School of Social Sciences

Master in business administration (MBA)

The rise of Nvidia: The Financial Analysis of The Company's Growth and Market Dominance Over the Last Ten Years.

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"I would like to express my sincere gratitude to my professor Mr. Dedoulis Emmanouil for the valuable guidance, feedback and support throughout this dissertation. I would also like to thank my family and girlfriend for their patience, belief and encouragement during my studies"

Abstract

This dissertation examines Nvidia's financial transformation over the years 2015–2025, focusing on how the company evolved from someone whose main focus was the production of gaming graphics units to a leading firm in the semiconductor accelerated computing and artificial intelligence ecosystem. The study shows how this transition is reflected in the long term financial performance of the company, including revenue growth, profitability, liquidity, leverage and cash flow generation.

This study adopts a quantitative longitudinal case study design which is based on financial statement analysis. The analytical framework combines trend analysis, common size analysis, ratio analysis, cash flow diagnostics and peer benchmarking. Nvidia is the primary company while AMD and Intel are used as benchmark firms because of their relevance to the semiconductors industry, product market overlap and competitive positioning. The focus of the analysis is based on audited annual reports and Form 10-K filings for Nvidia, AMD and Intel and is supported by appropriate financial information.

The findings of the analysis show that the financial development of the company over the period was not linear. The earlier growth was linked to the expansion of gaming, visualization and data center activities, while the later acceleration was strongly associated with the demand for data center computing which is related to AI. The analysis also

identifies a temporary deterioration in 2023, followed by a sharp recovery in revenue growth, margins, free cash flow and balance sheet strength. In comparison with AMD and Intel, Nvidia demonstrates a distinctive combination of revenue acceleration, margin expansion and cash flow conversion, although the comparison is limited with differences in business models, product mixes and manufacture structures.

The dissertation concludes that the rise of Nvidia reflects both on specific strategic positioning of the company and on broader conditions of the industry, including ai demand, supply chain capacity, customer concentration and regulatory constraints such as export controls. The study therefore interprets Nvidia's financial performance as the result of interacting with strategic, operational and macroeconomic factors, while avoiding narrow causal claims.

Keywords

Nvidia, semiconductor industry, financial performance, transition to a leading company, strategic positioning, ratio analysis, cash flow

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1. Introduction

1.1 Background and Context

Over the past ten years, there has been an increase in competitive advantage for many industries due to the use of high performance computing and artificial intelligence (AI) technologies. Many researchers have examined the economic implications of using digital

technologies. Capabilities which are based on artificial intelligence can grow rapidly, and profitable results are possible due to the learning advantages, complementary assets, and the ability to control ecosystems (Brynjolfsson and McAfee, 2014 & Bughin et al., 2018). Semiconductors are the main core of this shift as they produce computing hardware which enables the development and application of AI technology.

Nvidia was selected as the primary company for this study because they represent an example of strategic transformation in the semiconductor industry. During the research period the company moved from being mainly associated with gaming GPUs to becoming a key firm in ai acceleration, data center computing and a platform based on semiconductor ecosystems. The company is the appropriate example for examining how strategic repositioning is reflected on financial performance, particularly in revenue growth, profitability, liquidity, cash generation and capital structure.

AMD and Intel on the other hand are used as benchmark firms because they provide two different but relevant points of comparison. AMD is closer to Nvidia in terms of its fabless semiconductor model and its exposure to GPUs, CPUs, ai accelerators, gaming and data center markets. Intel is a major incumbent with strong exposure to CPUs, data center infrastructure and a more vertically integrated manufacturing and foundry model. Therefore, AMD and Intel are not treated as perfect peers but as useful benchmarks for identifying whether Nvidia's performance reflect on firm's strengths or wider semiconductor and AI industry trends.

The research gap that is addressed in this dissertation is the discussion of Nvidia focuses on its market value, technological leadership and role in the AI boom, while less attention is given to how this strategic transformation appears in the company's financial statement over a longer period. This dissertation contributes by combining strategic and industry analysis with trend analysis, common size analysis, ratio analysis, working capital analysis, cash flow diagnostics and peer benchmarking. In this way the dissertation examines not only whether Nvidia grew, but also whether its growth was supported by stronger liquidity, profitability, cash convention and balance sheet resilience.

1.2 Research Questions and Objectives

The purpose of this dissertation is to explain how NVIDIA has transitioned from being a company that focused on producing high performance gaming graphics (GPUs) to being

one of the most influential companies in artificial intelligence (AI) and data centers between 2015-2025. Furthermore, it will examine how that transition had an impact on the firm's revenue growth, margin expansion and cash generation.

This research is going to answer the following questions:

I. How does this change towards ai and data center platforms influence and to what extent changes in revenue, margin structure, cash flow convention and financial resilience between 2015 and 2025?
II. How far are the firm's financial changes descriptively to AMD and Intel and what do these differences suggest about Nvidia's capabilities versus the broader semiconductor and AI industry conditions?
III. What are the implications for other established companies in technology with products positioned in rapidly changing platform markets, based on the experience of Nvidia?

1.3 Overview of methodology

The research methodology which was adopted in this dissertation was based on a quantitative longitudinal case study approach. Nvidia is treated as the primary case, while AMD and Intel are used as benchmark peers to help distinguish specific firm patterns from wider industry effects. The analytical framework is a 360° financial statement analysis integrating the income statement, balance sheet, and cash flow. The empirical analysis is conducted through four main techniques: trend analysis, common size analysis, expanded ratio analysis including cash flow diagnostics, and integrated interpretation of the findings considering strategic and industry context. In addition, a limited amount of exploratory correlation and regression analysis is included as a supplementary and explicitly non causal layer of analysis.

1.4 Dissertation structure

The dissertation structure has seven chapters. Chapter 1 introduces the research topic, explains the background to the company's growth, presents the research questions and summarizes the methodological approach which was adopted in the study.

Chapter 2 reviews the academic and industry literature which is relevant to the dissertation. Examine the financial statement analysis, ratio analysis, cash flow measures, limitations of

the accounting ratios and the importance of the intangible assets. The chapter also positions the study within the semiconductor and AI industry context and identify the research gap which addressed by the study.

Chapter 3 presents the methodology. It explains the rationale for selecting Nvidia as the main case and AMD and Intel as the benchmark companies. It also distinguishes the analytical methods that are used in the study, including trend analysis, common size analysis, ratio analysis and cash flow diagnostics. It also distinguishes the data sources that are used to collect and validate financial information.

Chapter 4 provides the background of Nvidia and the industry in general that is required to interpret company's financial performance. It discusses the firm's strategic evolution, the position in the semiconductor value chain, the competitive environment and the regulatory factors.

Chapter 5 presents the empirical financial statement analysis for the period between 2015 and 2025. It examines Nvidia's revenue growth, profitability and liquidity. It also compares the company's performance to AMD and Intel to distinguish specific patterns of performance.

Chapter 6 shows the findings in relation to the literature, the research questions and the wider industry context. It interprets Nvidia's growth through financial, strategic and market explanations while also recognizing the limitations of the analysis.

Chapter 7 concludes the dissertation by summarizing the main findings, answering the research questions and presenting limitations and areas for future research.

2. Literature review

2.1 Section introduction

This chapter covers the literature that is relevant to the financial statement analysis, the dynamics of the semiconductor industry, the firm level competitive advantage and the financial implications of the ai driven growth. The purpose is to establish whether Nvidia's

performance reflects a temporary demand cycle, a broader semiconductor trend or a specific firm strategy and financial position. The chapter therefore connects accounting tools such as ratio analysis, trend analysis, common size analysis and cash flow analysis with the strategic management such as resources, capabilities and platform ecosystems.

2.2 Financial statement analysis in corporate finance

Financial statement analysis is a fundamental tool in corporate accounting and finance that offers structured methods for assessing performance, risk and value creation using publicly available information (White, Sondhi and Fried, 2003 & Penman, 2013). While the simplest form of financial analysis involves the income statement and balance sheet, most academic and professional frameworks advocate for financial analysis that integrate all three statements since each one of them provides unique insights into a firm's economic operations (Penman, 2013).

There are three forms of financial analysis that are commonly used.

Trend analysis focuses on the evolution of key items over time. This can include the use of fixed base indexing to portray long-term expansion and year on year growth rates to detect turning point. Trend analysis is useful when the intention is to describe how a firm's scale, profitability and financial structure change over a decade, rather than making a judgment in a single year (White, Sondhi and Fried, 2003).

Common size analysis standardizes financial statements so that income statement items are expressed as a percentage of revenue and balance sheet items are expressed as a percentage of total assets. Common size analysis is beneficial when a firm experiences rapid growth, since it reveals changes in the firm's structure (i.e., cost composition, margin profile, financing mix) that would be invisible in absolute terms (Penman, 2013). For example, two firms could experience similar growth, but one could exhibit cost discipline and margin expansion while the other exhibits growth through increased asset intensity or increasing leverage.

Ratio analysis reduces financial statements into indicators that can be compared across time and across firms. Ratios generally pertain to profitability, liquidity, leverage, efficiency and

market valuation. These categories are significant since they represent various aspects of a firm's financial condition: not only "is the firm profitable?", but also "what is the riskiness of the firm's funding structure?" and "to what extent do profits translate into cash?" (White, Sondhi and Fried, 2003 & Penman, 2013).

These tools are commonly applied in practice, however, academic literature is consistent in its assertion that analysis becomes significantly more informative when it is integrated, in other words, when results from trend, common size and ratio analysis are interpreted collectively rather than separately as individual lists of metrics. Integrated analysis is particularly necessary for high growth technological firms, since rapid change can create distortion in a single period comparisons and since accounting numbers may be affected by intangible investments and working capital dynamics.

2.3 Ratio Analysis in academic literature: performance, distress and returns

2.3.1 Ratios as indicators of performance

Ratios are often used as indicators to measure the performance of the company. The profit margins, return on assets (ROA) and return on equity (ROE) have been studied and show how the companies have revenue from sales, assets and equity. Furthermore, whether performance is primarily attributable to operational efficiency or to financial structure (Penman, 2013). For example, the DuPont framework is used to break ROE down into margin, turnover and leverage components. This is particularly relevant for a case like Nvidia, since the increasing profitability can arise from scale advantages and pricing power, but it can also arise from leverage or the way accounting classifies income.

2.3.2 Ratios and prediction of financial distress

The first and most influential application of ratios in literature was the prediction of financial distress. Beaver (1966) demonstrated that specific ratios (such as cash flow relative to total debt) can categorize firms that will eventually go bankrupt from firms that will not, years prior to the actual bankruptcy. Altman (1968) extended upon Beaver's findings by developing the Z-Score, which combines multiple ratios into a discriminant model to predict the likelihood of bankruptcy. Ohlson (1980) subsequently developed a probabilistic model based upon accounting variables. Although these studies focused on distress prediction, they

illustrate an important concept applicable to the dissertation at hand: ratios become increasingly meaningful when viewed collectively, rather than individually.

