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Financial Accounting

EBGN 305 Final Project

Financial Explorations of Intel and AMD

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Introduction

Intel Corporation and Advanced Micro Devices Inc. (often shorted to AMD) are two of the largest corporations in the global semiconductor industry. As the global race for artificial intelligence accelerates, analyzing the economic structures of key semiconductor companies is essential to understanding how financial dynamics influence modern technological advancement.

Intel has historically dominated the market in CPUs, data centers, and embedded systems. With the rise of competitors like AMD, Intel attempts to maintain market relevance through operating their manufacturing and investing heavily in R&D. AMD has recently emerged as direct competition with Intel in CPUs and has gained considerable market share through their Ryzen and EPYC processor lines. Unlike Intel, AMD outsources chip manufacturing to the Taiwan-based TSMC.

Intel and AMD differ in scale, strategic partnerships, and operational structure. A financial analysis of both companies will highlight the unique strengths, market challenges, and growth positions for each company in the rapidly evolving semiconductor landscape.

Section 1: Company Financial Reports

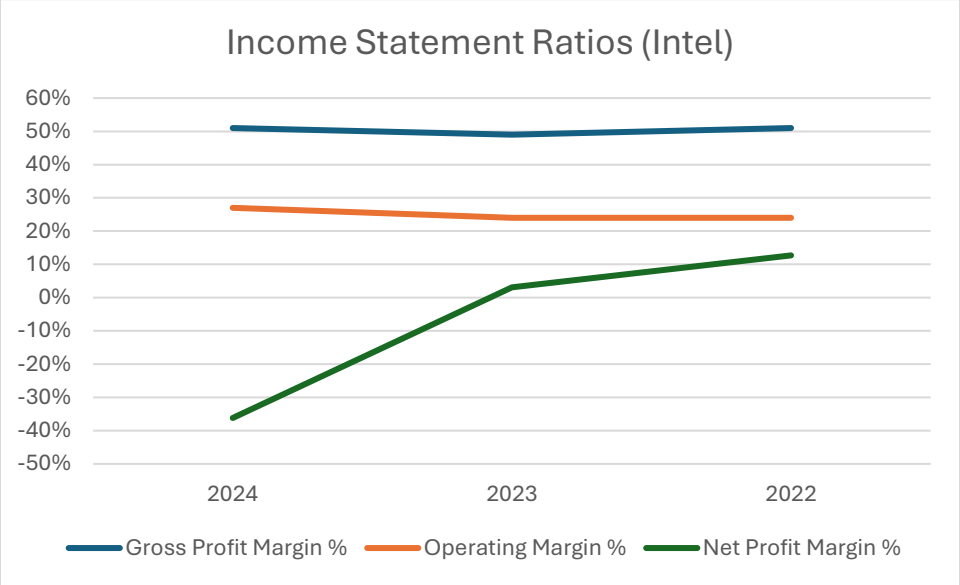
The following links provide souring to the 10-K filings for both Intel and AMD as they were submitted to the United States Securities and Exchange Commission:

- Intel Data 2024-2022: https://www.sec.gov/Archives/edgar/data/50863/000005086325000009/intc-20241228.htm
- AMD Data 2024-2023: https://www.sec.gov/Archives/edgar/data/2488/000000248825000012/amd-20241228.htm
- AMD Data 2022 https://www.sec.gov/Archives/edgar/data/2488/000000248823000047/amd-20221231.htm

Section 2: Income Statements

Intel	2024	2023	2022
Gross Profit Margin	51%	49%	51%
Operating Margin	27%	24%	24%
Net Profit Margin	-36.2%	3.1%	12.7%

