



# NVIDIA (NVDA)

Updated May 21<sup>th</sup>, 2018 by Jonathan Weber

## Key Metrics

<b>Current Price:</b> \$246	<b>5 Year CAGR Estimate:</b> 8.0%	<b>Quality Percentile:</b> N/A
<b>Fair Value Price:</b> \$184	<b>5 Year Growth Estimate:</b> 15.0%	<b>Momentum Percentile:</b> N/A
<b>% Fair Value:</b> 133%	<b>5 Year Valuation Multiple Estimate:</b> -7.2%	<b>Total Return Percentile:</b> N/A
<b>Dividend Yield:</b> 0.2%	<b>5 Year Price Target</b> \$339	<b>Valuation Percentile:</b> N/A

## Overview & Current Events

NVIDIA Corporation is a specialized semiconductor company that designs and manufactures graphics processors, chipsets and related software products. Its products include processors that are specialized for gaming, design, AI data science and big data research, as well as chips designed for autonomous vehicles, robots, etc. NVIDIA was founded in 1993, is headquartered in Santa Clara, CA, and is valued at \$150 billion.

NVIDIA's most recent quarterly results were announced on May 10, the company reported earnings per share of \$2.05, an increase of 141% year over year. This immense earnings growth was accompanied by a revenue increase of 65%, to \$3.2 billion. Guidance for Q2 sees revenues of \$3.1 billion, a small decrease compared to Q1 results, but ahead of what analysts had expected.

## Growth on a Per-Share Basis

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2023
<b>EPS</b>	\$0.29	\$0.40	\$0.65	\$0.94	\$0.90	\$0.74	\$1.12	\$1.08	\$2.57	\$4.82	<b>\$6.75</b>	<b>\$13.55</b>
<b>DPS</b>	-	-	-	-	\$0.08	\$0.31	\$0.34	\$0.40	\$0.49	\$0.57	<b>\$0.61</b>	<b>\$1.25</b>

NVIDIA has been a successful player in the graphic processor (GPU) industry. As this hasn't been a very sizeable market for many years, its revenues as well as its earnings were not at a level that would allow for a \$150 billion market capitalization at all. More recently NVIDIA's growth exploded, though, due to two main trends: Cryptocurrencies became more common, and miners who want to mine / generate a significant amount of cryptocurrencies oftentimes do this with graphic processors. This has driven demand for top-tier GPUs over the last year, which is one of the reasons why NVIDIA has been able to grow its GPU revenues by 77% during Q1. NVIDIA offers crypto-specific GPUs, but demand from miners is somewhat cyclical: During times when the price of cryptocurrencies is lower, a lower amount of crypto-miners upgrade their GPUs, but more GPUs are bought when the price of cryptocurrencies is rising.

NVIDIA has also found out that its GPUs are very versatile in AI applications: This has, originally, not been intended and came as a surprise to NVIDIA as well, but the company has immediately started to capitalize on this trend by offering GPUs that are optimized for deep learning purposes, where these GPUs act as the brain of computers, robots, self-driving cars, etc. Those GPUs are utilized in professional visualization, data centers and automotive markets.

All of the markets NVIDIA supplies GPUS for have strong growth rates, which poises well for NVIDIA's revenue outlook – even without significant market share gains the company should easily be able to capitalize on growing demand from gamers, professionals, cryptocurrency miners, scientists, etc.

NVIDIA recently has been able to grow its profits a lot faster than its revenues, which can be explained by operating leverage and improving economics of scale. Going forward this should help NVIDIA to achieve above-average earnings growth rates as well, although the 140%+ earnings growth rates from the most recent quarter will not be sustainable.

NVIDIA's forecasts see a total addressable market of \$50 billion in data centers alone (by 2023), which, compared with the company's trailing revenues of just \$10 billion (across all businesses), shows that NVIDIA has a lot of potential to grow its presence over the coming years. Many tech companies drive their EPS growth by repurchasing shares, but even though NVIDIA has bought back shares occasionally, its share count has actually increased over the last five years.

## Valuation Analysis

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Now	2023
<b>Avg. P/E</b>	49.8	31.3	21.3	17.4	14.8	19.6	16.9	22.6	23.5	33.3	<b>36.4</b>	<b>25.0</b>
<b>Avg. Yld.</b>	-	-	-	-	0.6%	2.1%	1.8%	1.6%	0.8%	0.4%	<b>0.2%</b>	<b>0.6%</b>

NVIDIA's valuation has increased significantly starting in 2015. This was the point where NVIDIA transformed from a gaming-focused GPU producer into a company that sells its products to many different industries. The improved growth rates (and outlook with substantially bigger addressable markets) has led to a revaluation that has made NVIDIA's shares rally. Its current valuation will likely not be sustainable in the long run, but due to its high growth rates and strong outlook NVIDIA will likely continue to trade at an above-average valuation for the foreseeable future.

## Safety, Quality, Competitive Advantage, & Recession Resiliency

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2023
<b>GP/A</b>	34.9%	32.3%	29.0%	36.8%	35.2%	31.7%	36.2%	38.1%	41.3%	51.8%	<b>55.0%</b>	<b>50.0%</b>
<b>Debt/A</b>	28.2%	25.7%	29.1%	25.3%	24.8%	38.5%	38.6%	39.2%	41.4%	33.5%	<b>32.0%</b>	<b>28.0%</b>
<b>Payout</b>	-	-	-	-	8.9%	41.9%	30.4%	37.0%	19.1%	11.8%	<b>9.0%</b>	<b>9.2%</b>
<b>Std. Dev.</b>	65.7%	54.0%	42.5%	56.1%	27.8%	17.6%	24.5%	29.4%	39.7%	44.2%	<b>35.0%</b>	<b>30.0%</b>

NVIDIA has a very strong balance sheet, its total liabilities are about one third of its assets, and in eight of the last ten years its net interest expense was negative (i.e. they earned more interest than they paid). The company has also managed to increase its already quite high gross profits to assets ratio further over the last couple of years, especially after 2015 when the company increasingly supplied chips to other markets than the gaming market it was originally focused on. NVIDIA's payout ratio has shrunk to below 10%, as the dividend was raised continuously, but not nearly at the same pace as the company's earnings growth.

NVIDIA's business is cyclical, the gaming market is impacted by disposable income, demand from crypto miners is dependent on cryptocurrency prices and demand from businesses is dependent on the stage of the economy. NVIDIA has been able to remain profitable even during the last financial crisis, though, thus it seems unlikely that its profits evaporate completely even in an adverse scenario. In the gaming market NVIDIA is the producer with the best tech, and it was NVIDIA who basically established the GPU-for-AI market, it is a market leader there, too (and will remain so).

## Final Thoughts & Recommendation

NVIDIA has very strong fundamentals (margins, balance sheet strength, etc.), produces high growth rates and addresses very attractive, fast-growing markets. Its shares trade at a premium valuation, though, and its dividend yield is negligible. For share price appreciation focused investors NVIDIA could still be an attractive long-term investment, but shares are very volatile and the industries NVIDIA addresses are all somewhat cyclical.

## Total Return Breakdown by Year

