**EPS Summary:**

**FY21**

* **Increase: NVIDIA's EPS rose significantly due to record revenue driven by strong demand in its Gaming and Data Center segments. The launch of the GeForce RTX 30 Series GPUs and the growth in AI and data center applications were major contributors**

**FY22**

* **Increase: The EPS continued to grow, fueled by exceptional demand for NVIDIA's computing platforms across various sectors, including AI, gaming, and autonomous vehicles. The company's revenue hit new heights, supported by its robust product lineup and strategic acquisitions**

**FY23**

* **Decrease: The EPS saw a decline primarily due to a slowdown in the gaming market post-pandemic and challenges in the broader semiconductor industry. Despite flat revenue, increased operating expenses and a dip in gaming demand impacted profitability**

**FY24**

* **Increase: A dramatic surge in EPS was observed, driven by explosive growth in the Data Center segment, which saw a 217% increase in revenue. The widespread adoption of NVIDIA's AI and data processing solutions across various industries, along with new product launches, significantly boosted earnings**

**Profitability ratios:**

**ROA:**

* FY21: The ROA was 15.04%, reflecting efficient asset utilization driven by strong demand in gaming and data center segments.
* FY22: ROA increased to 22.07%, supported by exceptional demand across AI, gaming, and autonomous vehicles.
* FY23: ROA dropped to 10.61% due to a slowdown in the gaming market and increased operating expenses.
* FY24: ROA surged to 45.28%, driven by explosive growth in the Data Center segment and widespread adoption of AI solutions.

**ROE:**

The significant rise in FY24 can be attributed to a dramatic increase in both revenue (up by 126% to $60.9 billion) and GAAP earnings per share (up by 586% to $11.93), reflecting strong financial performance and enhanced profitability compared to shareholders' equity.

**ROCE:**

FY2024: Significant increase in ROCE to 59.8%, indicating enhanced efficiency in utilizing capital to generate profits.

FY2023: Notable decline in ROCE to 12.2%, suggesting challenges in operational performance.

FY2022: Improvement in ROCE to 25.2%, reflecting better capital utilization compared to the previous year.

FY2021: ROCE at 18.2%, serving as a baseline for subsequent performance evaluations.

**Gross margin** is a key indicator of a company's profitability and efficiency, representing the percentage of revenue that exceeds the cost of goods sold (COGS). A higher gross margin indicates better efficiency in managing production costs relative to sales.

**FY21 to FY22**: NVIDIA’s gross margin remained strong and saw a modest increase as it capitalized on the growing demand for gaming GPUs and data center products.

**FY23 to FY24**: The most significant improvement in gross margin occurred during these years. The surge in AI-related product demand (like GPUs for machine learning and data centers) led to a dramatic increase in NVIDIA’s gross margins.

There is steady growth in **SG&A expenses**, which reflects NVIDIA's expanding operations and increased investments in marketing, administrative functions, and other general expenses to support its business growth but **SG&A as a percentage of revenue** decreased overtime, from **11.63% in FY21** to **4.36% in FY24**. This reduction highlights NVIDIA's operational efficiency as its revenue base grew, especially in the high-margin **data center** and **AI** sectors.

The company managed to keep **SG&A growth** in check while expanding its global presence and enhancing its marketing and sales operations.

This substantial increase in **R&D** spending reflects NVIDIA's commitment to innovation and maintaining its competitive edge, particularly in areas like artificial intelligence, data centers, and gaming technologies.

Fy22: Significant advancements in AI, including the development of new AI models and enhancements in data center technologies. Increased focus on autonomous vehicle technology and robotics

FY23: generative AI and deep learning. Development of new GPU architecture and enhancements in gaming technologies. Increased investment in software development

FY24: Development of new AI chips and expansion of data center products. Enhanced efforts in autonomous driving and robotics

EBIT, EBT and Net profit Margin will be explained in later slide but overall, there is a good increase in FY21 to FY22 but FY23 was a dip, and it surged in FY24.

**Asset Utilization ratios:**

**Asset turnover**

**It improved from FY21 to FY22** due to increasing sales in gaming and data centers.

**Declined in FY23** as assets grew faster than revenue, largely due to heavy investments.

**Significantly increased in FY24** as revenue surged, particularly from AI and data center businesses.

PPE Turnover:

**NVIDIA’s PPE Turnover is extremely high compared to traditional semiconductor companies** (e.g., Intel), thanks to its fabless model.

**The drop in FY23** was due to increased PPE investment while revenue stayed flat.

**FY24 saw a major improvement** as revenue skyrocketed while PPE remained relatively low.

**Cash Turnover**:

This ratio measures how efficiently a company utilizes its cash to generate revenue.

Higher cash turnover means the company efficiently uses its cash to generate revenue.

Lower cash turnover means cash is sitting idle or being held for strategic reasons.

Increased significantly in FY24 (3.10x) → Revenue growth outpaced cash reserves.