Data Collected and Calculated from Page 45 of Intel 10K

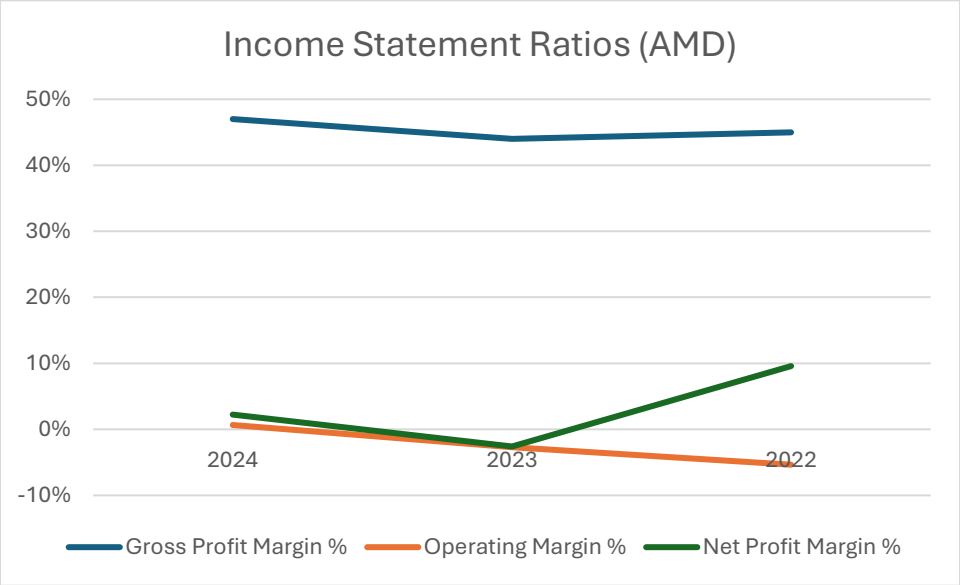


Intel's gross profit margin stayed stable at around 51 percent from 2022 to 2024, showing consistent product-level profitability. Operating margin improved slightly from 24 percent to 27 percent, reflecting better cost control. However, net profit margin dropped sharply from 12.7 percent in 2022 to -36.2 percent in 2024, indicating significant non-operating losses that hurt overall profitability despite solid operating performance.

AMD	2024	2023	2022
Gross Profit Margin	47%	44%	45%
Operating Margin	0.66%	-2.71%	-5.36%
Net Profit Margin	2.25%	-2.60%	9.58%

Data Collected and Calculated from Page 22 of 2025 AMD 10K

and Page 45 of 2022 AMD 10Q

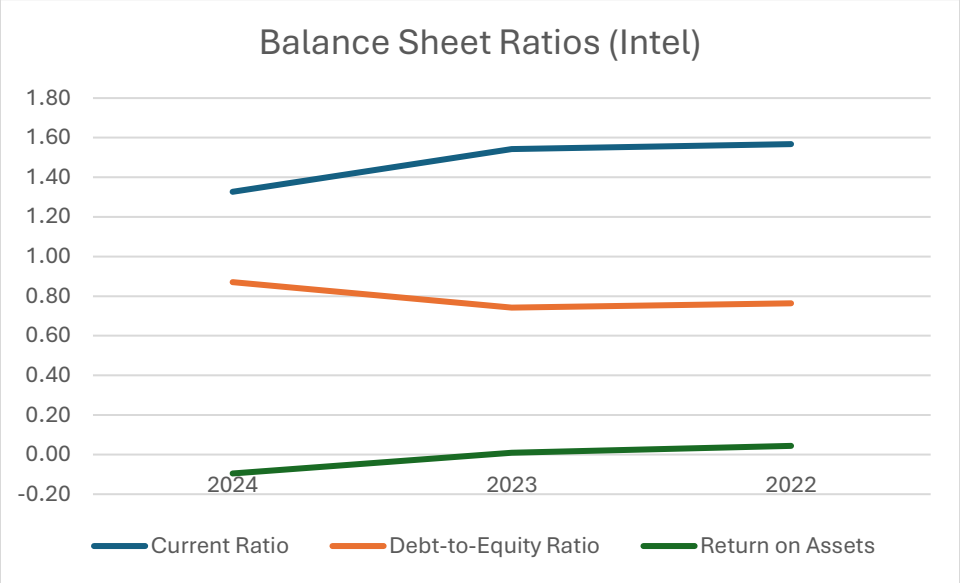


AMD's gross profit margin remained relatively steady, rising slightly from 45 percent in 2022 to 47 percent in 2024, indicating consistent control over production costs. Operating margin improved from -5.36 percent in 2022 to a slim positive 0.66 percent in 2024, reflecting gradual recovery in operating efficiency. Net profit margin, though volatile, rebounded from a loss of 2.60 percent in 2023 to a positive 2.25 percent in 2024, suggesting AMD is beginning to recover its bottom-line profitability after a challenging period. Unusually, AMD's operating margin has been lower than their net profit margins each year. This means that non-operating income is boosting AMD's net income significantly.

