



**March 23, 2017**

**CURRENT PRICE:** \$5.70  
**RATING:** BUY  
**PRICE TARGET:** \$10  
**CURRENT YIELD:** N/A

**EPS Estimates - GAAP**

	DEC 16A	DEC 17E
1Q	(\$0.22)	(\$0.27)
2Q	\$0.07	(\$0.23)
3Q	(\$0.21)	(\$0.23)
4Q	(\$0.38)	(\$0.22)
	<b>(\$0.74)</b>	<b>(\$0.95)</b>

**Trading Data**

52-WEEK PRICE RANGE: \$6.72-\$4.20  
SHARES OUTSTANDING: 31.9(M)  
MARKET CAP: \$181.8(M)  
AVG. DAILY TRADING VOLUME: 0.2(M)  
S&P 500: 2,346

**Valuation Data**

BOOK VALUE: \$3.10  
PRICE TO BOOK: 1.84x  
DIVIDEND: n/a

**MAXWELL TECHNOLOGIES, Inc. (NSDQ: MXWL)**

*The "Still Waiting" continues*

**Highlights**

- 4Q16 GAAP earnings of (\$0.78)/share vs.(\$0.07)/share
- Chinese subsidy uncertainty impacts revenues
- Seeking to diversify/grow revenue streams
- Potential of higher revenues in 2018
- Maintain BUY rating & \$10/share 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-\$5.70), 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.

In 2016 MXWL sold its Radiation-Hardened Microelectronic Products business to Data Device Corporation for approximately \$21 million in cash. MXWL recognized a pre-tax gain of \$6.66 million.

MXWL recently announced it was buying Nesscap Energy Business, a producer of small sized ultracapacitors, for \$23.75 million, with newly issued stock. Management believes Nesscap's products will compliment MXWL's larger-sized ultracapacitors.

## **MXWL TRANSITIONING SALES/GROWTH EFFORTS**

During the past 3 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. 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. For example, agreements have been signed with Corning (GLW-\$27.34) to develop/market MXWL's products, and with Duke Energy ( DUK-\$82.68) and US and foreign railroad systems to employ products in their electrical grid systems.



In another example, two of the three US truck OEMs, Kenworth 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.

MXWL announced plans to purchase Nesscap Energy Business for \$23.75 million. The acquisition will be done with approximately 4.6 million newly issued shares of MXWL stock. Nesscap produces smaller sized ultracapacitor products and will compliment its larger ultracapacitor products

Management announced it was expanding the partnership with China Railway Rolling Stock Corporation (CRRC). The expansion will localize manufacturing of MXWL's ultracapacitor-based modules for use in the China green energy bus market during 2H17. CRRC will exclusively use MXWL's 2.7-volt and 3-volt ultracapacitor cells in local production lines and manufacture the products

MXWL unveiled a new Generator Starting Solutions (GSS) product line geared to start commercial/industrial standby/backup generators.

#### TAKEAWAYS FROM 4Q16 EARNINGS CONFERENCE CALL

During the conference call management discussed the decline in revenues from lower Chinese bus orders and steps being pursued to grow alternative revenue streams. Over the past two years the Chinese governments have decreased subsidies towards the bus sector thereby causing a decline in MXWL's ultracapacitor revenues and profitability. As a result, management has outlined new initiatives to counter this problem.

One, are new cost cutting initiatives including a 10% reduction in MXWL's workforce, cost containment efforts, and manufacturing/supply chain consolidation to lower its cost structure.

Second, management believes the acquisition of Nesscap could accelerate MXWL's goal of diversifying its revenue streams, produce economies of scale, and potentially expand both revenues and gross margins. The company believes ultracapacitor revenues could increase 34% from current levels and push gross margins towards 30% during the next few quarters.

Third, MXWL announced it would move the production of ultracapacitors used for the Chinese hybrid bus market to China through the agreement with CRRC.

MXWL's objective is to develop revenue streams in other areas such as automotive, trucking, rail, wind, industrial, and smart energy grids. If successful in penetrating these areas with its product sales, then revenues could start to rise during 2H18

Another area MXWL sees as a potential new avenue of revenues is in the dry electrode battery technology area. Management's objective is to partner with automotive and energy storage industry leaders. Hopes are this area could "unlock new application forms" in this area for MXWL products and generate a new revenue stream beginning in 2022.