In the research context of Nvidia's, prediction is not the objective of this dissertation. However, the same reasoning applies when evaluating financial resilience. Leverage, liquidity and coverage measures are meaningful only when evaluated in conjunction with profitability and cash generation.

2.3.3 Ratios and stock returns / valuation

In addition to the above the research investigates whether accounting information can be used to explain stock returns. Ou and Penman (1989) discovered that financial statement analysis can produce signals that are predictive of subsequent returns, indicating that accounting information may contain information that is not explicitly reflected in prices. Piotrowski (2000) developed the F-score framework, demonstrating that simple financial statement signals can differentiate between strong and weak firms among valuable stocks. These studies suggest that indicators that are based on accounting can be connected not only to internal performance, but also to the expectations of the investor and to the valuation of the outcome.

For firms in the technological sector, the connection between accounting fundamentals and market valuation can be complex. High growth can cause investors to price heavily long run expectations, thereby causing traditional valuation ratios, such as the price to earnings (P/E) ratio, to be unstable and difficult to interpret without context (Penman, 2013). This supports the notion that valuation metrics should be approached with caution and evaluated in conjunction with fundamentals such as margins, investment intensity and cash generation.

2.4 Limitations of ratio analysis and the necessity of using cash flow based measures

The literature emphasizes that there are significant limitations associated with ratios. Firstly, ratio analysis generally deals with past performance. It does not inherently explain causality or future events. Therefore, ratio analysis requires contextual understanding of the conditions in the strategy and in the industry to properly interpret (Penman, 2013).

Secondly, ratios can be highly sensitive to accounting policies and classification decisions. Comparison between firms can be compromising when firms recognize revenue in different manners, capitalize or expense different items, or alter their financial reporting structures over time (White, Sondhi and Fried, 2003). This is particularly problematic for the technological sector where intangible investments are substantial and where accounting may underestimate or misrepresent value creation (Lev, 2001). When firms make substantial investments in R&D or ecosystem development, accounting regulations frequently require these expenditures to be expensed, which can reduce reported earnings in early stages despite creating long term value.

Thirdly, ratios can be distorted by temporary factors, including working capital fluctuations, unusual charges, or changes in stock compensation and tax items. Consequently, the literature on earnings quality emphasizes the importance of analyzing earnings in conjunction with cash flows.

A major theme in the research on earnings quality is that accounting earnings are comprised of cash flows and accruals. Dechow (1994) demonstrates that accruals enhance the temporal matching of revenues and expenses but also introduce errors in estimation and managerial discretion. Sloan (1996) demonstrates that the market may incorrectly price the accrual portion of earnings, implying that earnings composition is relevant to forecasting and valuation. Dechow and Dichev (2002) further contend that the quality of accruals depends on the degree to which accruals correlate with future cash flows.

Practically speaking, this literature provides support for the employment of indicators which are based in cash flow, such as:

a) Operating cash flow relative to net income (CFO/NI) - often used as a basic test of the "quality" of earnings.
b) Free cash flow (FCF) - used to determine a firm's ability to generate cash after meeting investment requirements.
c) Cash flow coverage measures (e.g. CFO divided by debt) - used to measure a firm's financial stability.

These measures are particularly pertinent for high growth firms. A firm can report strong profits and yet can have poor cash flow due to working capital requirements or the need for substantial investment. Conversely, good cash flow coupled with margin expansion provide

stronger evidence of sustainability. Accordingly, a dissertation that incorporates cash flows does more than replicate ratios: it assesses not only the level of performance, but also the quality and durability of that performance.

2.5 Intangibles, R&D intensity, and value relevance in technology firms

In this section it will be discussed how Nvidia's financial report reveals the company's intangible investment in areas such as architectural innovations, software stacks and related complementary capabilities. It is known from academic literature that companies who are in the technological industry make large expenditures to build intangible assets, mostly in the form of research and development (R&D), software development and ecosystem building activities. All of that in hope to generate future economic benefits. However, because these expenditures are currently accounted for as expenses on the income statement, there is a potential disconnect between the timing of investment and the reporting of earnings, making some conventional measures of financial performance less informative about the nature of the firm's investment profile.

Knowing that, this study will analyze the extent to which Nvidia's financial reports reflect its investment in intangible assets and evaluate the degree to which those expenditures are generating returns. Academic research has shown that R&D is economically asset. Studies have demonstrated that capitalizing R&D (or using other methods to capitalize the future economic benefits generated by R&D) improves the ability to predict a firm's stock price and therefore captures the firm's true asset base (Lev and Sougiannis, 1996). Other researchers have examined the relationship between R&D intensity and stock market outcomes and found that R&D is a significant predictor of future earnings, suggesting that R&D is more than simply a discretionary operating expense (Chan, Lakonishok and Sougiannis, 2001).

The same line of research has extended the idea of "intangible capital" to encompass not only R&D but all forms of nonphysical capital including marketing, brand recognition, human capital, etc. (Peters and Taylor, 2017). Peters and Taylor demonstrate that accounting for intangible capital can alter significantly the way someone views a firm's profitability and valuation. When a firm's investment in intangible assets is recognized as economically significant, two implications follow for interpreting ratio analysis. Firstly, efficiency

measures which based on assets such as asset turnover and ROA may appear to be either overly strong or weak due to the fact that they do not take into account the significant portion of the firm's "true" capital base that is missing from book assets. Second, the differences which appear to be in profitability among firms may be at least in part the result of differences in accounting treatment of investment, not simply different levels of economic performance.

Therefore, in lieu of attempting to completely restate Nvidia's accounts, this dissertation seeks to develop an understanding of the firm's financial performance that is cognizant of its investment in intangible assets. Specifically, this dissertation will track the firm's R&D intensity (i.e., R&D as a percentage of sales) as a contextual indicator of the firm's level of investment in intangible assets alongside measures of the firm's margins and cash flow performance. Furthermore, the inclusion of cash flow measures in this study supports the idea that cash flows provide a complimentary view of a firm's long run financial sustainability and provides a means of evaluating whether the firm's profitability is supported by positive cash flow generation (Dechow, 1994; Dechow and Dichev, 2002).

2.6 Linking corporate finance to strategy: resources, capabilities and platforms

To understand the financial performance of a company, it is necessary to link the accounting outcome to strategic explanations. Firms attain sustained competitive advantage when they possess resources and capabilities that are valuable, rare, difficult to imitate and organizationally supported (Barney, 1991). In rapidly evolving technological markets, firms must be capable of sensing opportunities, seizing them through investment and execution, and transforming their resources base over time (Teece, Pisano and Shuen, 1997 & Teece, 2007).

In addition, strategic literature gives emphasis on the importance of examining a firm's ecosystem as a source of competitive advantage (Gawer and Cusumano, 2014 & Jacobides, Cennamo and Gawer, 2018). When an ecosystem becomes standardized, it can generate network effects that support the pricing power, the scale economies, and the sustain profitability.

For this study, strategic literature is relevant because it provides a conceptual framework for understanding the relationship between Nvidia's financial findings and its strategic positioning in the technological sector. The literature highlights the possibility that:

a) Nvidia's margins will rise as it gains more pricing power through leadership.
b) Nvidia's operating cash flow will remain strong as platform scale reduces incremental costs.
c) Nvidia's balance sheet will be strong as profits are retained and reinvested in R&D and ecosystem expansion.
d) Nvidia's resilience will be enhanced strongly as liquidity and cash generation enable continued investment through shocks.

While financial measures show "what happened," the strategic literature explains "why it has happened."

Therefore, this dissertation will link these two and provide a insightful review of the firm's history than a simple financial summary of the firm's performance.

2.7 Semiconductor and AI industry context

Nvidia's financial performance cannot be evaluated without consideration of the overall context in the industry of semiconductors and AI. Semiconductors are generally regarded as being the main subject to cycles of boom and bust, shaped by inventory dynamics, changes in capacity, and fluctuations in demand across various end markets (Aubry and Renou Maissant, 2014). During the timeframe 2015–2025, the industry of semiconductors was influenced by the increasing demand and importance of advanced computer chips and accelerators in support of AI and data center applications. The result was the significant shift in profit pools to a selected group of firms located in leading edge design and manufacturing ecosystems (McKinsey & Company, 2025). Therefore, a small number of firms capture a disproportionate share of economic profit (McKinsey & Company, 2025).

The context of the industry is relevant to the evaluation of Nvidia's financial performance because it influences the mechanisms through which strategy translates into financial performance. For example, the increasing demand for high end accelerators required to process AI workloads. This phenomenon can drive both increases in revenue and margin for leading suppliers of those accelerators (McKinsey & Company, 2025).

Also, the supply chain constraints in advanced manufacturing and packaging can limit the delivery of products. The impact was the pricing and the influence on working capital requirements (McKinsey & Company, 2025).

Last but not lease the regulatory restrictions such as export controls can restrict access to new markets, introduce risk, and potentially affect the growth rates of segments, the geographic distribution of sales, and the forward looking guidance provided by management (BIS, 2022 & BIS, 2023 & GAO, 2024).

Therefore, simply stating that Nvidia grew is insufficient to adequately describe the firm's experience. To properly understand how growth occurred (through what product lines), whether profitability is sustainably supported (common size cost structure), and whether performance is sustainable (cash conversion, FCF, liquidity and leverage), the industry literature suggests that we should investigate how growth occurred, how profitability is sustained, and how performance is maintained.

2.8 Research gap and dissertation contribution

There is limited direct academic research on Nvidia, however, the firm is frequently referred in case and industry analyses as an exemplary of platform leadership in AI computing. The main argument is that Nvidia's competitive advantage is not merely the result of its superior GPUs, but also the development of the ecosystem.

Additionally, widely industrial economic analyses often identify Nvidia as a leading outlier in semiconductor during the AI cycle, and therefore, the need for a detailed financial statement based assessment of the manner in which growth, margins, cash conversion and balance sheet structure evolve over time is motivated (e.g., Vendrell Herrero, Vaillant and Bustinza, 2025; McKinsey & Company, 2025).

Although existing researches focus on technology leadership or competitive narratives, empirical financial analysis is typically confined to short windows or to standard ratio summaries. This is the gap that this dissertation addresses.

Therefore, this dissertation is intended to contribute in three specific ways:

a) A 360° financial statement analysis over a ten year window. Unlike most of the previous research that relied primarily on ratios, this dissertation will utilize trend analysis, common size statements, and cash flow diagnostics to evaluate the

financial performance of the company. (Penman, 2013 & White, Sondhi and Fried, 2003).

b) Earnings quality and sustainability through cash flow measurements. By incorporating cash flow indicators (CFO/NI, FCF, coverage ratios), the dissertation will assess whether Nvidia's profitability is supported by positive cash flow generation and thereby reflects insights from the earnings quality literature (Dechow, 1994; Dechow and Dichev, 2002 & Sloan, 1996).
c) Strategic management interpretation. The dissertation will interpret financial trends within the framework of strategic management theory. It will seek to explain how firm's strategic positioning in the technological market and how the forces which drive the semiconductor and AI industry translate into financial outcomes. Therefore, the theories of corporate finance and strategic management will explain the results of Nvidia's growth over this decade.

