



Monolithic Power Systems, Inc. (MPWR)

Updated May 9th, 2023 by Nikolaos Sismanis

Key Metrics

Current Price:	\$407	5 Year CAGR Estimate:	10.4%	Market Cap:	\$19.3 B
Fair Value Price:	\$300	5 Year Growth Estimate:	16.0%	Ex-Dividend Date:	06/29/2023
% Fair Value:	136%	5 Year Valuation Multiple Estimate:	-5.9%	Dividend Payment Date:	07/14/2023
Dividend Yield:	1.0%	5 Year Price Target	\$630	Years Of Dividend Growth:	6
Dividend Risk Score:	D	Retirement Suitability Score:	F	Rating:	Buy

Overview & Current Events

Monolithic Power Systems is a leading semiconductor company that designs, develops, and markets high-performance power solutions. The company utilizes its deep system-level and applications expertise to develop highly integrated monolithic systems used in computing and storage, automotive, industrial, communications, and consumer applications industries. Its mission is to reduce total energy consumption in its customers' systems with green, practical, and compact solutions. Monolithic Power generates around \$1.8 billion in annual revenues and is headquartered in Kirkland, Washington.

On May 4th, 2023, Monolithic Power reported its Q1 results for the period ending March 31st, 2023. For the quarter, revenues grew by 19.4% year-over-year to \$451.1 million, once again powered by Monolithic's diversified growth strategy, technological innovation, investment in production capacity, and, importantly, broad-based market share gains. Notably, Storage and Computing revenues grew by 24.1% to \$119.8 million, while Automotive revenues jumped to \$105.3 million, a gain of 93.2% versus the prior-year period. Following strong top-line growth, adjusted EPS advanced by 22.4% to \$3.00 compared to Q1 2022.

Monolithic expects Q2 revenues in the range of \$430 million to \$450 million, suggesting a year-over-year decline of 4.5% at the midpoint of this outlook. Based on this estimate, the current market fundamentals, and Monolithic's net income margin expansion trajectory, we now expect FY2023 adjusted EPS of \$12.00, modestly lower than our previous estimate of \$13.00. Keep in mind that adjusted EPS is a more meaningful valuation and performance metric than GAAP EPS due to Monolithic's high stock-based compensation expenses. However, all data shown in the table below reflects normalized results as originally reported in the company's 10K with the SEC.

Growth on a Per-Share Basis

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2028
EPS	\$0.61	\$0.92	\$0.89	\$1.30	\$1.58	\$2.49	\$2.52	\$3.67	\$5.28	\$9.37	\$12.00	\$25.20
DPS	---	\$0.45	\$0.80	\$0.80	\$0.80	\$1.20	\$1.60	\$2.00	\$2.40	\$3.00	\$4.00	\$9.95
Shares¹	37.4	38.7	39.5	40.4	41.4	42.2	43.2	44.8	45.8	46.7	48.6	60.0

Monolith's EPS has been growing rapidly over the past decade on the back of increasing demand for efficient analog semiconductor solutions. Specifically, the company features a 10-year EPS CAGR of 35.5%. Despite Monolithic's prolonged success, EPS been snowballing over the past few years, as was also the case in FY2022. This is primarily due to the company's new cutting-edge products, which the market has welcomed with very strong demand. We anticipate EPS growth of around 16% in the medium-term, implying a significant deceleration from its current levels. This is to account for potential demand and production headwinds going forward. The ongoing supply crisis combined with a global shortage in the semiconductor industry should also ensure the company retains solid pricing leverage in the short to medium-term, which should further contribute to EPS growth.

In 2014, Monolithic initiated its quarterly dividend, which has grown with each new EPS plateau following higher

¹ Share count is in millions.

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profitability. We expect DPS growth of around 20% in the medium-term, lower than the latest dividend hike of 33%, to be prudent. We assume that the company will retain a healthy payout ratio moving forward.

Valuation Analysis

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Now	2028
Avg. P/E	39.5	46.0	56.2	50.0	58.2	52.6	57.5	72.8	85.2	42.7	33.9	25.0
Avg. Yld.	---	1.1%	1.6%	1.2%	0.9%	0.9%	1.1%	0.7%	0.5%	0.8%	1.0%	1.6%

Monolithic's historical P/E has averaged close to the mid-50s due to the company's constant rapid expansion. While we believe that the ongoing multiple expansion is not unreasonable based on Monolithic's accelerated growth and profitability prospects, we have set our medium-term fair multiple at 25. This is to account for potential headwinds caused by the cyclical nature of the semiconductor industry and the possibility for a slowdown in growth. Due to its rich valuation multiple, Monolithic's dividend payments have historically resulted in very low yields. Despite the likely rapid dividend growth, we expect dividends to remain a token of the total returns.

