



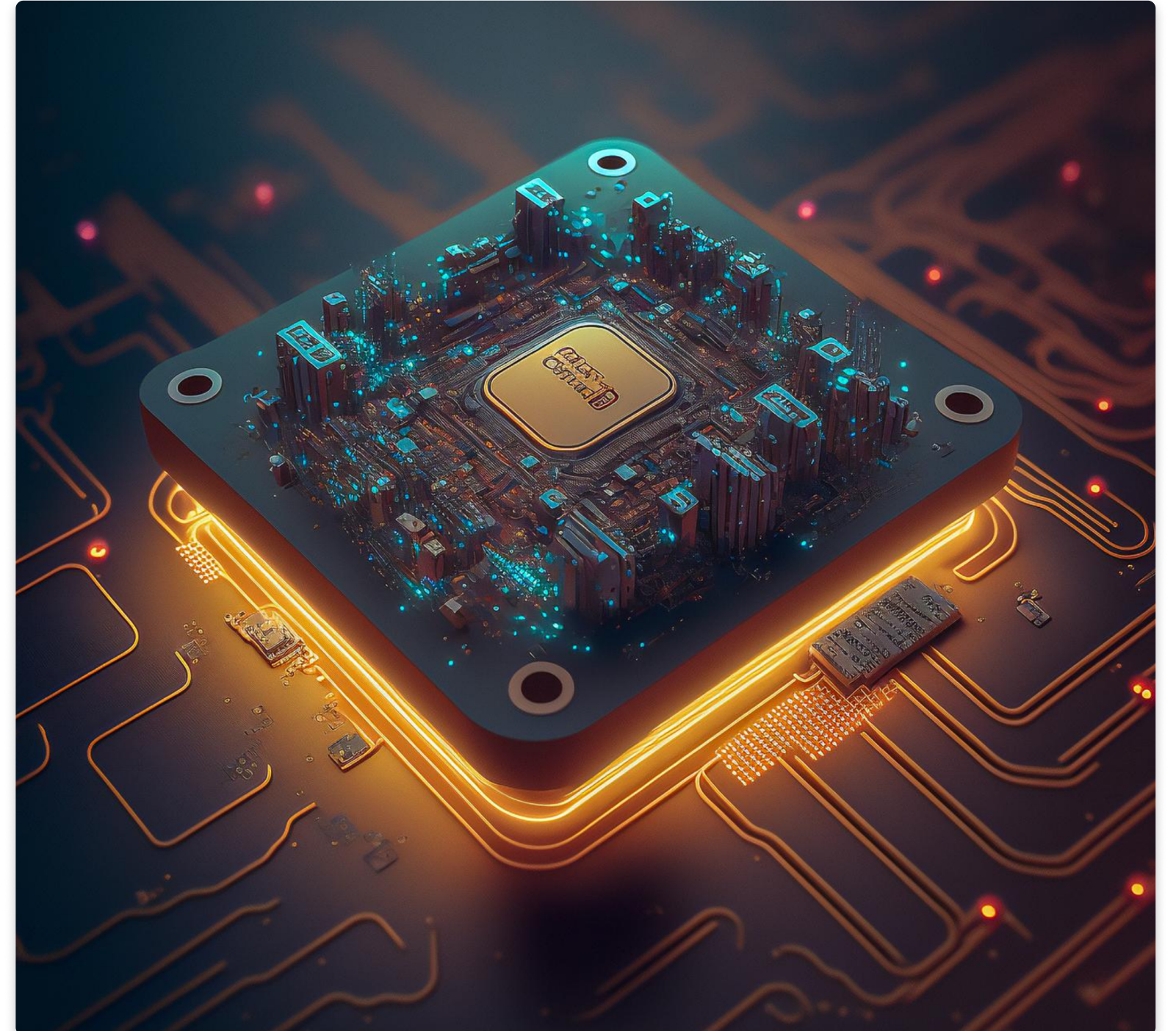
# Wealthpin **Pro**

**NOVEMBER 2023**

No matter which way you cut it, semiconductors will continue to play a central part in the American economy. In fact, it's hard to see where they don't grow in importance over the coming years.