2.9 Conceptual framework for analyzing Nvidia's performance

In this study we will use literature to develop a conceptual model comprising of three interlinked dimensions:

Firstly, corporate financial layer which encompasses measurements of both the level of performance and the stability of the financial health of the company (i.e. profitability, liquidity, gearing/capital structure and cash flow) (Penman, 2013).

Secondly, the strategic layer which is focused on the resources, capabilities and ecosystem positions of Nvidia that provide with potential sustainable competitive advantages such as pricing power and scale economies (Jacobides et al., 2018; Barney, 1991).

Thirdly, context layer, which is focused on the AI market dynamics, including: AI demand growth, supply chain constraints, competition, regulatory environment etc. These factors determine both the risk profile and opportunity set available to Nvidia, and consequently affect the nature of its revenues, margins, working capital and cash flows.

This model provides the methodological foundation for Chapter 3 and supports a comprehensive 360 degree analysis of the factors what influence the performance of Nvidia

(strategic and industry) and identifies patterns that can be explained by its strategy and industrial environment.

3. Methodology

3.1 Background

In this chapter provides an overview of the analytical framework which will be used to evaluate the financial and economic development of NVIDIA from 2015 through 2025. The methodology for this dissertation will be a comprehensive (360°) financial analysis based on the income statement, the balance sheet and the cash flow statement as a single diagnostic tool.

The empirical analysis is structured around four different dimensions: trend analysis using calculations with fixed base and moving base analysis, common size analysis of the income statement and balance sheet, expanded ratio analysis that includes measures based on cash flow and an integrated interpretation, which links the financial outcomes to strategic and industry drivers.

A limited exploratory correlation and regression component is included only as supplementary descriptive check. It is not used to establish causality, but to increase the level of analytical detail of the work by investigating whether key Profitability outcomes move systematically in relation to plausibly related variables such as R&D Intensity, Leverage, and Business Mix Indicators (Kothari, 2001).

3.2 Research design

The dissertation follows quantitative longitudinal research design, where Nvidia is the primary case and AMD and Intel are the benchmark peers. The design is characterized as quantitative since the dissertation depends on numerical data, and longitudinal since it monitors changes over this ten year period, instead of a single cross section.

This design fits well since the study aims to provide insight information on how Nvidia's financial profile changed from being a gaming company which focused on GPU to a leading provider of the AI and data center acceleration. The longer term design enables the

evaluation of both structural change and short term turning points that could be masked within shorter periods.

3.3 Case selection and benchmarking

3.3.1 Why Nvidia?

Nvidia was chosen as the primary case because it illustrates an example of strategic transformation within the technological sector. Specifically, Nvidia has experienced a significant strategic shift in the past decade from focusing primarily on manufacturing gaming GPUs to becoming a leading player in the AI and data center markets. From a perspective of strategic management, transformations of this nature are typically attributed to the creation and reconfiguration of valuable capabilities and ecosystems (Barney, 1991 & Teece et al., 1997). Therefore, the dissertation sees Nvidia as an academically relevant case that illustrates how strategic repositioning would be reflected on financial statements through changes in margins, cash generation, investment capacity, and balance sheet structure.

3.3.2 Why AMD and Intel as peers?

AMD and Intel were selected as benchmark peers of Nvidia due to their analytical utility for assessing whether Nvidia's performance in the last decade reflects on firm capabilities or industry wide semiconductor dynamics. AMD is the closest benchmark peer to Nvidia with respect to business model and product architecture. Both AMD and Nvidia are fabless semiconductor designers that rely on third party foundries and compete in several segments including GPUs, AI accelerators, data center computing and gaming graphics. Intel is not as close as AMD in terms of business models, however it is an important benchmark peer because it is a major incumbent in computer and data center infrastructure, competes across CPUs. Products like GPUs and accelerators are part of Nvidia's wider competitive set. In total AMD and Intel cover the main market segments that are relevant to this dissertation while also providing contrast between a nearer product peer and a larger incumbent platform rival. These firms therefore were used as analytical benchmarks rather than as perfectly comparable peers. While comparability is far from perfect, AMD's business model is relatively close to that of Nvidia. However, the business models differ because Intel is a lot more vertically integrated and has much greater exposure to CPUs and its foundry business. Additionally, the companies' fiscal years, their segment reporting and their business mix do

not have the same characteristics. Therefore, AMD and Intel are considered as analytical benchmarks peers instead of being treated as exactly like for like peer comparisons.

3.4 Horizon: 2015–2025

The study examines the period of 2015 – 2025 since it captures the majority of Nvidia's financial evolution in a driven AI strategy. The ten year time horizon is sufficient to evaluate structural trends in revenue composition, profitability and cash flow generation, while still allowing the identification of disruptive events and turning points. The time horizon also supports fixed base trend analysis and moving base trend analysis and provides a reasonable foundation for cautious exploratory statistical checks.

3.5 Data sources

This research uses only secondary data. The sources are the audited annual report (Form 10-K) filings of NVIDIA, AMD and Intel. These filings contain the most reliable figures for revenue, operating income, net income, total assets, total equity, liabilities, operating cash flow, and capital expenditures. Where it was possible, financial databases such as Yahoo Finance were consulted for a limited range of variables which are based on market including, but not limited to, price per share, market capitalization, and the valuation ratios. Databases were also referenced to cross check specific numbers.

When using an external database for efficiency or validation, all figures were compared to the original audited filing. If there was a discrepancy, the figure from the original audited filing was treated as the most reliable number. All figures representing dollar amounts are in US dollars and represent billions where applicable. Measures of percentages will be presented consistently for each period. Free cash flow is defined as operating cash flow minus capital expenditure, and capital expenditure represents the line item "purchases of property and equipment" or equivalent from the cash flow statement. It is acknowledged that this study has limitations with respect to comparability due to variations in fiscal year timing, segment reporting, and business mix among firms.

3.6 The 360° financial statement analysis framework

This dissertation applies ratio analysis, trend analysis, common size analysis and cash flow analysis as complementary financial statement analysis techniques. These tools are widely

used in academic and professional financial analysis because they allow the analyst to assess performance, liquidity, solvency, efficiency and cash generation capacity over time and across firms. However, the ratios are not interpreted mechanically. They are interpreted together with trend evidence, common size evidence and the strategic and industry context developed in chapter 4.

3.6.1 Trend analysis

Trend analysis is utilized to evaluate both the directional change of a variable over the longer term, as well as any short term turning points. To achieve this objective, two complementary methods are applied: Firstly, the fixed base trend analysis where a base year (2015) is established as equal to 100, then key variables are expressed as an index relative to the base year 2015. Secondly, the moving base trend analysis where year on year growth rates are calculated.

Key items include revenue, operating profit, net income, operating cash flow, free cash flow, total assets, total equity and total debt. By using both methods, the study can identify persistent change, rather than temporary fluctuations. (White, Sondhi and Fried, 2003)

3.6.2 Common size analysis

Common size analysis is utilized to evaluate the structural components of a firm's financial position, rather than its scale:

Firstly, Common size income statements express each item as a percentage of revenue (i.e. cost of revenue, R&D, SG&A, operating income).

Secondly, Common size balance sheets express each item as a percentage of total assets (i.e. cash and investments, receivable, inventory, debt, equity).

Common size statements are prepared for selected years (i.e. 2015/2016, 2020, 2023 and 2025) for Nvidia, and at least one or two years for AMD and Intel, to support peer comparison. (Penman, 2013)

3.6.3 Expanded ratio analysis including cash flows

Ratio analysis is conducted in standard categories (profitability, liquidity, leverage, efficiency, based on market), and is explicitly extended to include cash flow diagnostics.

Standard ratio sets include:

a) Profitability: gross margin, operating margin, net margin, return on assets (ROA), return on equity (ROE)
b) Liquidity: current ratio, quick ratio
c) Leverage: debt/equity, debt/assets, interest coverage (where available)
d) Efficiency: asset turnover and optional working capital ratios (if data quality supports)
e) Based on market: price to earnings (P/E) ratio and market/book value ratio (interpreted with caution)

Core additions to the standard ratio sets include:

a) Cash flow based measures: CFO/NI (as a basic earnings quality indicator), CFO/EBIT (as a cash conversion measure), free cash flow (FCF) (defined as operating cash flow minus capital expenditure (Capex), FCF/NI and FCF margin (FCF/revenue)
b) Optional coverage measures such as CFO/debt or FCF/debt where appropriate.

Capital expenditure (capex) is taken consistently from the cash flow statement line item "purchases of property and equipment" (or equivalent), with sign conventions treated consistently across years and firms. These measures are incorporated since earnings may appear strong even when cash conversion is weak, and academic literature places emphasis on cash flows as critical indicators of sustainability (Dechow, 1994, Dechow and Dichev, 2002).

3.6.4 Integrated interpretation

To avoid generating a "Database report", the findings that are interpreted are using an diagnostic logic instead of a standalone list of ratios. Specifically, the dissertation triangulates profitability outcomes (margins, ROA/ROE), structural drivers (common size statements), resilience indicators (liquidity and leverage), and sustainability indicators (CFO/NI, FCF metrics). This enables a more critical discussion of strengths, risks and strategic implications, whether improved profitability is supported by cash generation and balance sheet strength, and whether the firm appears able to fund R&D and growth without unacceptable dependence upon external financing (Penman, 2013 & White et al., 2003).

3.7 Use of digital tools and AI assistance

Generative AI tools, including ChatGPT, were used only to support language editing, structure refinement and clarity checking. They were not used as sources of financial data, to generate numerical results, to fabricate citations, or to determine the dissertation's analytical conclusions. All financial data were obtained from audited company annual reports, form 10K filings, and other cited sources. Where external financial databases were consulted, the figures were checked against original company filings. All tables, figures, calculations, references, and interpretations were reviewed by the author, who remains fully responsible for the accuracy, originality, and academic integrity of the dissertation.

3.8 Reliability, validity and ethics

The reliability of the data is enhanced by the fact that the data were taken from audited filings, several important figures were cross checked with the data that are available in external databases. The validity of the data is enhanced using well established financial statement analysis tools (trend analysis, common size statements, ratio analysis and cash flow analysis/diagnostics) that are widely used in accounting and finance research (Penman, 2013). In terms of ethics, there is little ethical risk since the data are publicly available and do not involve human subjects, and the major ethical consideration is providing accurate reporting and properly citing references.