Safety, Quality, Competitive Advantage, & Recession Resiliency

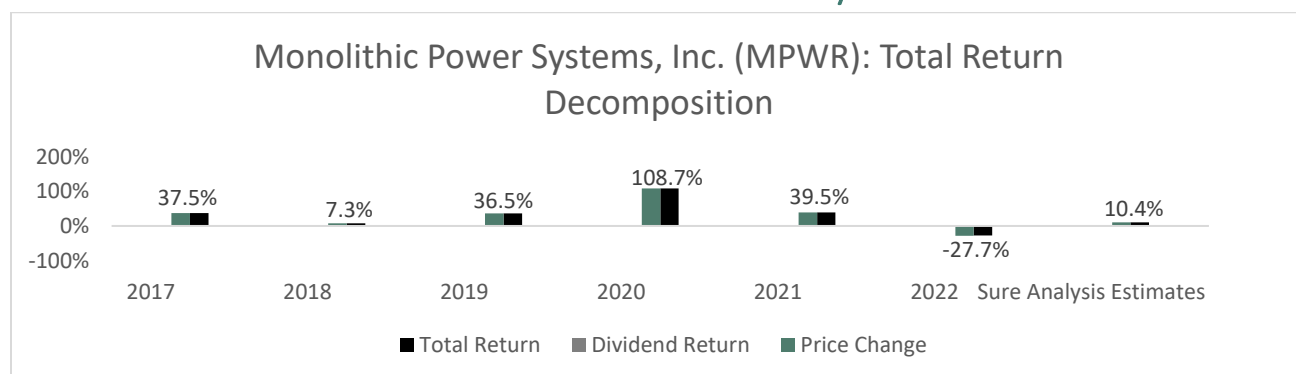
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2028
Payout	---	49%	90%	62%	51%	48%	63%	54%	45%	32%	33%	39%

We consider Monolithic's dividend very safe, not only due to the stock's healthy payout ratio, which currently stands at around 1/3 of its adjusted EPS, but also due to the sky-high profitability growth expectations. The company also enjoys several qualities, including excellent margins, no long-term debt on its balance sheet, and continually strong R&D spending, which should help it stay above its competitors. That being said, the analog and mixed-signal semiconductor industry is highly competitive and will most certainly remain so. The company's primary competitors include industry giants such as Analog Devices, Infineon Technologies, Maxim Integrated Products, and NXP Semiconductors, which could easily gain market share if Monolithic doesn't remain constantly innovative. On the positive side, the company has displayed fantastic recession resiliency qualities, despite the cyclical nature of semiconductors due to its mission-critical products. Sales remained robust during the Great Financial Crisis and even accelerated through the COVID-19 pandemic.

Final Thoughts & Recommendation

Monolithic Power Systems has rewarded its shareholders with fabulous returns over the past decade, powered by spectacular top- and bottom-line growth. The company's explosive growth may lag in the short-term, due to a shaky market outlook. However, we still remain optimist about its medium-term earnings growth prospects. We forecast annualized returns to 10.4% through 2028 which reflects this expectation, despite the rather severe valuation headwind estimates. We rate the stock to a buy and note that fluxes in its growth rates can wildly swing total returns either way.

Total Return Breakdown by Year



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Income Statement Metrics

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Revenue	238	283	333	389	471	582	628	844	1,208	1,794
Gross Profit	128	153	180	211	258	323	346	466	685	1,049
Gross Margin	53.7%	54.0%	54.1%	54.3%	54.8%	55.4%	55.2%	55.2%	56.7%	58.5%
SG&A Exp.	55	67	72	83	97	114	134	162	226	274
D&A Exp.	12	13	14	15	16	12	15	19	29	37
Operating Profit	24	27	42	54	79	115	105	167	269	535
Operating Margin	9.9%	9.7%	12.6%	13.9%	16.7%	19.8%	16.7%	19.7%	22.3%	29.8%
Net Profit	23	35	35	53	65	105	109	164	242	438
Net Margin	9.6%	12.6%	10.6%	13.6%	13.8%	18.1%	17.3%	19.5%	20.0%	24.4%
Free Cash Flow	45	65	54	71	68	119	120	212	225	188
Income Tax	1	1	7	5	18	13	4	5	30	87

Balance Sheet Metrics

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Assets	369	399	431	511	653	793	956	1,208	1,589	2,059
Cash & Equivalents	101	126	91	113	83	173	173	335	189	289
Accounts Receivable	24	26	31	34	38	55	53	67	105	183
Inventories	40	41	63	71	99	136	128	157	259	447
Goodwill & Int. Ass.	-	13	12	10	8	7	7	7	6.6	6.6
Total Liabilities	46	53	63	80	131	153	183	242	342	390
Accounts Payable	11	13	13	17	23	23	27	38	83	61
Long-Term Debt	-	-	-	-	-	-	-	-	-	-
Shareholder's Equity	323	346	369	431	522	640	773	967	1,244	1,669
LTD/E Ratio	-	-	-	-	-	-	-	-	-	-

Profitability & Per Share Metrics

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Return on Assets	7.0%	9.2%	8.5%	11.2%	11.2%	14.6%	12.4%	15.2%	17.3%	24.0%
Return on Equity	7.9%	10.6%	9.8%	13.2%	13.7%	18.1%	15.4%	18.9%	21.9%	30.1%
ROIC	7.9%	10.6%	9.8%	13.2%	13.7%	18.1%	15.4%	18.9%	21.9%	30.1%
Shares Out.	37.4	38.7	39.5	40.4	41.4	42.2	43.2	44.8	47.9	48.4
Revenue/Share	6.17	7.10	8.15	9.27	10.81	13.06	13.72	17.96	25.22	37.10
FCF/Share	1.16	1.62	1.31	1.69	1.56	2.67	2.61	4.51	4.69	3.88

Note: All figures in millions of U.S. Dollars unless per share or indicated otherwise.

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