Section 3: Balance Sheets

Intel	2024	2023	2022
Current Ratio	1.33	1.54	1.57
Debt-to-Equity Ratio	0.87	0.74	0.76
Return on Assets	-9.55%	0.88%	4.40%

Data Collected and Calculated from Page 77 of Intel 10K

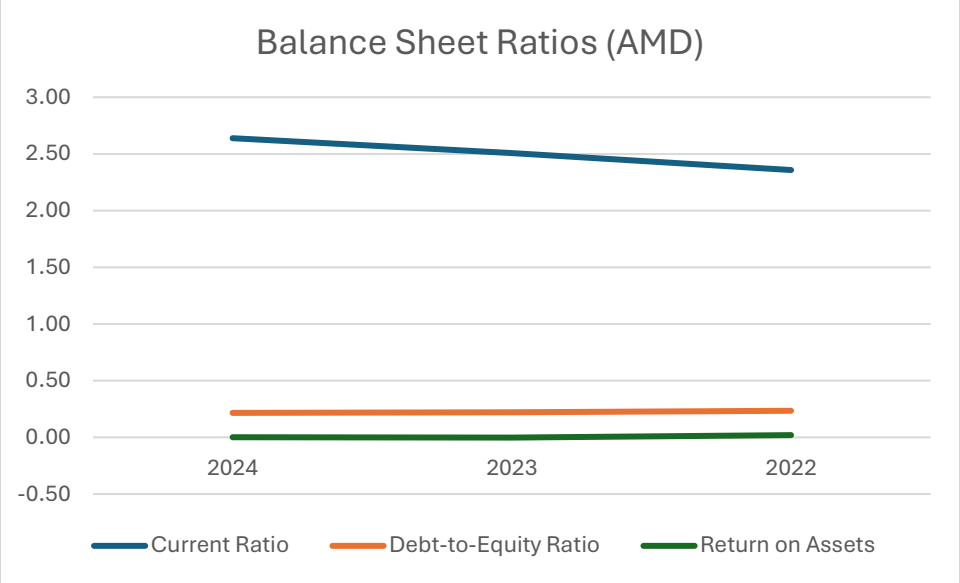


Intel's current ratio declined from 1.57 in 2022 to 1.33 in 2024, suggesting a weakening short-term liquidity position. The debt-to-equity ratio rose from 0.76 in 2022 to 0.87 in 2024, indicating increased reliance on debt financing. Return on assets fell sharply from 4.40 percent in 2022 to -9.55 percent in 2024, reflecting a significant drop in profitability and efficiency in using assets to generate earnings.

AMD	2024	2023	2022
Current Ratio	2.64	2.51	2.36
Debt-to-Equity Ratio	0.22	0.22	0.23
Return on Assets	0.18%	-0.20%	1.95%