Everything, from our cars, phones, satellites, and refrigerators require semiconductors to function. I've been harping on this for more than a year now, and our model portfolio already features a position in Axcelis Technologies (NASDAQ: ACLS).

But the chip industry is vast, with many moving parts. And considering its importance to global commerce, I believe it deserves more than just one measly investment.



With that in mind, this month, we're going to be looking at Monolithic Power Systems Inc. (NASDAQ: MPWR). They're an American chip company with a unique market moat, solid financials, and plenty of room to grow.

## **TRADE IDEA:**

### **MONOLITHIC POWER SYSTEMS INC (NASDAQ: MPWR)**



**PRICE AT PUBLICATION: \$537.80**

**MARKET CAP AT PUBLICATION: \$25.7 BILLION**

**52-WEEK RANGE: \$336.63-\$595.98**



## Business Overview

From Yahoo Finance:

*"Monolithic Power Systems, Inc. engages in the design, development, marketing, and sale of semiconductor-based power electronics solutions for the computing and storage, automotive, industrial, communications, and consumer markets. The company provides direct current (DC) to DC integrated circuits (ICs) that are used to convert and control voltages of various electronic systems, such as portable electronic devices, wireless LAN access points, computers and notebooks, monitors, infotainment applications, and medical equipment. It also offers lighting control ICs for backlighting that are used in systems, which provide the light source for LCD panels in notebook computers, monitors, car navigation systems, and televisions, as well as for general illumination products. The company sells its products through third-party distributors and value-added resellers, as well as directly to original equipment manufacturers, original design manufacturers, electronic manufacturing service providers, and other end customers in China, Taiwan, Europe, South Korea, Southeast Asia, Japan, the United States, and internationally. Monolithic Power Systems, Inc. was incorporated in 1997 and is based in Kirkland, Washington."*

**The demand for MPWR's products will be driven by two main trends:**

- 1** The integration of AI into more of our everyday products, thus increasing the need for high-processing chips.
- 2** The electrification of cars. The auto industry is one of MPWR's biggest customers. As cars add more functionality, they will require more semiconductors.