4. Background of the company and industry (2015–2025)

4.1 Corporate overview and strategic evolution of Nvidia

4.1.1 From GPU specialist to computing platform

Nvidia was established in 1993 and developed its position in manufacturing graphics processing units (GPUs) based on demand from PC gamers. As time progressed, the position of Nvidia in the market has greatly increased. Today the company describes itself as providing computing platforms that combine processors, interconnects, software, algorithms, systems and services across four major markets: data center, gaming, professional visualization, and automotive (Nvidia Corporation, 2025).

A distinguishing feature of the strategic evolution of Nvidia is that the current business model is not described as the company that sells only chips. Rather, it is described as selling

a complete wide variety of things, consisting of hardware (GPUs and other processors), networking, and software layers designed to improve the execution of complex workloads (specifically AI and high performance computing). Nvidia explicitly identifies that its platform encompasses more than just GPUs, including DPUs (data processing units) and CPUs and emphasizes a common underlying architecture and a software ecosystem centered on CUDA (Nvidia Corporation, 2025 & Cusumano, 2024).

This description of a "platform" by Nvidia reflects the recent literature in strategic management concerning scalability and advantages in technological sectors as increasingly being associated with the positioning within an ecosystem, the complementarities among components of the platform, and the ability to coordinate innovation across layers of hardware and software. Recent studies have identified Nvidia as a case study regarding scalability in an incumbent firm undergoing AI driven transformation, thereby reinforcing the necessity of considering Nvidia as more than simply a traditional semiconductor manufacturer (Gawer and Cusumano, 2014 & Jacobides, Cennamo and Gawer, 2018 & Vendrell-Herrero, Vaillant and Bustinza, 2025).

4.1.2 Capability expansions (networking, systems, enterprise software)

The shift of Nvidia towards data center computing is related not only to the improvements in GPU performance, but also to expanding capabilities in networking and systems. A major milestone was the acquisition of Mellanox Technologies that happened in 2020. A leading supplier of high performance end to end interconnect solutions. Nvidia claims it allowed it to expand the boundaries of its innovation scope into networking and enable data center scale platforms. Nvidia also associates this with the introduction of DPUs as a new class of processors (Nvidia Corporation, 2015-2025 & Nvidia Corporation, 2025).

These developments are relevant to the dissertation because they suggest that the financial statement outcomes of revenue and margin growth will increasingly reflect on solution level value capture (systems + software + networking) rather than a simple commodity chip cycle. The financial statement implications of this are: firstly, segment mix will change, secondly, there may be higher gross margins if the platform solutions that are differentiated are dominant, and thirdly higher operating expenses due to ongoing R&D, compute infrastructure and product development expenditures (Nvidia Corporation, 2025 & Cusumano, 2024).

4.1.3 Ecosystem and route to market approach

Nvidia's reporting also highlights ecosystem size. It describes its platforms as being available through major cloud service providers and server manufacturers and it explicitly highlights a large community of developers that are utilizing CUDA and related software tools (Nvidia Corporation, 2025).

From a commercial standpoint, Nvidia indicates that its direct customers include original equipment manufacturers (OEMs), original design manufacturers (ODMs), system integrators and distributors, supported by a large community of partners (including cloud providers, independent software vendors, add in board manufacturers, and global system integrators) (Nvidia Corporation, 2025).

This is relevant to the analytical work presented herein because an ecosystem route to market can provide benefits and risks. On one side, the breadth of the platform can provide support for demand and switching costs. On the other, the concentration of revenue and reliance on a small number of partners (primarily the hyperscale’s) increases exposure to customer purchasing cycles and the bargaining power of those partners. These issues will be addressed further in subsequent chapters of the dissertation relating to the financial statements and discussions (Nvidia Corporation, 2025 & Gawer and Cusumano, 2014 & Jacobides, Cennamo and Gawer, 2018).

4.2 Segment structure of the revenue of Nvidia

4.2.1 The reported segments and market categories of Nvidia

Nvidia reports its business results in two reportable segments:

Firstly, compute & networking which includes data center accelerated computing platforms, AI solutions and software, networking, automotive platforms, Jetson for robotics/embedded platforms, and DGX cloud services (Nvidia Corporation, 2025).

Secondly, graphics that cover GeForce GPUs, gaming infrastructure and services, workstation GPUs, related software, omniverse enterprise software, and some automotive infotainment solutions (Nvidia Corporation, 2025).

Nvidia separately defines its addressable markets in four major categories: a) data center, b) gaming, c) professional visualization, and d) automotive and provides a description of the demand of drivers and offerings of each category (Nvidia Corporation, 2025).

Table 4.1 provides a brief mapping between the segment reporting of Nvidia and the market categorization (for reference in Chapter 5 when analyzing segment mix and drivers).

Table 4.1: Nvidia segment and market structure (conceptual mapping)

Reportable segment	Main markets / offerings discussed by Nvidia
Compute & Networking	Data center platforms (compute + networking + software/services), AI enterprise software, networking (InfiniBand/Ethernet), DGX Cloud, automotive platforms, Jetson/embedded
Graphics	Gaming GPUs and services, professional/workstation graphics + software, omniverse enterprise / digital twin software, some automotive infotainment

Source: Author's mapping based on Nvidia's own segment descriptions and market disclosures in its FY2025 Form 10-K (Nvidia Corporation, 2025).

4.2.2 Data center

Nvidia describes its data center platform as having the primary focus of accelerating compute intensive workloads (AI, analytics, graphics, scientific computing) and being deployed across cloud, on premises, hyperscale, and edge data centers. It states that the platform incorporates both compute offerings (GPUs/CPUs, AI/HPC software stacks, systems) and networking offerings (adapters, DPUs, switch systems, and software) (Nvidia Corporation, 2025).

In its FY 2025 summary, Nvidia states that data center revenue grew at a strong year over year rate and directly attributed demand to AI workloads (including large language models) and its architecture roadmap (Hopper and Blackwell). Nvidia also states that the increase in gross margin in FY 2025 was due to the greater proportion of data center revenue (Nvidia Corporation, 2025).

For later financial statement interpretation, the critical aspect is that increasing proportions of data center revenue can reasonably be associated with (Nvidia Corporation, 2025 & McKinsey & Company, 2025):

a) Faster top line growth (due to the investments in AI by hyperscalers and enterprises).

b) Higher gross margins (if data center products and systems generate higher gross margins) and
c) Greater working capital commitment and supply chain risk (if there are long lead times and capacity constraints).

4.2.3 Gaming and professional visualization

NVIDIA continues to state that its gaming business is significant but is more sensitive to consumer and PC cycle fluctuations. Additionally, Nvidia states that there are seasonal fluctuation patterns in desktop gaming products (Nvidia Corporation, 2025).

Nvidia's professional visualization business is described in relation to workstation class GPUs and enterprise use cases (design, simulation, and increasingly generative AI enabled workflows). The FY 2025 discussion by Nvidia states that this area has experienced growth as well, primarily due to workstation GPU ramps and generative AI enabled design and simulation use cases (Nvidia Corporation, 2025).

Analytically, these areas are important for two reasons. First, they contribute to the diversity of revenue relative to a pure data center supplier. Second, their cyclical nature and transitions of products can produce volatility in quarter by quarter or annual trends of revenue and inventory management (particularly surrounding new GPU architectures) (Nvidia Corporation, 2025).

4.2.4 Automotive and embedded

Nvidia positions automotive around an end to end hardware and software approach (drive platform), including simulation via Omniverse tools and the ability to update vehicles over the air across all vehicle life cycles. It also highlights partnerships with automotive OEMs and Tier 1 suppliers (Nvidia Corporation, 2025).

The financial implications of this are that automotive is generally longer cycle (design wins and multiyear platforms). That often implies slower recognition of revenue compared to data center, but potentially more stable contract pipelines after adoption have occurred. It can also mean that the working capital characteristics and R&D intensity differ due to safety and qualification requirements (Nvidia Corporation, 2025).

4.3 Nvidia in the semiconductor value chain and operating model

Nvidia states clearly that it employs a fabless and contract manufacturing strategy to have suppliers provide wafer fabrication, assembly, testing, and packaging. According to the company, this way of doing business reduces the costs and risks associated with the ownership of manufacturing operations and enables a focus on design, quality assurance, marketing, and customer support (Nvidia Corporation, 2025).

Nvidia's public disclosures indicate key elements of the supply chain and partners, including:

a) Foundries (such as TSMC and Samsung) for wafer production,
b) Suppliers of memory (SK Hynix, Micron, and Samsung),
c) CoWoS technology for semiconductor packaging, and
d) Subcontractors (or contract manufacturers) who perform assembly, testing, and packaging.

There are clearly significant financial implications for Nvidia's operating model. Firstly, Nvidia's profitability is driven not just by the price of its products and their demand, but also by the cost of supplies at a satisfactory level of quality and quantity. Secondly, binding constraints to growth in revenue exist in the areas of foundry capacity, advanced packaging, and high bandwidth memory, even during periods of strong demand. Thirdly, the management of working capital (prepayments, purchases commitments, etc.) and cash flows becomes particularly critical to the assessment of the balance sheet and cash flows of the company (Nvidia Corporation, 2025 & SIA, 2025 & McKinsey & Company, 2025).

4.3.1 Capacity commitments, inventory risk, and product transitions

As part of its filings, Nvidia points out that in periods of strong growth it may place non-cancellable orders, pay premiums, or make deposits to ensure future supply and capacity. Additionally, Nvidia emphasizes that its supply chain is primarily located in the Asia Pacific area (Nvidia Corporation, 2025).

Nvidia also notes potential risks related to product transitions and architecture cadence. It emphasizes that there is a greater transition of products in data center and that the cadence of launches of new products will expand to meet the rapidly evolving needs of AI users. However, the faster pace of product transitions, according to Nvidia, leads to more revenue volatility and more difficulty in managing inventories (Nvidia Corporation, 2025).

Later chapters will provide a basis to interpret changes in:

a) Inventories and the provisions for inventories,
b) Movements in workings capital,
c) Cash flow conversion (cash flow from operations relative to net income),
d) Prepaid amounts and long term supply agreements that can reduce the availability of free cash flow and liquidity.

4.4 Competitive landscape and dynamics

4.4.1 Competition

Nvidia emphasizes that its markets are characterized by intense competition and rapid technological advancements, changing standards, and competition that is based upon performance, breadth of offerings, software support, manufacturing capabilities, total system costs, and access to customers and distribution channels (Nvidia Corporation, 2025).

Nvidia identifies its competitors as follows: First as accelerated computer suppliers (including firms offering GPUs, CPUs, DPUs, and AI processors) such as AMD, Intel, and others. Second, as large cloud service companies that develop internal hardware and software platforms (for example, large hyperscalers), and third as networking competitors (switches, adapters/DPUs, cables/optics) across both traditional networking companies and internal development by large system vendors (Nvidia Corporation, 2025 & Advanced Micro Devices, Inc., 2025 & Intel Corporation, 2025).