Data Collected and Calculated from Page 4 of 2025 AMD 10K

and Page 52 of 2022 AMD 10Q

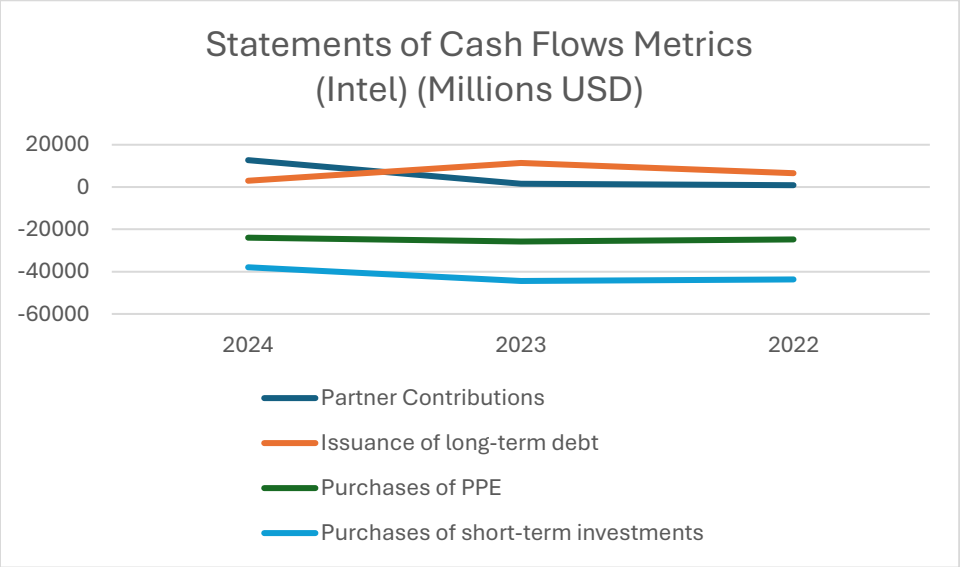


AMD's current ratio improved steadily from 2.36 in 2022 to 2.64 in 2024, showing strong and strengthening short-term liquidity. The debt-to-equity ratio remained very low and stable around 0.22, indicating conservative use of debt financing. Return on assets declined from 1.95 percent in 2022 to just 0.18 percent in 2024, suggesting reduced efficiency in generating profits from its asset base despite recent improvements in net income.

Section 4: Statements of Cash Flows

Intel	2024	2023	2022
Partner contributions	12,713	1,551	874
Issuance of long-term debt	2,975	11,391	6,548
Purchases of PPE	-23,944	-25,750	-24,844
Purchases of short-term investments	-37,940	-44,414	-43,647

Data Collected and Calculated from Page 78 of Intel 10K



In 2024, Intel saw a significant increase in partner contributions, rising to 12,713 from 1,551 in 2023 and 874 in 2022, while issuance of long-term debt dropped to 2,975 from 11,391 in 2023 and 6,548 in 2022. The company consistently spent heavily on capital investments, with purchases of property, plant, and equipment totaling -23,944 in 2024, following similar levels in prior years. Additionally, Intel continued to invest significantly in short-term investments,

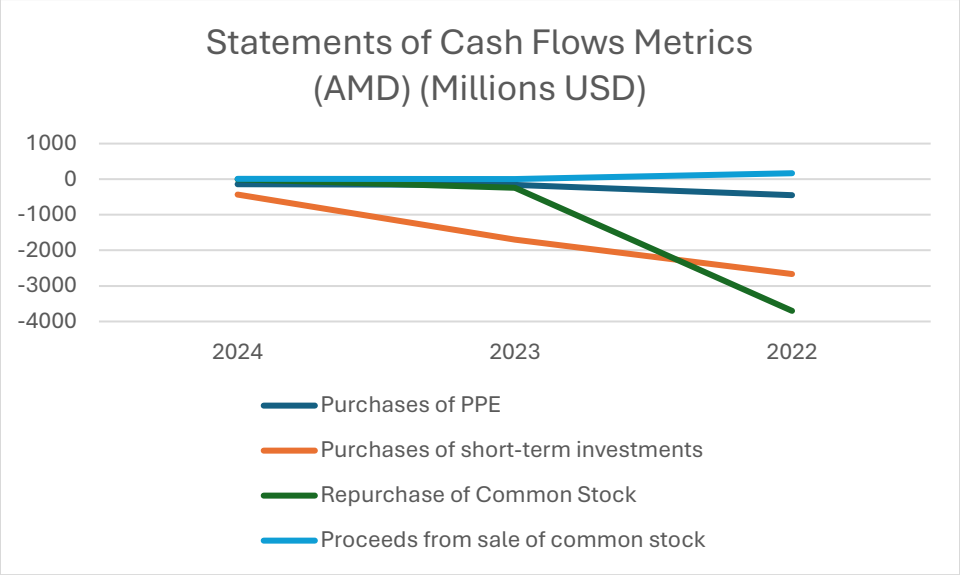
amounting to -37,940 in 2024 compared to -44,414 in 2023 and

-43,647 in 2022.