Dip in FY23 (1.56x) due to higher cash balance and stagnant revenue.

**Cash conversion cycle:**  
This metric reflects how many days it takes for NVIDIA to convert cash outflows into cash inflows.

Lower cash days = faster cash conversion, better liquidity.

Higher cash days = slower cash movement, potential inefficiencies.

Decreased from 5.8 days (FY21) to 3.8 days (FY24) → NVIDIA is now converting cash faster.

Shorter cycle = more liquidity, better working capital efficiency.

NVIDIA’s **A/R Turnover** improved significantly from **6.87x in FY20** to **8.81x in FY24**, reflecting more efficient collections. **A/R Days** decreased from **53.1 days in FY20** to **41.4 days in FY24**, indicating faster cash conversion. This trend highlights better receivables management, with **faster collections** and **enhanced liquidity**, especially in FY24, following strong revenue growth.

The trends in **inventory turnover** and inventory days suggest that NVIDIA has faced increasing challenges in managing its inventory efficiently over the past few years. The significant rise in **inventory days** and the corresponding drop in turnover ratio indicate that inventory is taking longer to sell, which could be due to several factors such as increased production, slower sales growth, or strategic decisions to hold more inventory.

* Increased Production: Higher inventory levels might be due to increased production to meet the expected demand.
* Market Conditions: Changes in market demand or economic conditions could impact sales and inventory turnover.
* Strategic Investments: NVIDIA might be investing in new product lines or technologies, leading to higher inventory levels.

**FY2024** has the highest **AP Turnover** of **8.54x**, indicating that NVIDIA is efficiently managing its accounts payable and paying its suppliers quickly.

**AP Days** for FY2024 are **42.7 days**, which is the shortest in the period analyzed, showing improved efficiency in managing payables compared to the prior years.

From **FY2021** to **FY2022**, there was a noticeable decline in **AP Turnover** from **6.65x** to **6.33x**, which means that NVIDIA took slightly longer to pay its suppliers in FY2022.

A shorter CCC is generally favorable as it indicates that the company can quickly convert its investments into cash, improving liquidity and reducing the need for external financing. The very slight improvements in CCC in FY22 and FY21 suggest that NVIDIA had been focusing on enhancing its operational efficiency, though the increase in FY23 and FY24 indicates some challenges.

**Leverage ratios:**

* **FY20 to FY21**: The ratio increased from 1.42 to 1.70, indicating that NVIDIA's assets grew at a faster rate than its equity. This could be due to significant investments or acquisitions.
* **FY22**: The ratio slightly decreased to 1.66, suggesting a more balanced growth between assets and equity.
* **FY23**: The ratio increased to 1.86, indicating a higher reliance on debt or liabilities to finance asset growth.
* **FY24**: The ratio decreased to 1.53, reflecting a substantial increase in equity, possibly due to retained earnings or new equity financing.
* **FY21**: The ratio increased to 0.70, indicating higher leverage, possibly due to increased borrowing to finance growth or investments.
* **FY22**: The ratio slightly decreased to 0.66, reflecting a more balanced approach to debt and equity financing.
* **FY23**: The ratio increased to 0.86, suggesting a higher reliance on debt, which could indicate increased financial risk but also potential for higher returns.
* **FY24**: The ratio decreased to 0.53, indicating a reduction in debt relative to equity, which suggests improved financial stability and lower leverage.
* **FY21**: The ratio compared to FY20 increased to 2.11, suggesting higher leverage.
* **FY22**: The ratio decreased to 1.57, indicating improved earnings relative to debt.
* **FY23**: The ratio increased significantly to 3.31, reflecting higher debt levels or lower earnings.
* **FY24**: The ratio decreased dramatically to 0.66, indicating strong earnings relative to debt, suggesting improved financial health and lower leverage.

Net Debt to EBITDA also exhibit same trend as Debt to EBITDA.

**Liquidity Ratios:**

* **FY20**: A very high current ratio of 7.67 indicates strong liquidity, with ample current assets to cover current liabilities.
* **FY21**: The ratio decreased to 4.09, still indicating good liquidity but with a higher proportion of liabilities.
* **FY22**: The ratio increased to 6.65, reflecting improved liquidity and a strong ability to cover short-term obligations.
* **FY23**: The ratio decreased to 3.51, suggesting a higher level of current liabilities relative to current assets.
* **FY24**: The ratio improved to 4.17, indicating a balanced approach to managing current assets and liabilities, maintaining good liquidity.

Current Ratio and Quick ratio exhibit similarity, Quick Assets is calculated after excluding Inventory, Current ratio is useful for a general overview of liquidity, while the quick ratio is better for assessing a company's ability to meet short-term obligations without relying on inventory sales.

NVIDIA's fluctuating interest coverage ratios reflect its dynamic financial performance and ability to manage interest expenses. The significant increase in FY24 suggests a strong financial position with excellent coverage of interest obligations. In case of FY23, The revenue decline and increased operating expenses are the reason for ratio fall.