# EQUITY RESEARCH

## RECENT EARNINGS

MXWL reported 4Q16 GAAP earnings of (\$0.38/share) vs. (\$0.07)/share during 4Q15 due mainly to a decrease in overall revenues when comparing the two quarters. Revenues fell to \$26.4 million from \$49.8 million due to the absence of the Microelectronic business (sold in 2016) and a decrease in ultracapacitor sales. The Microelectronics business contributed \$3.6 million in revenues during 4Q15. Ultracapacitors revenues declined to \$12.7 million from \$37.3 million due to weakness in the China bus market. This was partly offset by higher revenues from high-voltage sales, rising to \$13.7 million from \$8.9 million. Operating expenses decreased to \$15.6 million from \$15.8 million and the loss from operations rose to -\$9.9 million from -\$2.2 million. Gross margin declined to 21.6% from 28.6 million.

4Q16's non-GAAP earnings decreased to (\$0.23/share) from \$0.02/share during 4Q15 and gross margins fell to 22.4% from 29.1%. Adjusted EBITDA fell to -\$3.9 million from \$3.9 million and I non-GAAP income declined to -\$7.5 million from \$588,000.

## Our Thoughts

MXWL is rated a BUY for patient aggressive/speculative investors. Our last report was titled, "Still Waiting", and is an appropriate description as investors await a turnaround in the company's operating fundamentals. Management has shifted MXWL's focus away from its dependence on the disappointing Chinese bus sector towards the automotive sector, and sell products deeper into the trucking, rail, wind, and smart grid sectors as these areas seek to become more efficient during the next 3-7 years. Given MXWL's estimate of a revenue growth "inflection point" materializing during 2H18, investors will need to be patient shareholders. Fortunately, MXWL has very little debt allowing it to tread water until 2H18.. However, should MXWL successfully navigate itself towards this positive scenario, then its stock appears undervalued at current levels. Our price target is \$10/share, equating to MXWL trading at 6.9x our Enterprise Value/Revenues multiple bases on our 2017 revenue estimate.



## 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.

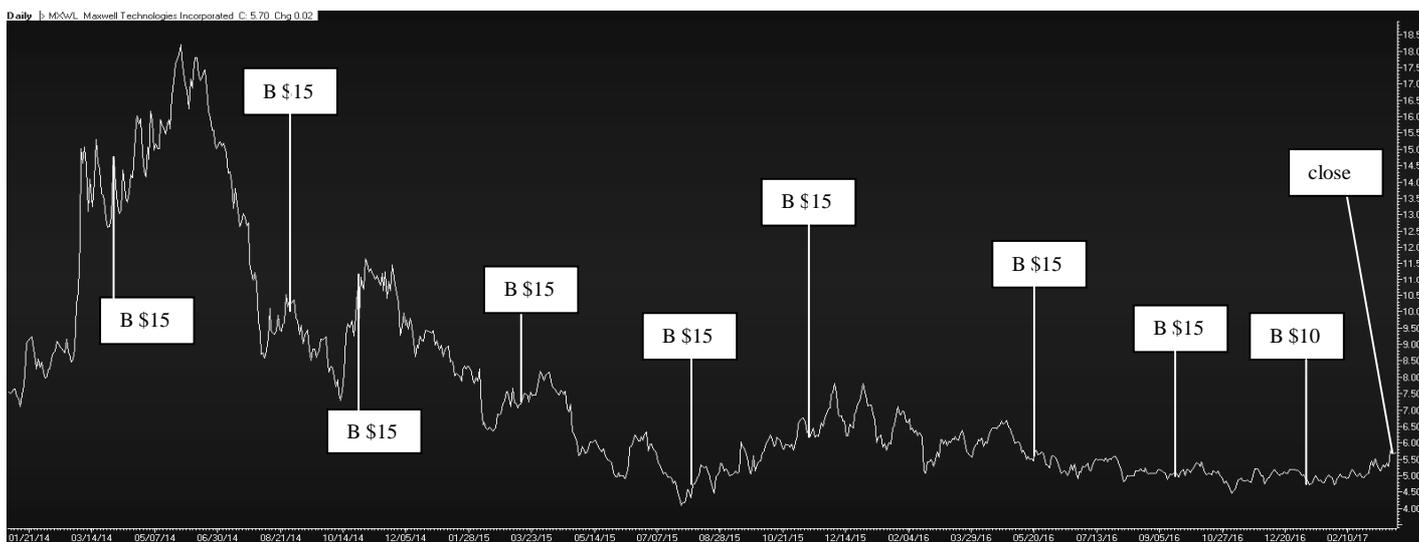
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# EQUITY RESEARCH

## 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  
 1/5/17 Lower price target to \$10  
 Ratings-  
 BUY: B  
 HOLD: H  
 SELL: S

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Our price target is \$10/share, equating to 6.9x our Enterprise Value/Revenue multiple based on our 2017 revenue estimate

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- (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.
- (2) Hold – The stock's total return including dividends is expected to be in line with the industry or market average of +/- 10% over the next twelve months.
- (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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