AMD	2024	2023	2022
Repurchases of common stock	-4	-241	-3,702
Proceeds from sale of common stock	5	3	167
Purchases of PPE	-142	-158	-450
Purchases of short-term investments	-433	-1,703	-2,667

Data Collected and Calculated from Page 5 of 2025 AMD 10K

and Page 54 of 2022 AMD 10Q

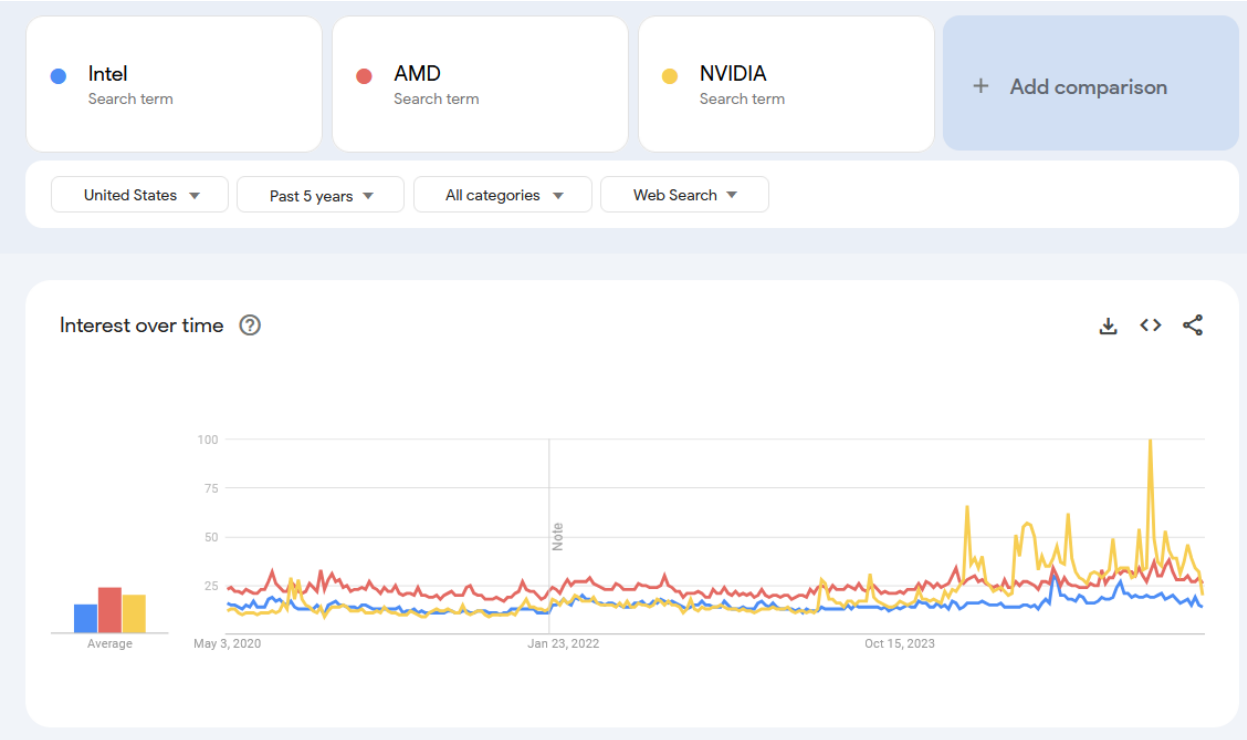


In 2024, AMD significantly reduced its repurchases of common stock to -4 from -241 in 2023 and -3,702 in 2022, while proceeds from the sale of common stock remained minimal at 5. The company also decreased its capital spending, with purchases of property, plant, and

equipment totaling -142 compared to -158 in 2023 and -450 in 2022. Similarly, purchases of short-term investments declined to -433 in 2024 from -1,703 in 2023 and -2,667 in 2022.

