



Monolithic Power Systems, Inc. (MPWR)

Updated August 1st, 2023 by Nikolaos Sismanis

Key Metrics

Current Price:	\$534	5 Year CAGR Estimate:	4.5%	Market Cap:	\$25.3 B
Fair Value Price:	\$300	5 Year Growth Estimate:	16.0%	Ex-Dividend Date:	09/29/2023 ¹
% Fair Value:	178%	5 Year Valuation Multiple Estimate:	-10.9%	Dividend Payment Date:	10/13/2023
Dividend Yield:	0.7%	5 Year Price Target	\$630	Years Of Dividend Growth:	6
Dividend Risk Score:	D	Retirement Suitability Score:	F	Rating:	Sell

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 July 31st, 2023, Monolithic Power reported its Q2 results for the period ending June 30th, 2023. For the quarter, revenues declined by 2.2% quarter-over-quarter to \$441.13 million. The decline in revenues was due to lower communications sales, offset by higher Industrial, Storage and Computing, and Consumer and Enterprise Data sales.

Notably, Communications revenues of \$49.3 million were down 27.4% from Q1-2023, primarily reflecting lower infrastructure sales. However, Storage and Computing revenues grew by 3.9% sequentially. The Industrial and Consumer segments also saw higher revenues, which increased by 4.8% and 2.9%, respectively. Finally, Enterprise Data revenues grew by 1.7% compared to the previous quarter. As a result of lower sales, adjusted earnings-per-share came in at \$2.82, compared to \$3.00 in Q1-2023.

Monolithic expects Q3 revenues in the range of \$464 million to \$484 million, suggesting a year-over-year decline of 4.3% at the midpoint of this outlook. Based on this estimate and the current market fundamentals, we continue to expect FY2023 adjusted EPS of \$12.00. 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
Shares²	37.4	38.7	39.5	40.4	41.4	42.2	43.2	44.8	45.8	46.7	48.8	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.

¹ Estimated dates based on past dividend dates.

² Share count is in millions.

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In 2014, Monolithic initiated its quarterly dividend, which has grown with each new EPS plateau following higher 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	44.5	25.0
Avg. Yld.	---	1.1%	1.6%	1.2%	0.9%	0.9%	1.1%	0.7%	0.5%	0.8%	0.7%	1.6%

Monolithic's historical P/E has averaged close to the mid-50s due to the company's constant rapid expansion. We believe that the current valuation multiple is unreasonably even when taking into account Monolithic's accelerated growth in recent years. We maintain 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

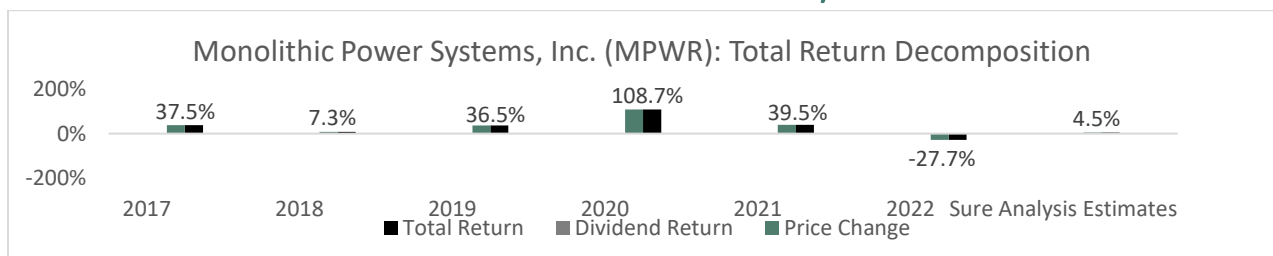
Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2028
Payout	---	49%	90%	62%	51%	48%	63%	54%	45%	32%	33%	39%

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 optimistic about its medium-term earnings growth prospects. Regardless, the stock's overextended valuation could offset most returns that Monolithic's growth could power moving forward. We forecast annualized returns to 4.5% through 2028 which reflects the potential for massive valuation headwinds despite expecting strong earnings growth ahead. We rate the stock a sell. Note that fluxes in Monolithic's 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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