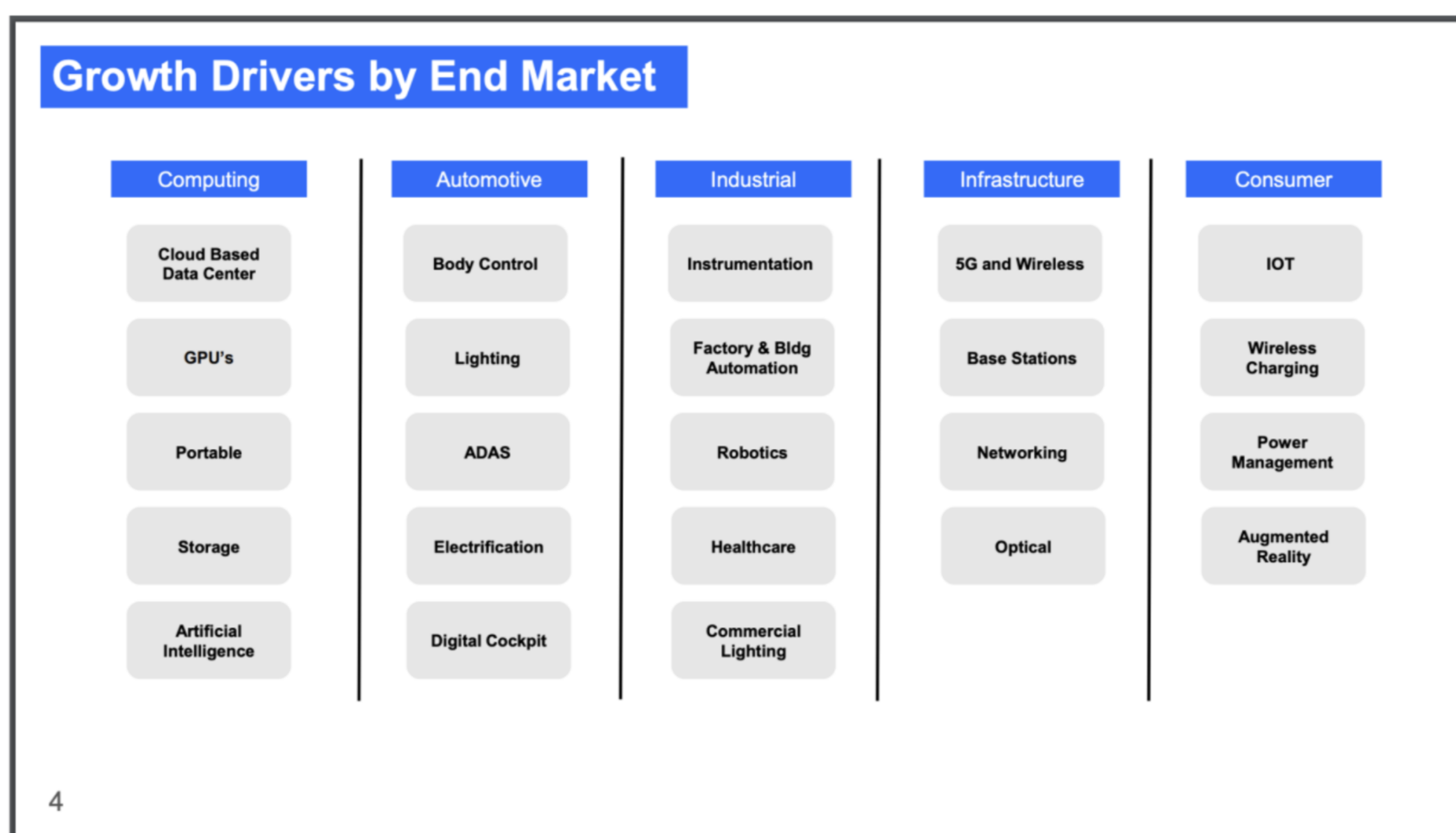


## Financials

Third quarter financials were released October 30th. MPWR reported quarterly revenue of \$479.9 million, up 8% since Q2, but down 8% year over year. The growth was driven mainly by the Automotive, Storage, Enterprise Data, and Compute segments.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue	\$ 474,867	\$ 495,418	\$ 1,367,060	\$ 1,334,136
Cost of revenue	211,326	204,516	597,064	553,393
Gross profit	263,541	290,902	769,996	780,743
Operating expenses:				
Research and development	64,787	67,263	192,184	178,497
Selling, general and administrative	63,188	71,768	205,645	212,353
Total operating expenses	127,975	139,031	397,829	390,850
Operating income	135,566	151,871	372,167	389,893
Other income (expense), net	2,289	5	14,129	(5,720)
Income before income taxes	137,855	151,876	386,296	384,173
Income tax expense	16,692	27,539	55,827	65,591
Net income	\$ 121,163	\$ 124,337	\$ 330,469	\$ 318,582

However, the falling revenue is expected to reverse into next year. The company has inked a number of big design wins for major players like NVIDIA, AMD, and Intel — mainly for various AI chip applications. So, the business pipeline is filled — backlogged, actually, according to the latest earnings call. This will benefit the company long term, and like I said, should lead to higher revenues over the next two quarters.





However, it is important to note that a large segment of MPWR's business is in China; specifically for Chinese EVs. Geopolitical pressures being what they are, and general disorderliness in the global economy, could see the company's margins squeezed over the next two quarters. So more revenue, but less cash flow.

