



September 9, 2016

CURRENT PRICE: \$4.89
RATING: BUY
PRICE TARGET: \$15
CURRENT YIELD: N/A

EPS Estimates - GAAP

	DEC 15A	DEC 16E
1Q	(\$0.32)	(\$0.22)A
2Q	(\$0.31)	\$0.07A
3Q	(\$0.05)	(\$0.15)
4Q	(\$0.05)	(\$0.14)
	(\$0.73)	(\$0.44)

Trading Data

52-WEEK PRICE RANGE: \$8.04-\$4.20
SHARES OUTSTANDING: 32.0(M)
MARKET CAP: \$156.5(M)
AVG. DAILY TRADING VOLUME: 0.2(M)
S&P 500: 2,122

Valuation Data

BOOK VALUE: \$3.71
PRICE TO BOOK: 1.32x
DIVIDEND: n/a

MAXWELL TECHNOLOGIES, Inc. (NSDQ: MXWL)

2Q16 Earnings report-“the wait continues”

Highlights

- 2Q16 GAAP earnings of \$0.07/share vs.(\$0.31)/share
- Earnings benefited from asset sale gain
- Chinese subsidy uncertainty impacts revenues
- Potential of higher revenues & profitability in 2017
- Maintain BUY rating & \$15 price target

Investment Thesis

The recent sell-off in this stock has created an attractive entry point for speculative/aggressive investors seeking above average appreciation potential, from MXWL’s shares during the next 6-18 months. We believe MXWL is a revenue/earnings growth story, based on rising demand for the company’s products on both a short-term and long-term basis. Specifically, increased demand for the company’s ultracapacitor products could drive earnings growth as auto/truck/rail industries move towards “greener” options to increase mileage and lower vehicle emissions.

Company Summary

Maxwell Technologies (MXWL-\$4.89), headquartered in San Diego CA, develops, manufactures, and markets advanced energy storage/power delivery products. These products are used in the transportation, renewable energy, industrial, information technology sectors and the company also offers microelectronic products for space/satellite applications. MXWL’s produces two primary items; ultracapacitors and high-voltage capacitors. Internal manufacturing is done at facilities in Phoenix AZ and Rossens Switzerland. Low-cost offshore assembling of MXWL’s ultracapacitor products is done by Belton Technology (Hong Kong China) and Lishan Battery Company (Tianjin China). Sales offices are located in San Diego CA, Norfolk UK, Rossens Switzerland, Munich Germany, and Shanghai China.

For Important Disclosure information regarding the Firm’s rating system, valuation methods and potential conflicts of interest, please refer to the last two pages of this report.



BUSINESS OVERVIEW

MXWL has two primary products: Ultracapacitors and High-Voltage Capacitors.

Ultracapacitors (UC) are energy storage devices which possess high power density (having the ability to charge/discharge energy at a fast rate) and a long operational life. MXWL's ultracapacitor cells and multi-cell packs/modules supply high energy storage/power delivery solutions for application in many industries. These products are used in the transportation, energy, consumer, industrial electronics, and information technology industries. Ultracapacitors are the "lion's share" of MXWL's business comprising 62% of 2011's sales.

High-Voltage Capacitors (HVC) are devices designed/manufactured to perform reliably in all types of climates for electric utility infrastructures for long periods of time. This product group includes grading/coupling capacitors and capacitive voltage dividers used for safety, and reliability, in electric utility infrastructures. Other applications for this product group are used in the transmission, distribution, and measurement of high-voltage electrical energy.

MXWL recently sold its Radiation-Hardened Microelectronic Products business which includes high-performance/high-density power modules, memory modules, and single board computers. This unit was sold to Data Device Corporation for approximately \$21 million in cash and MXWL recognized a pre-tax gain of \$6.66 million.

MXWL TRANSITIONING SALES/GROWTH EFFORTS

During the past 2 years there has been a change in MXWL's management team and sales strategy with the objective of diversifying its targets markets and grow revenues. CEO, Dr. Franz Fink joined the company in May 2014 and hired a new CFO, David Lyle, and employed new people for key/strategic positions. Recently Jorg Buckheim was named Senior Vice President/Chief Sales Officer after spending 13 years at Hella, a global leading in lighting/electronic components and systems for the automotive industry, where he had been serving as CEO/President of Hella China. Dr. Henning Hauenstein became MXWL's Vice President of Strategy/Marketing after working at Infineon Technologies for 10 years as Senior Vice President /General Manager of the automotive business segment.

MXWL's new management group saw the need to shift MXWL away from the Chinese government subsidy-dependent hybrid bus business and diversify into other sectors moving towards mandated energy efficient standards set for 2020. These other sectors include electric/utility grid systems, wind generation, railroad systems, automotive, and truck sectors. To this end, plans are to work with existing customers and establish new strategic



partnerships to assist funding of key technologies/ solutions to accelerate the broader commercialization of MXWL's products.