This provides an important backdrop for the dissertation as it suggests that a competitive advantage of Nvidia cannot simply be measured by comparing it to "chip competitors." Rather, the relevant competitive group includes: (i) competing accelerator chips, (ii) competing systems, (iii) competing software stacks and developer tools, and (iv) alternatives from internal customer designs (Nvidia Corporation, 2025 & Advanced Micro Devices, Inc., 2025 & Intel Corporation, 2025).

4.4.2 Why software and ecosystems matter in this setting

One additional commonality across Nvidia's reporting is the importance of software and a developer ecosystem (CUDA, libraries, enterprise software suites).

Research on platforms and ecosystems suggests that companies can strengthen their advantages when they form a foundation on which complements are built and when switching costs increase. Consistent with this perspective, Nvidia's disclosures regarding its developer ecosystem and full stack approach can be interpreted as evidence of this type of platform logic (Gawer and Cusumano, 2014 & Jacobides, Cennamo and Gawer, 2018 & Nvidia Corporation, 2025).

At the same time, however, it is also important to avoid overstating this as a permanent moat. Ecosystems can be challenged (through open standards, customer vertical integration, or alternative stacks), and competition can accelerate when profit pools become unusually large. These considerations provide a useful backdrop for assessing valuation and risk: large margins and rapid growth can be accompanied by increasing expectations and more competitive reactions over time (Cusumano, 2024 & Advanced Micro Devices, Inc., 2025 & Intel Corporation, 2025 & McKinsey & Company, 2025).

4.5 Semiconductor and AI industry context, 2015–2025

4.5.1 The semiconductor cycle and the AI demand shock

The semiconductor industry is typically cyclic due to inventory adjustments, capacity additions, and fluctuations in demand across end markets. A recent study of industry also suggests that it underwent a downturn following 2022 and that the recovery has been uneven. McKinsey's 2025 review (McKinsey & Company, 2025) discusses how overall industry trends can appear very differently, depending on whether Nvidia is included or not, suggesting that the growth of demand for applications based on AI has been very concentrated (McKinsey & Company, 2025).

This is important to consider in the dissertation since it implies that it is essential to assess Nvidia's performance relative to careful benchmarks. For example, if industry demand was soft in certain areas during portions of the time frame under consideration, but Nvidia performed well during those periods, that supports the notion that there were firm specific strategic and product factors at play. On the other hand, if peers showed comparable patterns, then industry cycles may have accounted for a larger proportion of the variability in performance (Aubry and Renou-Maissant, 2014 & McKinsey & Company, 2025).

4.5.2 Concentration of value creation

An important characteristic of the 2015-2025 period is the increasing concentration of economic profits in the hands of a limited number of semiconductor firms. (McKinsey & Company, 2025) McKinsey's study of the semiconductor industry describes a "steep" power curve, where the top 5% of firms captured virtually all the economic profits in 2024. Specifically, McKinsey identified Nvidia as one of the top value creators in the industry.
Additional to McKinsey analysis the Global Institute also identified Nvidia as having exceptionally high economic profits in 2024, within a broader examination of competitive arenas.
These studies provide a rational justification for focusing on a single case study of one of the most successful value creators in a ten year period. If the concentration of value creation has reached extremely high levels, then a case study of a firm that is a leader in the current wave of concentration is highly relevant for understanding how strategy, ecosystem positioning, and financial outcomes can reinforce another one in intense AI markets.

4.5.3 Data center build out as a driver of demand

Nvidia's disclosures emphasize that demand for its products comes primarily from cloud service providers and companies with internet consumers that use accelerated platforms for AI applications (such as foundation models and recommendation systems) (Nvidia Corporation, 2025).

Industry studies also indicate that the growth of AI has redirected the demand and investments of the semiconductor supply chain to benefit firms which are exposed in AI and to burden those that are not exposed to AI. McKinsey's description of AI as channeling investments and demand toward a select subset of suppliers forecasts substantially higher growth rates for AI exposed semiconductor firms compared to non AI segments through 2030 (McKinsey & Company, 2025 & SIA, 2025).

From a financial analytical perspective, the implications of the data center build out are that scale can manifest itself as (Nvidia Corporation, 2025 & McKinsey & Company, 2025):

a) Rapid increases in revenue,
b) Margin expansions (if the company maintains pricing power and continues to improve its product mix), and

c) Large working capital and supply chain commitments (as long as supply constraints and lead times are meaningful).

4.6 Regulatory and geopolitical environment (with emphasis on export controls)

4.6.1 U.S. export controls on advanced computing: timeline and relevance

The ten year time frame also includes a significant regulatory shock for the AI hardware market which is the growing U.S. export controls on advanced computing and semiconductor related technologies (BIS, 2022 & Federal Register, 2022 & BIS, 2023 & Federal Register, 2023).

Official documentation from the U.S. government describes major actions on export control initiated by an interim final rule on October 2022 and subsequent updates (including October 2023 measures) intended to restrict exports of advanced computing integrated circuits and related items to China and other countries (BIS, 2022 & BIS, 2023). Oversight analyses published by the U.S. government also document the ongoing evolution of these controls after October 2023, indicating that the framework governing these controls has not been static (GAO, 2024).

4.6.2 Firm level exposure and response to export controls

Nvidia's FY2025 filing with the securities and exchange commission provides a firm level view of how the export controls impacted its operations. According to Nvidia, it has faced increasingly restrictive and expansive export restrictions over the last three years that have made it difficult for it to serve customers outside of the U.S. Nvidia further states that it has had to deal with licensing requirements for exports to China (including Hong Kong and Macau) and other designated country groups, and that specific product families have been subject to these requirements (Nvidia Corporation, 2025).

Additionally, Nvidia indicates that it developed new data center products that do not require a license or advance notice for each shipment, and that it developed products specifically for sale in China. Generally, it saw an increase in data center sales in FY2025, but that data center sales in China remained below levels prior to the imposition of export controls as a percentage of total data center sales (Nvidia Corporation, 2025).

These statements by Nvidia provide a basic assumption that export controls will have impact on the following:

a) Geographic composition of revenue and segment mix,
b) Risk factors disclosed by the company and potentially revenue volatility,
c) Product mix (and therefore margins), and
d) Working capital and inventory (as product redesign and routing can cause issues in supply planning).

4.7 Connecting the background to expected financial statement patterns

The primary purpose of this chapter was to make the subsequent financial analysis more meaningful by establishing ahead of time what business model and conditions in the industry may look like in the accounts. In this regard, table 4.2 provides a practical summary of these relationships.

Table 4.2: Business/industry drivers and likely financial statement "signatures" (conceptual guide)

Driver discussed in Chapter 4	**Likely to appear in...**	**Examples of "what to look for" in chapter 5**
Shift toward data center / AI infrastructure demand	Income statement, segment mix, margins	Higher revenue growth, higher gross margin if data center mix rises, higher operating income
Expansion to networking, DPUs/CPUs, systems and software	Revenue composition, operating expenses, cash flows	Rising opex (R&D/engineering, computing infrastructure), stronger margins if solution value capture increases
Fabless model & reliance on foundries/packaging/memory	Balance sheet, cash flow, risk disclosures	Inventory swings, prepayments, purchase commitments, working capital volatility, cash conversion patterns
Faster product/architecture cadence	Income statement volatility, inventory, cash flows	Periods of revenue volatility, inventory provisions, temporary margin effects around transitions
Customer concentration and hyperscaler demand cycles	Revenue growth, receivables, risk factors	Large changes in receivables, sensitivity of revenue growth to cloud capex cycles
Export controls and shifting geopolitical rules	Geographic revenue, product mix, disclosures	China revenue share changes, product mix adjustments, increased compliance/risk disclosure, potential volatility

Source: Author's synthesis based on Nvidia, AMD and Intel annual reports/form 10-K filings and cited industry and regulatory sources.

This table does not intend to establish causation as to why certain financial metrics will change in response to changing underlying conditions in business and in industry. Rather, the table establishes a structured framework for understanding why financial metrics change in response to changes in the underlying business and industry conditions. The linkages described above were established based on Nvidia's own disclosures regarding their business model, supply chain, and regulation exposures and industry analysis regarding AI driven concentration and cyclical trends in the semiconductor/AI industry between 2015 and 2025 (Nvidia Corporation, 2025 & SIA, 2025 & McKinsey & Company, 2025 & BIS, 2022 & BIS, 2023 & BIS, 2024 & GAO, 2024).

5. Results of financial statement analysis (2015-2025)

The findings of this study will be presented in this chapter through an empirical financial statement analysis for Nvidia and compare it with AMD and Intel for the years 2015 – 2025. The primary focus of this chapter is on identifying the patterns that will be reported by liquidity, profitability and the capital structure analysis. The interpretation is descriptive in nature and the relationship between the financial patterns, the strategic and industry contexts will be examined in detail in Chapter 6.

5.1 Data sources, conventions and analytical logic

Unless otherwise stated, all amounts will be expressed as U.S. dollars in billion ($B) while ratios and growth rates will be expressed as percentages %.

The primary financial data were extracted from the audited annual reports and Form 10-K filings that were provided by the companies that included in the study. These filings contain the official numbers for revenue, cost of revenue, gross profit, operating income, net income, total assets, total equity, total liabilities, current assets, current liabilities, inventory, receivables, payables, operating cash flow, investing cash flow, financing cash flow and capital expenditures.

Nvidia is examined as the primary longitudinal case over the period 2015 – 2025. AMD and Intel on the other hand are used as benchmark firms to assess whether Nvidia's performance

is distinctive or whether similar patterns are visible among the major competitors. The comparison is analytical rather than perfectly like for like because Nvidia and AMD operate mainly through fabless semiconductor models, whereas Intel has a more capital intensive manufacturing and foundry structure.

The chapter is organized as a layered financial analysis. The analysis begins with liquidity, including static liquidity ratios, working capital efficiency and cash flow liquidity. Then it examines profitability through trend analysis, common size analysis, margins, return ratios and DuPont analysis. Finally, it assesses capital structure through leverage, financial risk and interest coverage measures. (Nvidia Corporation, 2025 & AMD, Inc., 2025 & Intel Corporation, 2025)

5.2 Liquidity analysis

5.2.1 Static liquidity ratios

Static liquidity ratios provide a snapshot of whether a firm has enough current resources to cover short term obligations. They are useful but limited because a strong current ratio can reflect cash strength, receivables growth, inventory accumulation or prepayments. Therefore, static liquidity must be followed by activity and cash flow analysis.