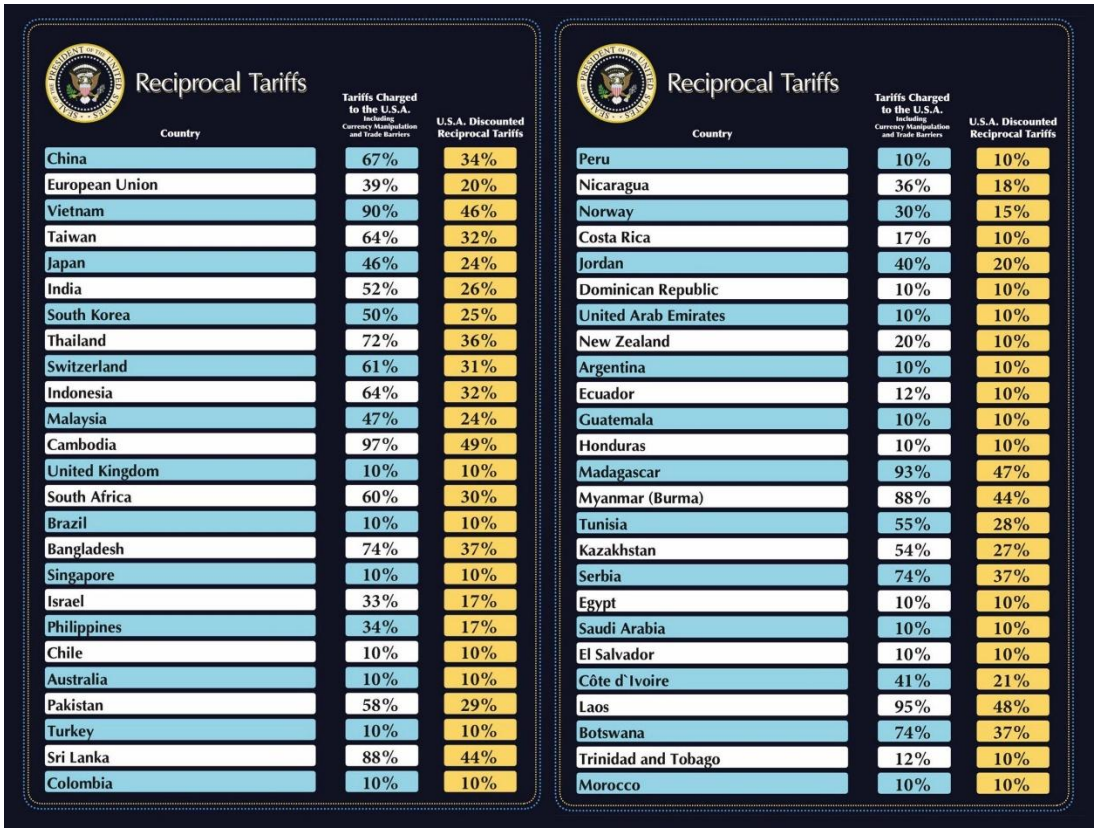
Section 5: Additional Information

Outside of pure financial statistics, it is important to gauge company media relevance to help forecast future sales numbers. The most reliable way to do this is to look at the quantity of searches each company is receiving through Google, which is public information through Google Trends.



This graphic visualizes search terms of Intel, AMD, and NVIDIA over the last 5 years. As can be seen, AMD has consistently been significantly searched more than Intel, telling us that people are talking about and researching AMD products more. The additional variable of NVIDIA stock is shown in this comparison to understand how each company has and is comparing to the current largest semiconductor company. AMD, in particular, is surprisingly receiving an only marginally smaller amount of searches than modern NVIDIA.

Another highly relevant point to consider in this analysis is the impact that recently imposed United States tariffs will have on each company. Tariffs are meant to incentivize companies to manufacture within the United States, which is good for a company like Intel which currently manufactures 75% of their products domestically, according to their website. AMD, on the other hand, outsources all of their manufacturing to TSMC in Taiwan. This is highly problematic for AMD because Taiwan recently received a “32% import tariff” according to DIGITIMES, meaning that AMD’s operating costs are going to increase at least 32%. Theoretically, these tariffs should set Intel significantly ahead of AMD because now AMD must choose to invest extremely highly into costly domestic manufacturing or continue to operate under the 32% import tariff.