One example of this was the recent agreement with Corning Industries geared to enhance performance of MXWL's electrode technology and new IP potentially allowing ultracapacitors to withstand extreme hot and cold temperatures. Also, the electrification of automobiles, or "emobility" with electric/hybrid vehicles, also creates another potential future revenue stream.

Another example, Duke Energy's (DUK-\$77.95) and Win Inertia commissioned the use of MXWL's hybrid energy storage system in DUK's electric grid system in efforts to increase the overall efficiency of its electrical network. If successful in this case, then other utilities may also consider employing this energy storage system.

Similar to the DUK energy storage system, rail lines have started to employ MXWL's technology in Philadelphia PA (SEPTA metro train system), Spain, and in China. Management believes the new Chinese government subsidy spending will emphasize infrastructure spending and could drive additional revenues towards MXWL as well as other non-Chinese rail systems seeking to capture/store train braking energy and cycle back into its rail grid, thus lowering energy use.

Two of the three US truck OEMs, Kenillworth and Peterbilt, now offer MXWL's products and expectations are the third, now in the fifth season of testing, may also offer the same sometime during the next 12 months.

Given the increased use of offshore wind turbines for electrical generation, MXWL has a number of new designs utilizing ultracapacitors to be used on large offshore end remote wind turbines. These products offer an extended life and reduced maintenance expense. MXWL management expects continued global efforts to increase electrical wind generation to be a material contributor to its revenue stream in 2016 and beyond.

RECENT DEVELOPMENTS

Corporate Events:

MXWL sold its microelectronics product line this past April to Data Device Corporation for approximately \$21 million in cash.

An agreement was reached with Viex Capital Advisors to appoint an independent member to MXWL's Board of Directors and have a shareholder vote to consider an annual election of directors with one year terms at the company's 2017 annual stockholders meeting.

As part of its ongoing cost cutting efforts, MXWL consolidated its two manufacturing centers in San Diego and Arizona.



During MXWL's 2Q16 conference call, management provided 3Q16 guidance of \$24 million-\$27 million in revenues, gross margins of 28%-31%, non-GAAP gross margins of 29%-32%, GAAP operating expenses of \$13.8 million-\$14.2 million, and non-GAAP operating expenses of \$12.5 million-\$12.9 million.

Management noted MXWL's bus revenues declined during the past few months as its customers in China continue to wait for the Chinese Central Government's decision on potential changes to China's bus subsidy program. In addition, short-term changes in China's spending, for wind turbines, has also slowed revenues from that country's wind market sector. Revenues in these two sectors could rise if the Chinese government outlines forward subsidies for the bus and wind industries increase demand for MXWL's ultracapacitors.

MXWL announced its ultracapacitors are being used for regenerative braking energy storage in Beijing China's subway system as part of the strategic partnership with China Railway Rolling Stock Corporation (CRRC). This installation will leverage MXWL's 48-volt modules in two sets of regenerative braking energy storage devices for the system's No.8 line, which runs north-south through Beijing.

Jurg Buchheim was appointed to MXWL's Board of Directors effective 7/1/16. Mr. Buchheim served as MXWL's senior vice president and chief sales officer from March 2016 until resigning on 3/30/16 to take a position as CEO of INALFA Roof Systems B.V., a global supplier of vehicle roof supplier systems located in Europe.

At the annual shareholder meetings MXWL announced the approval of an amendment to the Company's Restated Certificate of Incorporation to increase the total number of authorized shares of common stock to 80 million shares from 40 million. Additionally, approval was given by shareholders to increase the number of shares of common stock reserved for issuance under the 2013 Omnibus Equity Incentive Plan by 2.4 million shares.

Product News:

ENERGY GRID-MXWL's ultracapacitors were selected by Beijing Huadian Tianren Electric Power Control Technology Company as the core component of a wind farm energy storage demonstration project. This will be the first megawatt-scale ultracapacitor wind farm energy system in the world and will deploy 1,152 of MXWL's 56V/130F ultracapacitor modules.

RAIL-China Railway Rolling Stock Corporation (CRRC) signed an agreement with MXWL to examine multi-year collaboration activities between these two companies to jointly develop new applications-specific/next generation capacitive energy storage solutions for the Chinese rail market. CRRC is a subsidiary of one of the world's largest rail vehicle manufacturers.



RAIL- CAF Power & Automation will use MXWL's UCs as a standard component of the energy-storage system ACR (Rapid Change Accumulator) used to power light-rail cars. CAF is a global manufacturer of railway vehicles/equipment.