Table 5.1 Static liquidity indicators and peer benchmark

Company	Fiscal year	Current ratio	Quick ratio	Cash ratio	Working capital ($B)	Cash & securities ($B)
Nvidia	2025	4.44	3.67	0.48	62.1	43.2
AMD	2024	2.62	1.56	0.52	11.8	5.1
Intel	2024	1.33	0.72	0.23	11.7	22.1

Source: Author's calculations based on Nvidia Corporation (2025), AMD, Inc. (2025) and Intel Corporation (2025).

The latest year liquidity shows that Nvidia had the strongest static liquidity position among the three firms. Its current ratio of 4.44 and working capital of approximately $62.1 billion indicates substantial short term financial flexibility. AMD also shows a comfortable current ratio, but on a much smaller scale. Intel's current ratio is above one, but materially lower than Nvidia's, reflecting a heavier capital intensive balance sheet and a larger current liability base. Static liquidity therefore supports the view that Nvidia's balance sheet was strong, but it does not yet prove that liquidity was supported by efficient operations or cash generation.

5.2.2 Activity ratios and working capital efficiency

Activity ratios examine whether liquidity is supported by efficient working capital management. Inventory turnover, receivables turnover and payables turnover help identify whether growth is producing cash pressure through inventory build up or receivables expansion. The operating cycle combines inventory and receivables days, while the cash conversion cycle deducts payable days to estimate the time between cash outflow and cash recovery.

Table 5.2 Activity ratios and cash conversion cycle

Company	Inventory turnover	Receivables turnover	Payables turnover	Operating cycle (days)	Cash conversion cycle (days)
Nvidia	4.25	7.89	7.25	132.14	81.76
AMD	2.59	4.90	6.46	215.35	158.83
Intel	3.07	15.44	3.38	142.70	34.83

Source: Author's calculations based on company annual reports/Form 10-K filings. Payables turnover uses cost of revenue/cost of sales as a proxy for purchases.

Nvidia's activity ratios add nuance to the static liquidity picture. Its receivables turnover remains sound, but its cash conversion cycle is longer than Intel's because Nvidia's rapid expansion was accompanied by significant inventory and receivables growth. This does not necessarily indicate weak liquidity because Nvidia's operating cash flow remained very strong. However, it shows why static liquidity ratios alone are insufficient. AMD also shows working capital pressure, particularly through inventory and receivables growth. Intel's cash conversion cycle appears shorter because payable days are higher. This is consistent with a capital intensive operating model and should not be interpreted as evidence of stronger profitability.

5.2.3 Cash flow liquidity and quality of earnings

Cash flow liquidity question whether liquidity is strong only on paper or it is supported by recurring cash generation. A sustainable firm should normally generate positive operating cash flows that are sufficient to support investment and financing needs. This is particularly important for high growth technology firms because revenue growth can create pressure on accounts receivable, inventories and supply commitments.

Table 5.3 Cash flow liquidity and earnings quality

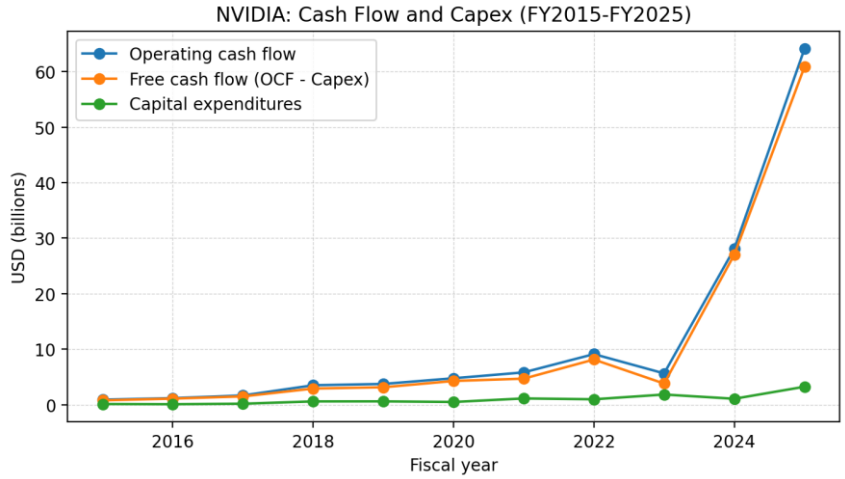
Company	CFO ($B)	Investing CF ($B)	Financing CF ($B)	Capex ($B)	FCF ($B)	CFO / operating income	FCF margin
Nvidia	64.1	-20.4	-42.4	3.2	60.9	0.79	46.6%
AMD	3.0	-1.1	-2.1	0.6	2.4	1.60	9.3%

Company	CFO ($B)	Investing CF ($B)	Financing CF ($B)	Capex ($B)	FCF ($B)	CFO / operating income	FCF margin
Intel	8.3	-18.3	11.1	23.9	-15.7	n.m.	-29.5%

Source: Author's calculations based on company annual reports/Form 10-K filings. n.m. = not meaningful where operating income is negative.

The cash flow layer strengthens the interpretation of Nvidia's liquidity. Nvidia generated $64.1 billion of operating cash flow in 2025 and approximately $60.9 billion of free cash flow after capital expenditure. This indicates that the company's liquidity was not merely a balance sheet position. It was supported by actual cash generation. AMD also generated positive operating cash flow and free cash flow, but on much smaller scale. Intel generated positive operating cash flow despite reporting a loss, largely because of non cash charges, but its standard free cash flow was negative after very large property, plant and equipment additions. This contrast is important to the benchmark comparison: Nvidia's liquidity is supported by strong profitability and strong cash conversion, whereas intel's cash generation is constrained by capital intensity.

Figure 5.1 Operating cash flow.



Source: Author's calculations based on Nvidia Form 10K annual reports, 2015–2025

5.2.4 Growth pressure on working capital

The final liquidity layer examines whether growth was accompanied by pressure on working capital. If inventories and receivables grow faster than revenue, the firm may face timing pressure even when margins are strong. Conversely, if growth is accompanied by strong operating cash flow, working capital pressure is more manageable.

Table 5.4 Growth and working capital pressure

Company	Revenue growth	Inventory growth	Receivables growth	Cost of revenue growth
Nvidia	114.2%	90.8%	130.7%	96.4%
AMD	13.7%	31.8%	43.2%	6.9%
Intel	-2.1%	9.6%	2.2%	10.0%

Source: Author's calculations based on latest and prior year balance sheet and income statement figures.

Nvidia's receivables and inventories increased sharply in 2025, reflecting the scale of demand and the operational requirements of rapid data center growth. However, this pressure was more than offset by operating cash flow and free cash flow generation. AMD also shows inventory and receivables growth above revenue growth suggesting that its ai and data center ramp required additional working capital support. Intel, by contrast, had declining revenue while inventory and cost of sales increased, which indicates a less favorable operating pattern.

5.3 Profitability analysis

5.3.1 Trend and common size analysis for Nvidia

The evidence shows that Nvidia's financial development was not linear. The fixed based trend analysis identifies three broad movements: sustained expansion from 2015 to 2022, a temporary deterioration in 2023 and a sharp step change in 2024 and 2025. This pattern is important because it prevents the analysis from treating Nvidia's growth as a smooth trend.

Table 5.5 Nvidia fixedcbase trend analysis (2015 = 100)

Year	Revenue	Net income	CFO	FCF	Total assets	Equity
2015	100.0	100.0	100.0	100.0	100.0	100.0
2016	107.1	97.3	130.2	139.6	102.4	101.1
2017	147.6	264.7	184.3	190.7	136.7	130.3
2018	207.5	483.4	386.3	371.0	155.6	169.0
2019	250.0	656.1	412.8	400.7	184.7	211.3
2020	232.9	443.7	525.4	545.0	240.3	276.0
2021	356.8	686.2	642.4	598.8	400.0	382.4
2022	574.8	1545.2	1005.5	1038.0	613.9	601.8
2023	576.9	692.6	622.5	485.8	572.2	500.0
2024	1301.3	4722.7	3101.5	3449.5	912.5	972.9
2025	2777.8	11553.1	7075.1	7767.0	1555.6	1794.1

Source: Author's calculations based on Nvidia annual reports/Form 10-K filings.

The fixed based table shows that by 2025 Nvidia's revenue index had reached 2,777.8 while net income, operating cash flow and free cash flow had increased much more sharply. This indicates that the late period's acceleration was not only a revenue story. It was also associated with operating leverage, margin expansion and cash generation. The 2023 decline

in net income, CFO and FCF remains important because it shows that Nvidia was still exposed to cyclical and operational shocks before the AI driven acceleration of 2024 – 2025. Common size analysis explains the structural dimension of this change. It shows how much of each sales was absorbed by cost of revenue and operating expenses, and how much remained as operating profit and net income.

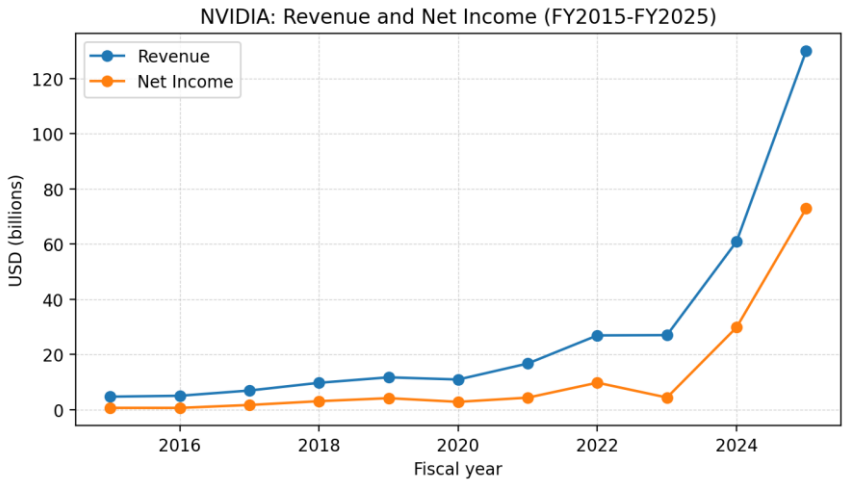
Table 5.6 Nvidia common size income statement, selected fiscal years

Year	Cost of revenue (% sales)	Gross profit (% sales)	Operating expenses (% sales)	Operating profit (% sales)	Net income (% sales)	SG&A (% sales)
2015	44.4%	55.6%	39.3%	16.2%	13.5%	10.3%
2018	40.1%	59.9%	26.9%	33.1%	31.4%	8.4%
2020	38.2%	61.7%	35.6%	26.1%	25.7%	9.6%
2022	37.5%	62.5%	25.1%	37.2%	36.2%	8.8%
2023	43.0%	57.0%	41.5%	15.6%	16.2%	9.8%
2024	27.3%	72.7%	19.0%	53.7%	48.9%	4.0%
2025	25.3%	74.7%	12.0%	62.7%	56.1%	2.0%

Source: Author's calculations based on Nvidia annual reports/Form 10-K filings.

