Broadcom (AVGO)

Updated May 21th, 2018 by Jonathan Weber

Key Metrics

Current Price:	$240	**5 Year CAGR Estimate:**	15.3%	**Quality Percentile:**	N/A
Fair Value Price:	$266	**5 Year Growth Estimate:**	10.3%	**Momentum Percentile:**	N/A
% Fair Value:	90%	**5 Year Valuation Multiple Estimate:**	2.0%	**Total Return Percentile:**	N/A
Dividend Yield:	3.0%	**5 Year Price Target**	$435	**Valuation Percentile:**	

Overview & Current Events

Broadcom designs, develops and sells semiconductors under the following business units: Wired infrastructure, wireless communication, enterprise storage and industrial. Its offerings include data center chips, factory automation, energy systems and power generation, broadband access, home connectivity, etc. Broadcom is a fabless semiconductor company, which means that the products it designs are manufactured by other companies (so called foundries). Broadcom has recently redomiciled to the US and is now headquartered in San Jose, CA. The company was founded in 1961 and is currently valued at $97 billion.

Broadcom's most recent earnings release (March 15) included (adjusted) earnings per share of $5.12, an increase of 41% year over year. Revenues were up by 28% year over year (up 10% on a quarter-to-quarter basis), reaching $5.3 billion during the first quarter. Broadcom's non-GAAP EPS numbers oftentimes include a lot of adjustments, one big recurring item is the amortization of intangibles after takeovers, the most recent results adjust for the impact of tax reform.

Growth on a Per-Share Basis

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2023
EPS	$0.35	-$0.09	$1.81	$2.28	$2.77	$2.89	$4.90	$8.98	$11.45	$16.02	***$19.75***	***$32.25***
DPS	-	-	$0.07	$0.40	$0.61	$0.88	$1.23	$1.64	$2.52	$4.81	***$7.00***	***$13.00***

Broadcom's profitability has exploded over the last decade. Its earnings per share rose almost fifty-fold during the 2008-2017 time frame. This earnings growth was driven by a significant amount of M&A activities, the most important one being the merger between Broadcom and Avago Technologies (which explains the ticker symbol). Broadcom has since made several other major takeovers, including its acquisition of Brocade for $6 billion that closed in late 2017.

These acquisitions naturally have impacted Broadcom's growth tremendously, thus what we see in the above table is not Broadcom's organic growth rate. Due to its size Broadcom will not be able to continue to acquire competitors regularly, as regulators are less likely to allow future major acquisitions that would increase Broadcom's market share further. It thus seems quite likely that Broadcom will grow substantially slower going forward, more in line with the markets that it is serving.

Broadcom's biggest market is wireless communications, where the company owns a strong connectivity portfolio that includes advanced LTE, Bluetooth 5.x, Wi-Fi, GNSS (GPS, Galileo, etc.) and so on. Broadcom is also well positioned in the enterprise storage market, where it provides switching and other connectivity solutions as well as storage products such as SSD controllers. These markets will continue to grow, and even without any major acquisitions Broadcom's revenues should continue to grow as well: Thanks to a strong IP portfolio (22,000 patents) it is unlikely that Broadcom loses any market share going forward. Earnings growth will further be driven by improving economics of scale and share buybacks – the company has announced a $12 billion buyback program in April 2018, enough to buy back 12% of its stock.

Valuation Analysis

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Now	2023
Avg. P/E	---	---	11.7	13.6	13.0	13.4	14.7	13.9	13.5	14.4	***12.2***	***13.5***
Avg. Yld.	---	---	0.3%	1.3%	1.7%	2.3%	1.7%	1.3%	1.6%	2.1%	***3.0%***	***3.5%***

Broadcom has, after the company became profitable again in 2010, been valued at relatively inexpensive valuations consistently. Despite the rise in the broad market Broadcom did not get significantly more expensive, and right now shares are trading at a small discount relative to the historic average.

Broadcom's dividend, which was grown at a very strong pace over the last five years (51% annually), three years (61% annually) and last year (the most recent dividend increase was a 72% hike), yields 3.0% right now, which is substantially more than the average yield and also more than what investors can get from the broad market.

Safety, Quality, Competitive Advantage, & Recession Resiliency

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2023
GP/A	35.0%	28.4%	44.8%	46.9%	40.0%	35.1%	18.1%	33.9%	12.0%	15.7%	***23.0%***	***28.0%***
Debt/A	58.3%	47.2%	30.2%	18.0%	15.5%	15.4%	69.1%	55.2%	56.2%	57.4%	***56.0%***	***52.0%***
Int. Cov.	1.5	0.5	12.9	188	---	---	---	9.1	4.9	5.6	***6.5***	***8.0***
Payout	---	---	3.9%	17.5%	22.0%	30.4%	25.1%	18.3%	22.0%	30.0%	***35.4%***	***40.0%***
Std. Dev.	---	28.1%	27.6%	39.9%	22.5%	24.9%	33.2%	34.6%	19.8%	21.1%	***16.0%***	***18.0%***

The above table can be quite confusing due to the big moves in the ratios we see here, but most of them can be explained by Broadcom's M&A activities. Big takeovers led to sizeable increases in Broadcom's asset base, which resulted in steep drops in Broadcom's gross profits to assets ratio, especially when combined with acquisition-related intangible asset amortization that lowers the company's gross profits.

In some years Broadcom's interest expenses were very low (due to low debt levels and / or high relative cash holdings), which resulted in high interest coverage ratios (in 2012-2014 net interest income was positive), more recently its interest expenses rose significantly as the company's leverage increased. As M&A will presumably slow down going forward all of these metrics should normalize.

Broadcom did not remain profitable during the last financial crisis, but the company was much smaller and less diversified back then. Due to low fixed costs (as Broadcom operates fabless) and due to a lot of diversification across industries and geographically, the company is better positioned to weather future economic downturns. Due to its strong IP portfolio and its size (which provides strong negotiation positions versus customers and suppliers) Broadcom is well positioned in the markets it targets, and market share losses are not overly likely.

Final Thoughts & Recommendation

Broadcom is a high-growth company, but much of its extraordinary growth was achieved through takeovers and mergers over the last decade. Going forward Broadcom will not be able to make transforming acquisitions easily, which is why the company will rely more on organic growth in the markets it targets. Due to a compelling dividend yield and an inexpensive valuation Broadcom should still be able to deliver attractive total returns going forward.

Total Return Breakdown by Year