AUTOMOTIVE-Last September General Motors (GM-\$30.48) announced the Continental Automotive System's MXWL's voltage stabilization system (VSS) will be a standard feature on 2016 Cadillac ATS and CTS sedans, and some ATS coupes. This is the first North American OEM to integrate the Continental UC-based VSS as part of its enhanced start-stop system geared to lower fuel costs, lower emissions, and improve operating performance.

Recent Earnings

MXWL reported 2Q16 GAAP earnings of \$0.07/share vs (\$0.31)/share during 2Q15. The improvement was due to the sale of the company's microelectronics business which generated pre-tax gain on the sale of \$6.66 million. Revenues decreased to \$34.1 million from \$37.8 million, MXWL's gross profit fell to \$10.0 million from \$12.2 million, and gross margins declined to 29.2% from 32.2%. Revenues were lower due to a slowdown in the Chinese government's subsidies for buses and windmills. Ultracapacitor revenue fell to \$21.2 million from \$23.5 million and high-voltage's decreased to \$11.8 million from \$11.9 million. Total operating expenses declined to \$13.8 million from \$18.4 million following management's cost-cutting efforts during the past year. Overall income, when comparing 2Q16 with 2Q15, rose to \$2.8 million from -\$6.4 million.

2Q16 non-GAAP earnings decreased to (\$0.13)/share vs. (\$0.11)/share during 2Q15. Non-GAAP's gross margin fell to 30.0% from 33.0% while the non-GAAP operating loss rose to -\$3.1 million from -\$2.2 million and the net loss increased to -\$4.0 million from -\$3.2 million.



EQUITY RESEARCH

Our Thoughts

MXWL reported 2Q16 GAAP earnings of \$0.07/share vs (\$0.31)/share during 2Q15. The improvement was due to the sale of the company's microelectronics business which generated a pre-tax gain of \$6.66 million. Absent the gain from the microelectronics business sale, the company would have generated an operating loss of -\$3.8 million vs. -\$6.3 million. 2Q16 non-GAAP earnings decreased to (\$0.13)/share vs. (\$0.11)/share during 2Q15.

While 2Q16 comparisons with 2Q15 showed declining results there was improvement when compared sequentially with 1Q16. On a GAAP basis, earnings improved to \$0.07/share from (\$0.21)/share, gross margins rose to 29.2% from 27.4%, and the operating loss decreased to -\$3.8 million from -\$6.2 million. On a non-GAAP earnings improved to (\$0.13)/share from (\$0.14)/share, gross margins rose to 30.0% from 28.4%, and the operating loss was -\$3.1 million vs. -\$3.7 million. These sequential comparisons point towards the company's stance of hitting a nadir in operating results at the end of 2015.

Management's narrative during the past year has been moving MXWL towards profitability in 2017-2018 by reducing overall expenses and developing its new product pipeline towards the needs of the rail, automotive, bus, trucking, and wind industries. Despite headwinds in Chinese government subsidies for the country's bus and windmill sectors, MXWL believes wider acceptance of its products by rail, wind, truck, and automotive companies could propel revenues higher and generate sustained profitability during the next two years.

Meanwhile, the wait continues for positive earnings to materialize at MXWL, and this waiting caused momentum investors to abandon its stock. Our sense is these investors may return if management attains its stated goal of profitability during 2017. Should this occur, momentum investors could quickly return to this stock and propel it towards our price target of \$15/share, equating to a 17.6x our Enterprise Value/Revenue multiple based on our 2016 revenue estimate. Our rating for MXWL is a BUY and is recommended for aggressive/speculative investors seeking above average appreciation potential.



Risks

There are no guarantees MXWL will be able to grow future earnings. Declining customer orders, increasing commodity prices, and rising operating costs could negatively affect the company's profits. Economic slowdowns, or political change, in Europe and Asia could have adverse effects on earnings. Given the majority of its revenues come from overseas, fluctuations in currency values could impact MXWL's profitability. New products from competitors, or changing industry trends, are risks for MXWL's ability to sell its products. Negative equity markets, rising interest rates, terrorist attacks, and failure to comply with the Sarbanes Oxley Act could cause a decline in MXWL's share price. Given the relatively small amount of daily trading activity in MXWL's stock, any increase in trading volume could significantly accelerate the volatility of its share price movement.