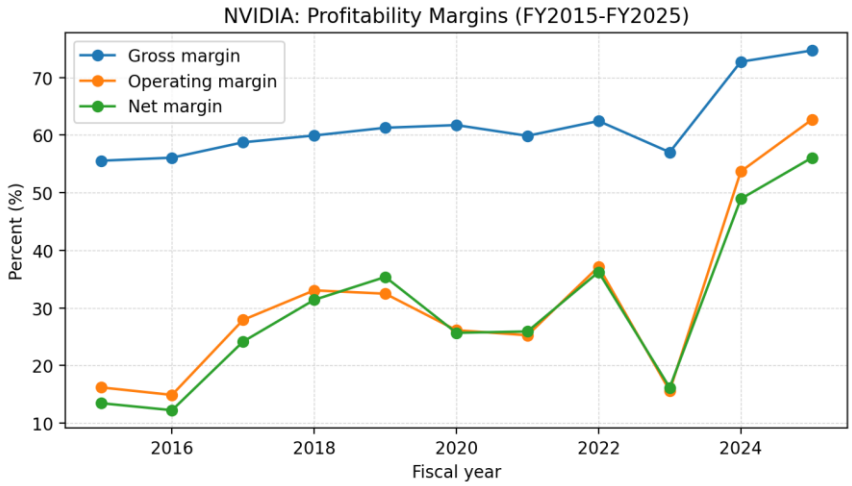
The common size evidence shows a major improvement in Nvidia's margin structure. Cost of revenue declined from 43.0% of sales in 2023 to 25.3% in 2025, while operating profit rose from 15.6% to 62.7% of sales. This aligns with Nvidia's own FY2025 disclosure that gross margin improved because of a higher mix of data center revenue. The implication is that Nvidia's profitability improvement was linked to not only to higher sales volume, but also to a more favorable revenue mix and operating leverage.

Figure 5.2 Revenue and net income.



Source: Author's calculations based on Nvidia Form 10K annual reports, 2015–2025

Figure 5.3 Profitability margins



Source: Author's calculations based on Nvidia Form 10K annual reports, 2015–2025

5.3.2 Profitability measures and peer comparison

Table 5.7 Core profitability measures and margins

Company	Fiscal year	Revenue ($B)	Gross profit ($B)	Operating income ($B)	Net income ($B)	Gross margin	Operating margin	Net margin
Nvidia	FY2025	130.5	97.9	81.5	72.9	75.0%	62.4%	55.8%
AMD	FY2024	25.8	12.7	1.9	1.6	49.4%	7.4%	6.4%
Intel	FY2024	53.1	17.3	-11.7	-18.8	32.7%	-22.0%	-35.3%

Source: Author's calculations based on Nvidia Corporation (2025), AMD, Inc. (2025) and Intel Corporation (2025).

The peer comparison confirms that Nvidia's profitability was distinctive. AMD was profitable and benefited from data center growth, but its latest year margins were materially lower than Nvidia's. Intel had a larger revenue base than AMD, but it reported an operating loss and a net loss, reflecting restructuring, impairment and manufacturing/foundry pressures. This means Nvidia's late period profitability should not be interpreted as a general semiconductor, sector outcome. It appears closely linked to Nvidia's data center mix, platform position and ability to scale revenue without a proportionate increase in cost structure.

5.3.3 Return ratios and DuPont analysis

Return ratios assess whether profits are high relative to the resources employed. Dupont analysis strengthens this interpretation by decomposing ROE into net margin, asset turnover and the equity multiplier. This shows whether ROE is driven by profitability, asset efficiency or leverage. For consistency with ratio tables in this dissertation, the Dupont table uses end of year assets and equity.

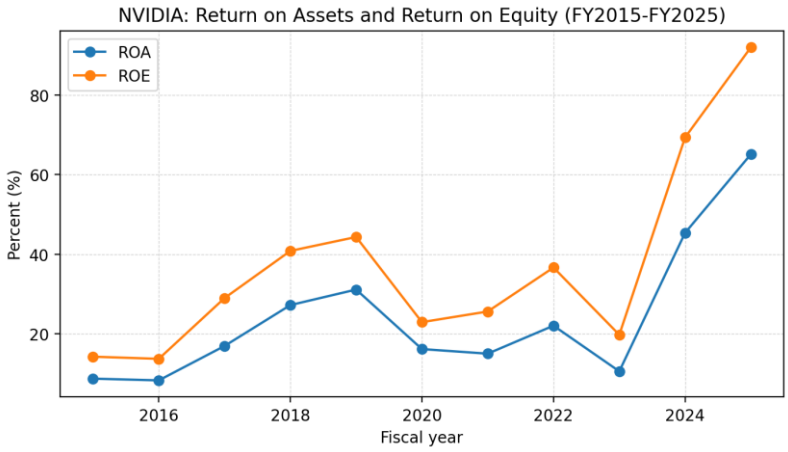
Table 5.8 DuPont decomposition and return ratios

Company	Net margin	Asset turnover	Equity multiplier	ROA	ROE	Primary ROE driver
Nvidia	55.8%	1.17	1.41	65.3%	91.9%	Margin expansion and asset efficiency
AMD	6.4%	0.37	1.20	2.4%	2.9%	Positive margin, low leverage
Intel	-35.3%	0.27	1.98	-9.5%	-18.9%	Negative margin and high capital intensity

Source: Author's calculations based on company annual reports/Form 10-K filings.

The Dupont results indicate that Nvidia's ROE was driven mainly by its very high net margin and strong asset turnover, not by excessive leverage. This is important because a high ROE caused mainly by leverage would imply greater financial risk. AMD's ROE was positive but much lower, mainly because its net margin was modest and its equity multiplier was low. Intel's negative ROE reflects the negative net margin and its higher equity multiplier shows that its balance sheet structure is more leveraged and asset intensive than Nvidia's.

Figure 5.4 Returns on assets and equity.



Source: Author's calculations based on Nvidia Form 10K annual reports, 2015–2025

5.4 Capital structure analysis

Capital structure analysis examines whether Nvidia's growth was accompanied by increasing financial risk or by a stronger balance sheet. The focus is on debt to equity, the equity multiplier, interest coverage, CFO to debt and the net cash or net debt position.

Table 5.9 Capital structure, coverage and debt capacity

Company	Debt ($B)	Cash & securities ($B)	Net cash / (net debt) ($B)	Debt/equity	Equity multiplier	Times interest earned	CFO / debt
Nvidia	8.5	43.2	34.7	0.11	1.41	329.77	7.57
AMD	1.7	5.1	3.4	0.03	1.20	20.65	1.77
Intel	50.0	22.1	-27.9	0.50	1.98	n.m.	0.17

Source: Author's calculations based on company annual reports/Form 10-K filings. n.m. = not meaningful where operating income is negative.

Nvidia's capital structure appears conservative relative to its profitability and the cash generation. The company had approximately $34,7vbillion more cash and marketable securities than debt, debt to equity ratio of 0,11 and very high interest coverage. AMD also maintained a net cash position and low leverage, but at a smaller scale. Intel is the clear contrast: it had substantial total debt, a net debt position and negative operating income, making times interest earned not meaningful. This supports the view that Nvidia's growth during the late period was not funded by a material increase in financial leverage rather, it strengthened the balance sheet.

5.5 Integrated interpretation

The analysis leads to three main findings. First, Nvidia's liquidity was strong not only on a static basis, but also dynamically because it was supported by operating cash flow and free cash flow. The working capital shows pressure from receivables and inventory growth, but this pressure did not undermine overall liquidity because cash generation was very high.

Second, Nvidia's profitability was distinctive relative to AMD and Intel. The common size and margin indicate that the 2024-2025 acceleration was associated with a structural improvement in cost of revenue, operating expenses as a percentage of sales and net margin. Further, DuPont analysis shows Nvidia's ROE was driven by margin and asset efficiency rather than excessive leverage.

Third, the capital structure analysis shows that Nvidia's growth was accompanied by stronger balance sheet rather than by greater financial risk. Compared to AMD, Nvidia's absolute scale of profitability and cash flow was much larger. Compared with Intel, Nvidia's fables model and data center margin expansion produced a substantially stronger capital structure profile. Overall, the evidence supports the dissertation's argument that Nvidia's rise reflects a combination of firm specific strategic positioning and favorable ai related industry demand, while also recognizing that working capital pressure, export controls, supply constraints and competition remain important risks.

6. Discussion

6.1 Introduction

This chapter interprets how Nvidia's financial performance has changed since 2015, it connects the financial data trends that found in Chapter 5 with the conceptual structure that frames the whole dissertation. The analysis follows the layered structure of the financial analysis by considering liquidity, profitability and capital structure, while also interpreting Nvidia’s performance relative to AMd and Intel. Although it is not the purpose of the analysis to assign causation, it will attempt to create a coherent and evidence view of how Nvidia's financial profile has evolved over the period 2015 through 2025 and how such changes may have been influenced by the company's strategic position and the overall competitive environment in which the company operates (White, Sondhi & Fried, 2003 & Penman, 2013).

6.2 Review of the decade: Three Phases and One Turning Point

The results from chapter 5 clearly illustrate a multi phase model of performance from 2015-2025.

Phase 1 (2015- 2019) – the strong growth and improvement of profitability: Nvidia demonstrated significant growth in its financial performance with improvements in profitability. Fixed base indexes demonstrate a steady increase in all areas of financial performance including revenue, net income, operating cash flow (CFO), free cash flow (FCF), total assets, and equity. Therefore, this growth was not solely driven by an increase in the company's balance sheet, but it was supported by an improvement in the company's internal financial capacity.

Phase 2 (2020): In the year 2020, there was a decline in both revenue (-6.8%) and net income (-32.4%) compared to the previous year. However, both CFO and FCF continued to grow at similar rates to those in prior periods. The difference between the decline in earnings and the continuing growth in cash flow indicates that the short term adjustments that the company made were able to mitigate the decline in cash flow.

Phase 3 (2021 - 2022): Both years 2021 and 2022 showed a renewed commitment to performance growth in all financial areas with revenue increasing greater than 50% in each year (53.2% and 61.1%) and net income increasing significantly. CFO and FCF also increased demonstrating strong operating leverage and cash conversion during this period of growth.

Turning Point (2023): The year 2023 represents a clear turning point in the financial history of the company. The revenues for the year remained relatively flat (0.4%) compared to the previous year. Net income and cash flow declined significantly (net income -55.2%, CFO -38.1%, FCF -53.2%). Also, the company's margins declined, and the operating expenses increased as a percentage of revenues during this period. These declines are consistent with a temporary reduction in operating conditions resulting lower profits and cash flow compared to the same periods in previous year.