## An Evolving Business

Like alluded to in the company overview, MPWR's speciality is designing and manufacturing high-performance circuits, both analog and mixed-signal. One of MPWR's competitive moats is their ability to integrate high-functionality into a single chip, rather than a distributed chip system. This allows them to pack more computing punch into every square centimeter of space.

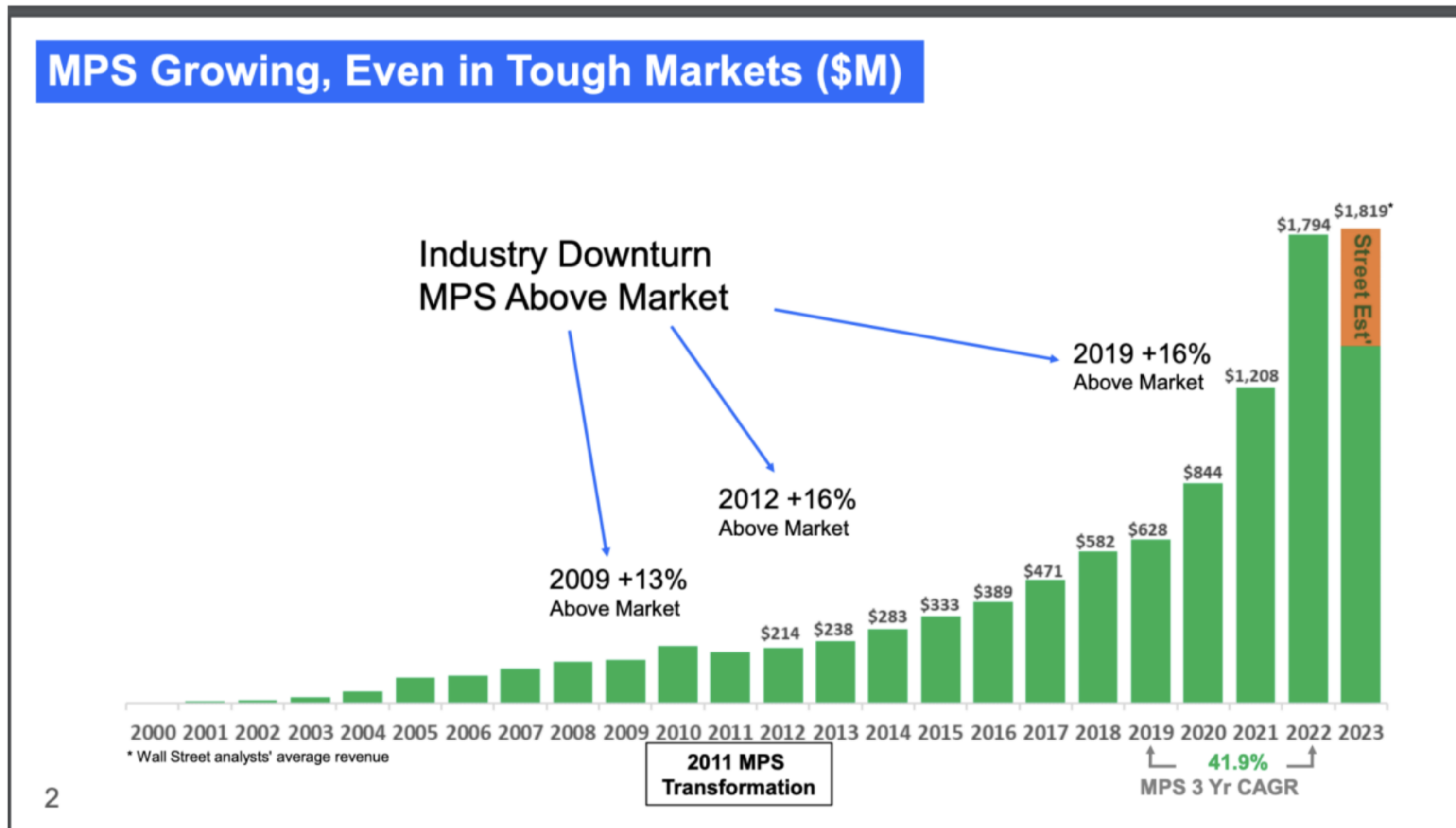
This competitive moat benefits directly from a shift in the market economics of the power management integrated circuit (PMIC) industry. It used to be that the PMIC market growth was driven primarily by number of units sold. However, technological innovations have led to the absolute number of units to be less important than the combined functionality of each unit.