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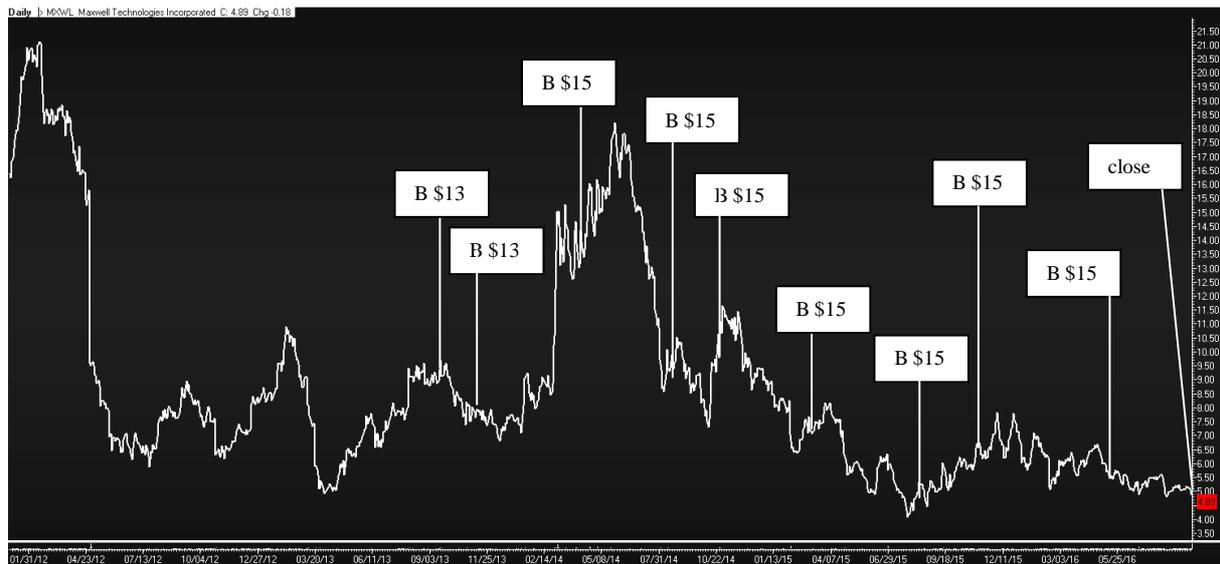


EQUITY RESEARCH

MAXWELL TECHNOLOGIES, INC. & SUBSIDIARIES
condensed consolidated statements of operations
(in thousands, except per share data - unaudited)

	1Q15	2Q15	3Q15	4Q15e	2015e	1Q16	2Q16	3Q16e	4Q16e	2016e
Revenue	\$34,670	37,796	45,076	\$47,264	\$164,806	\$35,203	\$34,135	\$35,927	\$36,427	\$141,692
Cost of revenue	24,284	25,643	30,820	32,140	112,887	25,550	24,154	24,790	24,771	99,265
Gross profit	10,386	12,153	14,256	15,124	51,919	9,653	9,981	11,137	11,656	42,427
Operating expenses:										
Selling, general, & administrative	11,368	10,142	9,070	9,268	39,848	10,098	8,223	9,921	9,629	37,871
Research & development	7,918	5,930	5,781	5,792	25,421	5,607	5,461	5,243	5,403	21,714
Amortization of intangibles										
Restructuring/exit costs		2,340	56	915	3,311	188	109			297
Total operating expenses	19,286	18,412	14,907	15,975	68,441	15,893	13,793	15,164	15,032	59,882
Income/(loss) from operations	-8,900	-6,259	-651	-851	-16,661	-6,240	-3,812	-4,027	-3,376	-17,455
Gain on asset sale							6,657			6,657
Interest expense, net	-89	-75	-25	-22	-211	70	61	44	73	248
Amort of debt discount/prepaid debt costs			5							
Other Income							47			47
Debt discount amort/prepaid debt costs	-5	-2			-7					
For. Currency loss, gain		-85	97		12	130	64			194
Income before income taxes	-8,994	-6,421	-584	-829	-16,828	-6,365	2,767	-4,071	-3,449	-11,118
Income taxes	347	2,955	865	801	4,968	483	600	813	926	2,822
Net income	(\$9,341)	-9,376	(\$1,449)	(\$1,630)	(\$21,796)	(\$6,848)	\$2,167	(\$4,884)	(\$4,375)	(\$13,940)
Net income per share (diluted)	(\$0.32)	(\$0.31)	(\$0.05)	(\$0.05)	(\$0.73)	(\$0.22)	\$0.07	(\$0.15)	(\$0.14)	(\$0.44)
Shares outstanding (diluted)	29,445	30,232	31,529	31,529	31,529	31,650	32,027	32,027	32,027	32,027

Important Disclosures



5/1/12 \$9.58 initiate BUY & \$13 price target
 4/2/13 \$4.98 lower to HOLD
 9/9/13 \$9.12 raise to BUY & \$13 price target
 4/8/14 Raise price target to \$15

Ratings-
 BUY: B
 HOLD: H
 SELL: S

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Our price target is \$15/share, equating to 17.6x our Enterprise Value/Revenue multiple based on our 2016 revenue estimate

Stock ratings used in this report are defined as follows:

- (1) Buy – The stock's total return including dividends is expected to exceed the industry or market average by at least 10% over the next twelve months.
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- (3) Sell – The Stock's total return including dividends is expected to be below the industry or market average by 10% or more over the next twelve months.

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