00	4.66	187.67

Appendix R - Company History

1993 **3D Graphics**
Founded on April 5, 1993, by Jensen Huang, Chris Malachowsky, and Curtis Priem, with a vision to bring 3D graphics to the gaming and multimedia markets.

1999 **GPU**
Invents the GPU, the graphics processing unit, which sets the stage to reshape the computing industry.

2006 **CUDA**
Opens parallel processing capabilities of GPUs to science and research with unveiling of CUDA® architecture.

2012 **AI**
Sparks the era of modern AI by powering the breakthrough AlexNet neural network.

2018 **RTX**
Reinvents computer graphics with NVIDIA RTX™, the first GPU capable of real-time ray tracing.

2022 **Omniverse**
Plays a foundational role in the building of the metaverse, the next stage of the internet, with the NVIDIA Omniverse™ platform.

Appendix S - Largest Semiconductor Companies

Rank	Name	Market Cap	Price	Today	Price (30 days)	Country
1	NVIDIA NVDA	$2.116 T	$846.71	0.76%		USA
2	TSMC TSM	$686.08 B	$132.27	4.86%		Taiwan
3	Broadcom AVGO	$583.44 B	$1,259	1.84%		USA
4	Samsung 005930.KS	$383.87 B	$57.68	0.89%		S. Korea
5	ASML ASML	$375.10 B	$889.03	2.05%		Netherlands
6	AMD AMD	$250.63 B	$155.08	0.69%		USA
7	QUALCOMM QCOM	$180.16 B	$161.44	1.75%		USA
8	Applied Materials AMAT	$161.45 B	$194.32	2.79%		USA
9	Intel INTC	$149.16 B	$35.04	1.79%		USA
10	Texas Instruments TXN	$148.94 B	$163.67	1.23%		USA

Glossary

AI	Artificial Intelligence
API	Application Programming Interface
AR	Augmented Reality
ASIC	Application-Specific Integrated Circuit
AV	Audio Visual
BP	Business Plan
Bn	Billion
CA	California
CAGR	Compound Annual Growth Rate
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
CIT	Corporate Income Tax
COE	Cost of Equity
COGS	Cost of Goods Sold
COSO	Committee of Sponsoring Organizations
CMP	Cryptocurrency Mining Processors
CPU	Central Processing Unit
CSP	Cloud Solution Provider
CUDNN CUDA	Deep Neural Network
D	Debt
D&A	Depreciation & Amortization
DCF	Discounted Cash Flow
DE	Delaware
DPU	Data Processing Unit
E	Equity
E	Estimates
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
EPS	Earnings per Share
ERP	Equity Risk Premium
ESG	Environmental, Social, and Governance
EV	Enterprise Value
FCFF	Free Cash Flow to Firm
FDII	Foreign Derived Intangible Income
FPGA	Field Programmable Gate Arrays
FY	Fiscal Year
GAAP	Generally Accepted Accounting Practice
GDP	Gross Domestic Product
GPU	Graphics Processing Units
Hist.	Historical
IT	Information Technology
LLM	Large Language Model
LTM	Last Twelve Months

LY	Last Year
M	Million
n/a	Not applicable
NAV	Net Asset Value
NOPAT	Net Operating Profit After Tax
Norm.	Normative
OEM	Original Equipment Manufacturer
P&L	Profit & Loss
PC	Personal Computer
PGR	Perpetual Growth Rate
PSU	Performance Stock Unit
R&D	Research & Development
ROA	Return on Asset
ROE	Return on Equity
ROTE	Return on Tangible Equity
ROIC	Return on Invested Capital
RSU	Restricted Stock Unit
SG&A	Sales, General & Administrative
SoC	System on Chip
Tot.	Total
TPU	Tensor Processing Unit
TX	Texas
VR	Virtual Reality
WACC	Weighted Average Cost of Capital
WC	Working Capital
WSE	Wafer Scale Engine
YoY	Year over Year

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