Phase 4 (2024 - 2025): Both years 2024 and 2025 represent a major step up in the size of the company and the level of profitability. Revenue grew by over 100% in both years (125.6% and 113.5%). Margins reached new record highs (gross margin ~ mid 70% by year 2025, operating margin > 60% net margin > 50%). The fixed base indexes for net income, CFO and FCF, also experienced dramatic increases. This phase is characterized by exceptional cash generation and improved indicators of balance sheet strength.

The interpretation of the four phases supports the utilization of trend analysis as a diagnostic tool. The trend analysis provides means to identify long run scaling through the use of fixed base trends and identifies turning points and variability in trends that may warrant additional research in the form of industry and firm specific context (White, Sondhi and Fried, 2003).

6.3 Profitability and margin structure: what changed and when

A major finding is the extent to which Nvidia’s profit margins expanded between year 2024 and 2025 compared to common size income statements.

There are some dramatic changes in the operating expense structure for the early periods and final years in the common size income statements for Nvidia.

Firstly, the cost of goods sold dramatically decreases as a % of sales. Secondly, the gross profit dramatically increased to approximately three quarters of sales and thirdly the operating expense dramatically decreases to the low teens % of revenue.

As presented earlier these results are consistent with the ratio results for gross margin, operating margin and net margin, all of which increased greatly at the end of the period.

Typical analysis of a firm's financial statement would suggest that this type of pattern is generally the result of a combination of:

a) Product/segment mix
b) Pricing power & differentiation and
c) The degree of operating leverage where the rate of growth of revenues exceeds the rate of growth of operating costs (Penman, 2013).

In addition to the data which presented in Chapter 4 background information, Nvidia's financial results show that the increasing contributions of data center and AI related product/service lines, along with the company's move toward an integrated platform (compute, networking and software) have both resulted in the improved margins of the company's financial performance.

The year 2023 compression is also visible through a common size lens. Operating expenses increased dramatically as a % of sales while operating profit decreased. Therefore, in 2023 the profitability of Nvidia was the result of both lower sales and a short term adjustment to the firm's cost structure/margin profile. Understanding this turning point is important to our discussion since it shows that even high performing firms can have short run adjustments and do not create overly linear "growth stories."

The peer comparison strengthens this interpretation. AMD remained profitable, but its operating and net margins were lower than Nvidia's. Intel on the other hand reported negative operating and net margins in the latest year. This suggests that Nvidia's late period margin expansion was not simply a general sector effect, but it was closely connected to its data center mix, platform position and ability to scale revenue without a proportional increase in cost structure.

6.4 Cash flows and earnings quality: sustainability and “conversion”

The inclusion of cash flow metrics within this research adds a level of detail to what may be considered sustainable levels of performance for Nvidia instead of an approach of a ratio only analysis.

In terms of long term trends, both CFO and FCF have expanded at a much higher rate than the previous periods during the examined last five years, particularly from year 2024 through year 2025. This supports further the view that as Nvidia's profitability increased, it is accompanied with an increasing amount of cash generated in addition to the reported earnings.

Cash conversion cycle metrics add nuance to the overall picture of how well management is converting earnings into cash. While the CFO/NI ratio does fluctuate over the reporting period, it is less than one in the latter half of the reporting period (i.e., year 2025) of the examined ten year period. A CFO/NI ratio less than one is not always a bad thing or a red flag in terms of financial performance, in some cases, a lower CFO/NI ratio may occur due to the timing of cash inflows and outflows related to working capital items such as accounts receivable, inventory and customer payments. However, the earnings quality literature has consistently supported that reported performance should never be looked at in isolation. Therefore, looking at cash flow along with earnings will provide insight into the quality and sustainability of the reported performance (Dechow, 1994 & Dechow and Dichev, 2002 & Sloan, 1996). Therefore, for this dissertation, while the CFO/NI ratio has varied significantly, Nvidia's FCF margin and total cash generation in 2024 - 2025 are extremely high.

6.5 The structure of the balance sheet and financial stability (liquidity, gearing and coverage)

When using the 360 degree approach it is necessary that profitability and cash flow performance be understood in relation to the resilience of the balance sheet as a whole.

The analysis of the years 2021 – 2025 shows that the company has high levels of liquidity (both current and quick ratios > 1) and decreasing gearing (reductions in both debt/equity ratio and debt/assets ratio) and very high coverage ratios (the interest cover ratio is rising

sharply from year 2024-2025). It is also worth noting that CFO/debt coverage has improved strongly from year 2024-2025. When viewed qualitatively, this trend suggests that in the last few years Nvidia's cash inflows have been relatively large compared to the total amount of interest bearing debt that it has outstanding, which is indicative of an improvement in its ability to service its debt.

Although these factors do not guarantee that there will be no risks (because technology remains a volatile market which is subject to regulatory and supply chain risks), they indicate clearly that the company has the resilience and financial flexibility to continue to invest during downturns (including R&D and ecosystem development). (White et al., 2003). Strategically speaking, this type of financial flexibility can be important to the company because it enables it to continue to invest even during down cycles (Teece et al., 1997 & Teece, 2007).

6.6 Interpreting the results through strategy and ecosystem lens

The dissertation’s conceptual framework integrates company’s financial tools with strategic management ideas such as resources/capabilities and platform ecosystems.

Persistent outperformance is associated with valuable and hard to imitate resources and the organizational ability to exploit them (Barney, 1991). In Nvidia’s case, the literature and the firm’s background emphasize not only on chip design, but also on complementary assets such as software stacks and developer adoption. The financial evidence is consistent with a firm that increasingly captures value at the “platform” level: margin expansion, strong operating leverage, and large cash generation appear alongside rapid scaling in the later years.

Dynamic theoretical capabilities emphasize the ability to sense, seize and transform in fast moving markets (Teece, Pisano and Shuen, 1997 & Teece, 2007). The multi phase financial pattern especially on the turning point in year 2023 and on the subsequent step change years 2024 and 2025 fits a view where performance is shaped by both market conditions and firm’s ability to scale into new opportunity waves. The dissertation does not claim that capabilities “caused” the financial outcomes. Rather, it argues that the patterns observed in the statements are consistent with a firm scaling effectively in a market environment where ecosystems and complements matter.

Platform and ecosystem research suggests that control of complements and developer/customer lock in can support durable advantage and pricing power (Gawer and Cusumano, 2014 & Jacobides, Cennamo and Gawer, 2018). Again, the evidence in chapter 5 is consistent with a firm that achieved exceptional margin structure in the later years, although competitive and regulatory factors remain important constraints.

6.7 Benchmarking and interpretation limits

Benchmarking against AMD and Intel reduces the risk of interpreting Nvidia's results only from a single firm perspective. In chapter 5, the peer comparison is applied across several analytical layers, including static liquidity, working capital efficiency, cash flow liquidity, profitability margins, DuPont decomposition and capital structure. This makes the comparison substantive than a simple visual comparison of selected figures.

The benchmark evidence suggests that Nvidia's late period performance was distinctive. AMD also benefited from data center and ai related demand, but its margins, free cash flow and return measures were materially lower than Nvidia's. Intel provides a different contrast because its more capital intensive manufacturing and foundry structure was associated with weaker profitability, higher debt and lower financial flexibility. Therefore, Nvidia's performance appears to reflect both favorable ai related industry demand and firm specific strengths connected to its platform position, data center mix and fabless operating model.

However, the benchmarking has limitations. Nvidia, AMD and Intel differ in business mix, fiscal year timing, segment reporting, customer exposure, accounting classifications and manufacturing intensity. Intel is especially different because of its vertically integrated manufacturing and foundry exposure. Therefore, the benchmark comparison should be interpreted as contextual evidence rather than as a perfectly controlled peer group test.

6.8 Limitations of study and robustness

There are several points to consider in terms of limitations in the study. Firstly, accounting comparability. Ratios are subject to accounting policy choices and classification decisions and therefore are particularly affected by intangible investment measurement problems (Lev, 2001). Secondly, the intangible investment. Technological firms typically expense

R&D and therefore it is possible that the amount of economic investment in the accounts will be understated which will then impact on the interpretation of ROA, asset turnover and certain margins (Lev & Sougiannis, 1996, Peters & Taylor, 2017).

The dissertation tracks R&D intensity conceptually and interprets ratios based upon an understanding of the intangible capital being measured (Lev & Sougiannis, 1996 & Peters & Taylor, 2017).

Thirdly, statistical limitations of analysis. If correlations or regressions are undertaken (should they appear elsewhere), those undertaken here are considered to be purely descriptive given the relatively small sample size per annum and were not designed to allow causal inferences (Kothari, 2001).

Finally, the short term shocks. The period also includes several short term shocks including but not limited to the pandemic, supply chain disruptions, and export restrictions. The dissertation views these as contextual factors and does not attempt to quantify their effect(s).

Despite the above noted limitations, the combined lens of the integrated framework provides enhanced robustness and reduces the risk of results being overly reliant upon a single metric.

7. Conclusion

The research was based on the financial and economic development of Nvidia the period between 2015 – 2025. The purpose was to determine whether and how it has utilized its strategic positioning in AI computing. To analyze the trends and evaluate the performance of Nvidia, the study examined the financial statements using a 360 degree analysis method of the financial statement, fixed base and moving base trend analysis, common size income statement, an extended ratio sets, and a series of cash flow diagnostics. Also, the study used AMD and Intel as peer benchmark companies and selected market indicators for additional context.

Nvidia's trajectory of financial and economic performance appears to be multiphase rather than strictly linear. The results of the trend analysis indicate to be consistent with long run growth in revenue, net income, operating cash flow, and equity for the company, while there

was a short term adjustment during the year 2020 and a turning point in 2023 when the company experienced a decline in profitability and cash generation compared to 2022. The subsequent period (2024-2025) indicates a significant increase both in scale and profitability for Nvidia. Common size statements indicate a significant reduction in the cost structure. The ratio results indicate extremely high margins and returns for the company. Also, free cash flow increased significantly and provides support for viewing the performance is based both in accounting and cash. Results from the liquidity, leverage and coverage ratios in the latter portion of the time frame provide evidence of excellent short term liquidity, decreasing leverage and enhanced ability of the company to service debt. The findings were viewed as descriptive in nature and were not considered as a result of relationships with cause and effect.

To answer the research questions, the study provided documentation of changes in the performance of Nvidia, the financial condition of the company, and the cash flow generated by Nvidia throughout the decade. Also, the study identified measures that represent the sustainability and resiliency of the company and evaluated those measures against peer companies and the overall industry context. In addition, the study contributed a systematic, statement based framework for evaluating the performance and financial condition of Nvidia that is superior to the standard ratio summaries that can be developed from a typical database.

Limitations of the study include the limited number of annual data observations that were available for analysis, the lack of comparative data for each firm, and the accounting treatment of intangible assets. Future studies could expand the number of peer companies to cover the entire ten year time frame, use quarterly data to identify the specific time period that the financial conditions of the company have turned down, and supplement the traditional financial statement analysis methods with valuation based methods.

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