Each PMIC system now has a number of advanced features, such as software programmability, embedded memory, microcontrollers for embedded systems algorithms, and more. As a result, each individual unit has become more expensive. For MPWR, who specializes in tightly designed PMIC systems, this allows them to squeeze more money out of every centimeter of chip space.

Which is why the company has demonstrated above-average revenue growth over the past five years:







## Growth in Automotive Sector

One of the fastest growing silos of MPWR's business is the automotive silo. In 2022, automotive related revenue composed 17% of total revenue. Over the coming years, leadership anticipates a total serviceable market (SAM) of \$7 billion.

**SAM Expansion**

Market	2015 SAM	2018 SAM	2021 SAM
Automotive	\$4B	\$6B	\$7B
Motion Control	\$2B	\$3B	\$4B
ACDC	\$1B	\$2B	\$2B
Modules	\$1B	\$2B	\$2B
Cloud Computing (Server / Storage)	\$800M	\$1B	\$4B
Networking / Telecom	\$600M	\$1B	\$1B
Battery Management	\$600M	\$1B	\$1B
<b>Total Market SAM</b>	<b>\$10B</b>	<b>\$16B</b>	<b>\$21B</b>



This growth is fueled by the technologification of cars. Advanced driver assistance, digital cockpits, electrification, lighting, and body control systems present in most new manufactured vehicles all require the types of power circuits that MPWR develops.

Accordingly, MPWR services an exceptionally large number of the major auto players. They're auto-manufacturing partners include Volkswagen, BMW, General Motors, Toyota, Geely, Tesla, Ford, Renault, Nissan, Mada, Hyundai, and Mercedes. They also work with a number of Tier 1 auto suppliers, including Bosch, Continental, Autoliv, Marquardt, Magna, Novero, ZF, Panasonic Automotive, Aptiv, Harman, and Hella.

As they expand their auto product portfolio, leadership expects to create a total potential revenue of \$400 per car. Besides that, MPWR has over \$1 billion of auto deals in the pipeline.

## Valuation

MPWR's forward P/E is 41.6x. This is quite a bit higher than average. However, historically, the stock has traded at 44x forward P/E. This means that, right now, the stock is trading rather cheaply compared to historical prices, and there is still appreciation potential.

There's a reason for the higher-than-average premium attached to MPWR shares. For one, MPWR has a higher-than-average EPS growth rate. The company has delivered a 33% compound annual growth rate (CAGR) in the five years from 2017 to 2022. Their business is also buoyed by secular growth in the artificial intelligence sector and a large number of locked-in deals for the coming months.





## Risk

MPWR is an American company. Hypothetically, they should benefit from the Biden administration's CHIPS Act, which provides federal funds to domestic companies in the semiconductor supply chain.

However, the bulk of MPWR's business — 86% to be precise — comes from Asia, mainly China. The supposed “decoupling” of the Chinese and American economies could throw a wrench into MPWR's business. The question is: “Will the decoupling actually happen?”

Or even, can it happen at this point. The latest visit by Chinese premier Xi to San Francisco indicates the decoupling may be farther away than many pundits thought.

Additionally, there are a number of slick competitors in the space, like Texas Instruments, On Semiconductors, and NXP Semiconductors. I do believe MPWR has significant advantages over each of these, but it's a competitive market — these competitors could eat away at MPWR's market share.

## Conclusion

Considering the product moat, line of business, and financials, I believe MPWR is a buy. We're adding it to the model portfolio.



To your wealth,  
**Alex Reid**  
Founder, Wealthpin Pro

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