



NVIDIA®

NVIDIA SHORT THESIS

Current Price

\$569.93

Target Price

\$395 - \$425



1. RECOMMENDATION

I recommend shorting NVIDIA Corporation [NVDA], the leading producer of the graphics processing unit (GPU) electronic circuit and a key player in various artificial intelligence (AI) growth areas. In my view, NVDA is at least 25%-31% overvalued. NVDA last traded at about \$570 per share.

The company has strong demand for its flagship GPU product, enjoys an enviable 40+% EBITDA margin, and possesses an unlevered balance sheet. It has also invested substantial capital into its autonomous driving unit which could in time generate substantial incremental cash. However, the stock price entirely reflects all this good news. NVDA trades at an EV/Revenue ratio of about 23x, a dramatically higher figure than even richly-valued high fliers like Tesla or Netflix. The stock is simply ahead of itself. It has appreciated about 260% since year end 2018, while its adjusted EBITDA increased at an annualized rate of only around 4% over the two-year period ended January 2020 (although I must note that EBITDA increased in the July 2020 quarter partly due to an acquisition). Any shortfall in quarterly earnings and/or unfavorable future earnings guidance would likely be poorly received. A recent example of such impact was in the fall of 2018, when negative developments in the Bitcoin mining industry contributed to a 40% sell-off in NVDA shares.

2. COMPANY BACKGROUND

About 20 years ago, NVDA introduced tremendous advances to the GPU chip. In turn, the GPU graphics accelerator became the backbone of more complex and detailed video games and has played a key role in the growth of virtual reality technology. Given its parallel processing structure, the GPU has also proven to be very efficient in processing large blocks of data simultaneously, making it a piece of hardware for machine learning and deep learning algorithms. As a result, NVDA plays a central role in the growth and in many cases, the creation – of AI technologies, autonomous driving vehicles, and businesses with high growth potential such as the newly acquired Arm Ltd.

In mid-September 2020, NVDA agreed to purchase Arm Ltd., a highly regarded chip designer and a pioneer in creating code for chips to communicate with software, for \$40 billion, equivalent to more than 20x projected revenue and 60x forward EBITDA. On a trailing 12 month basis, NVDA's revenue and adjusted EBITDA totaled \$13.1 billion and \$5.8 billion, respectively, and its adjusted LTM EPS was \$7.65. The company's market capitalization and enterprise value are \$304 billion and \$300 billion, respectively. As a consequence, NVDA's P/E, EV/Revenue and EV/EBITDA ratios are all quite lofty: 63.4x, 22.9x, and 51.6x, respectively, all expressed in terms of LTM results. I project 12%-15% annual revenue growth over the next few years,

and I expect NVDA to realize a slight improvement to its current impressive adjusted EBITDA margins in the low-to-mid 40% range over that period. Longer term, I anticipate gradual erosion in these margins.

3. INVESTMENT THESIS

The market views NVDA as having almost unlimited growth potential, with little risk of a growth slowdown. Investors perceive the presence of an almost unassailable moat around NVDA's technology, even though NVDA faces a major competitor AMD in its cash-cow GPU chip business. The stock is, quite literally, priced for perfection. To demonstrate, I consider Tesla, perhaps the stock that fundamental investors believe has the most stretched valuation, trades at around 16x trailing revenues, seven full multiple points less than NVDA which is trading at 23x trailing revenues. Similarly, NFLX, another highly-valued growth company, trades at about 9.4x LTM revenues. Perhaps the market is looking forward to a giant step change in NVDA's driverless technology revenues as a key element in the company's valuation. However, NVDA's automotive revenue totaled only \$111 million, or 3% of consolidated revenues, in the June 2020 quarter, down 47% on a year-over-year basis.

4. CATALYSTS

Given its valuation, NVDA must continue to print very strong quarterly results, as well as optimistic guidance. The market

would likely punish the company for any significant deviations. It has happened before: in the fall of 2018, NVDA shares declined around 40%, as investors reacted to the company's over-reliance on sales to crypto-currency miners when the price of Bitcoin declined precipitously. In addition, the market could potentially react poorly to the very optimistic synergy and other assumptions put forth to justify the Arm Ltd. purchase from SoftBank. The margin of error for a company with a 50+ EV/EBITDA multiple is quite small.

5. VALUATION

My base case assumes a discount rate of 15% (NVDA's beta is 1.53); annualized adjusted EBITDA growth of 20% for the balance of this fiscal year (ending January 2021) and for each of the subsequent three fiscal years; a 15% year-over-year increase in FY 2025, and 10% growth thereafter. Under this scenario, NVDA's DCF is around \$425, or 25% below the current share price. These EBITDA growth assumptions are not conservative; between FY 2018 (year ended January 2018) and FY 2020 (year ended January 2020), NVDA's compounded annual adjusted EBITDA growth was just under 4%. With this in mind, I note that if NVDA's EBITDA growth in the three fiscal years ending January 2022, January 2023 and January 2024 were to compound at a still-high 17% average annual rate, NVDA's fair value drops to around \$395, or 31% below the current share price.

6. RISKS AND HOW TO MITIGATE

Probably the biggest risk to an NVDA short position is the resumption of an almost exclusively tech-driven stock market rally. In that case, the stock could drift higher, as investors don't really factor valuations into their investment decisions. A pronounced pick-up in automotive revenue and additional partnerships with auto manufacturers could also boost investor enthusiasm. NVDA recently announced a partnership with Mercedes-Benz to launch intelligent vehicles across the car maker's fleet beginning in 2024. I could hedge against these risks by purchasing call options with a \$550 exercise price, limiting any losses to ~10%, or by setting a stop-loss or stop-limit order in that range.