Reciprocal Tariffs

Country	Tariffs Charged to the U.S.A. Including Currency Manipulation and Trade Barriers	U.S.A. Discounted Reciprocal Tariffs
China	67%	34%
European Union	39%	20%
Vietnam	90%	46%
Taiwan	64%	32%
Japan	46%	24%
India	52%	26%
South Korea	50%	25%
Thailand	72%	36%
Switzerland	61%	31%
Indonesia	64%	32%
Malaysia	47%	24%
Cambodia	97%	49%
United Kingdom	10%	10%
South Africa	60%	30%
Brazil	10%	10%
Bangladesh	74%	37%
Singapore	10%	10%
Israel	33%	17%
Philippines	34%	17%
Chile	10%	10%
Australia	10%	10%
Pakistan	58%	29%
Turkey	10%	10%
Sri Lanka	88%	44%
Colombia	10%	10%

Reciprocal Tariffs

Country	Tariffs Charged to the U.S.A. Including Currency Manipulation and Trade Barriers	U.S.A. Discounted Reciprocal Tariffs
Peru	10%	10%
Nicaragua	36%	18%
Norway	30%	15%
Costa Rica	17%	10%
Jordan	40%	20%
Dominican Republic	10%	10%
United Arab Emirates	10%	10%
New Zealand	20%	10%
Argentina	10%	10%
Ecuador	12%	10%
Guatemala	10%	10%
Honduras	10%	10%
Madagascar	93%	47%
Myanmar (Burma)	88%	44%
Tunisia	55%	28%
Kazakhstan	54%	27%
Serbia	74%	37%
Egypt	10%	10%
Saudi Arabia	10%	10%
El Salvador	10%	10%
Côte d`Ivoire	41%	21%
Laos	95%	48%
Botswana	74%	37%
Trinidad and Tobago	12%	10%
Morocco	10%	10%

Section 6: Company Comparison

Both companies appear to have been suffering as of recent years. Critically, Intel has been seeing much greater losses in their net profit margin, with their net profit margin in 2024 decreasing to -36.2% as compared to AMD's 2.25% 2024 net profit margin. Intel's investing and financing activities have barely changed at all over the past few years, which would be fine if the company was doing significantly well, but clearly, they are not if their net profit margins are so into the negative. Additionally, Intel is phasing out of relevance as Google Trends appears to show that significantly more people are searching for AMD products.

From a purely financing perspective, one should feel a lot more safe investing in AMD than Intel due to their minor declines in net profit margin compared to Intel's extreme collapse of net profit margin. However, to the high Taiwan import tariffs very recently imposed on the United States economy, it is unlikely that AMD is going to be a profitable business either, since their operating costs are going to drastically increase immediately, and AMD does not have the saved investments to afford to build extremely expensive semiconductor manufacturing factories within the United States.

Ultimately, I would still suggest investing in AMD over Intel, though, after seeing how both companies are rapidly declining in terms of all financial metrics, I would not suggest realistically investing in either company today.

Citations

[1] “INTEL CORPORATION 10-K Form,” INTC-20241228, https://www.sec.gov/Archives/edgar/data/50863/000005086325000009/intc-20241228.htm (accessed May 4, 2025).

[2] “ADVANCED MICRO DEVICES, INC. 10-K Form,” AMD-20221231, https://www.sec.gov/Archives/edgar/data/2488/000000248823000047/amd-20221231.htm#i179f0d6779c24794a67681755ffb9a04_118 (accessed May 4, 2025).

[3] “ADVANCED MICRO DEVICES, INC 10-Q Form,” AMD-20240330, https://www.sec.gov/Archives/edgar/data/2488/000000248824000056/amd-20240330.htm (accessed May 4, 2025).

[4] “Google Trends - Intel, AMD, NVIDIA,” Google Trends, https://trends.google.com.sg/trends/explore/TIMESERIES?date=all&q=amd%2Cintel%2Cnvidia&hl=en-US&sni=1 (accessed May 4, 2025).

[5] D. A. Jingyue Hsiao, “US imposes 10% blanket tariff starting April 5; Taiwan, Asia exporters face country-specific rates up to 49%,” DIGITIMES, https://www.digitimes.com/news/a20250403VL200/market-tariff-manufacturing-policy-2025.html (accessed May 4, 2025).

[6] “Leading American Chip Design and Manufacturing for More Than 50 Years,” Intel, https://www.intel.com/content/dam/www/central-libraries/us/en/documents/semiconductors-and-intel-introduction.pdf (accessed May 5, 2025).