

Teradyne Inc. (TER)

\$84.78 (As of 08/27/20)

Price Target (6-12 Months): **\$97.00**

Long Term: 6-12 Months

Zacks Recommendation: **Outperform**

(Since: 07/24/20)

Prior Recommendation: Neutral

Short Term: 1-3 Months

Zacks Rank: (1-5)

2-Buy

Zacks Style Scores:

VGM:A

Value: C

Growth: A

Momentum: A

Summary

Teradyne is gaining on robust Semiconductor Test and System Test businesses. Further, the company continues to benefit from expanding memory market exposure and strong product lineup. Additionally, robust Test demand and strong product lineup are major positives. Further, the company's lean cost structure and strong balance sheet remain tailwinds. Furthermore, management is optimistic about the Universal Robots acquisition and continuous design wins. We believe that the company has significant growth opportunities in the high-growth wireless test market in the long haul. Also, rising memory and storage test shipments, and new product design wins are major positives. Notably, the stock has outperformed its industry on a year-to-date basis. However, weakness in the mobility test market and sluggishness in HDD business are major headwinds.

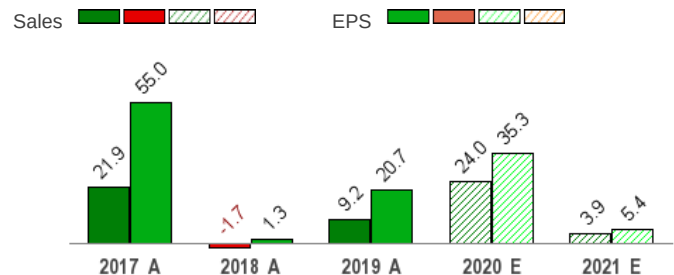
Price, Consensus & Surprise



Data Overview

52 Week High-Low	\$94.00 - \$42.87
20 Day Average Volume (sh)	1,478,069
Market Cap	\$14.1 B
YTD Price Change	24.3%
Beta	1.34
Dividend / Div Yld	\$0.40 / 0.5%
Industry	Electronics - Testing Equipment
Zacks Industry Rank	Top 48% (122 out of 252)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	27.9%
Last Sales Surprise	10.6%
EPS F1 Est- 4 week change	0.0%
Expected Report Date	10/27/2020
Earnings ESP	0.0%
P/E TTM	21.3
P/E F1	21.9
PEG F1	2.2
P/S TTM	5.1

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	661 E	817 E	786 E	685 E	2,956 E
2020	704 A	839 A	786 E	517 E	2,845 E
2019	494 A	564 A	582 A	655 A	2,295 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$0.78 E	\$1.20 E	\$1.14 E	\$0.85 E	\$4.08 E
2020	\$1.00 A	\$1.33 A	\$1.11 E	\$0.45 E	\$3.87 E
2019	\$0.54 A	\$0.66 A	\$0.77 A	\$0.88 A	\$2.86 A

*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 08/27/2020. The reports text is as of 08/28/2020.

Overview

Headquartered in North Reading, MA, Teradyne Inc. is a leading provider of automated test equipment. The company is primarily focused on the semiconductor test market, which generates the bulk of its revenues. It also provides specialized system testing equipment for specific end markets.

The semiconductor test product line primarily consists of the FLEX platform (including the IG-XL software operating system enabling single or simultaneous testing of semiconductor devices), the J750 testing system based on the IG-XL software (for very high-volume testing, as required for microprocessors) the Magnum test platform (enabling testing of memory devices produced in very large quantities) and the ETS platform (focused on analog/mixed signal discrete devices that usually have a lower pin count for testing through the proprietary SmartPin technology). Additionally, the company also offers a broad range of services across the world that helps in the deployment and functioning of its testing systems.

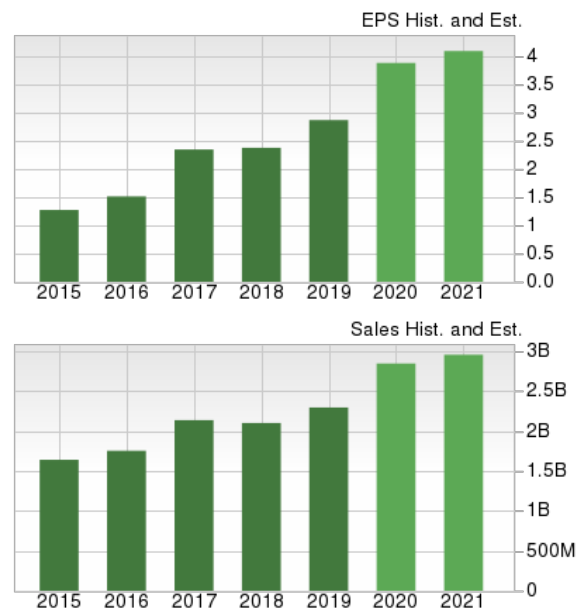
Customers primarily consist of semiconductor manufacturers, including integrated device manufacturers (IDMs) or foundries, as well as outsourced assembly and test subcontractors (OSATs).

The company reports revenues mainly under four segments. These segments are semiconductor Test, Industrial Automation, System Test and Wireless Test business.

For 2019, approximately 67% of revenues came from semiconductor testing platforms, 13% from Industrial Automation, 13% from the System Test business and the remaining 7% from the Wireless Test business.

The company has leveraged its expertise in semiconductor testing systems to expand into system testing for military/aerospace instrumentation, hard disk drive (including in-circuit test and x-ray inspection), printed circuit boards and automotive system diagnosis.

Teradyne has a large number of competitors, given its comprehensive product portfolio.



Reasons To Buy:

- ▲ A number of factors are expected to drive the **core semiconductor test business**, the most important of which is the growing demand for mobile devices. Teradyne is well positioned at leading players, which should help. Teradyne's strong portfolio and increased production complexities related to CSP will continue to generate some share gains as semiconductors start entering new applications related to the Internet of Things (IoT) market. Analog companies in general are expected to step up production, so demand for testing products should also pick up.
- ▲ The other market segment offering significant growth opportunity is **memory**. While the opportunity is relatively smaller than SoC test, increased complexities related to interface speeds in both NAND and DRAM devices are driving demand for testing devices. The company has been making steady gains here. Management expects Memory Test Market to grown on the back of strong demand in memory test, particularly with respect to new ramps. Teradyne's main advantage is that its products are scalable and the frequency range offered enables very high-speed testing that can be scaled up. Memory manufacturers are likely to grow much faster than others this year, since they are seeing steadier demand, driven by the growing demand for consumer electronic goods incorporating memory chips. Teradyne is clearly benefiting from this trend.
- ▲ The LitePoint acquisition expanded Teradyne's presence in the fast-growing **wireless testing market**. LitePoint opened up opportunities in higher-growth markets such as smartphones and tablets that the company did not serve earlier. This acquisition was particularly positive because it positioned Teradyne with solutions for next generation wireless networking and helped the company expand its footprint in Asia. Newer customers in China and Korea will generate growth in this segment while new products will expand the TAM for TER. Furthermore, LTE, LTE Advanced and 802.11ac adoption is expected to accelerate; and this combined with new standards like NFC testing will provide opportunities for LitePoint. Further, a proliferation of reliable, high-bandwidth connections in vehicles over the next five years will be another driver of test intensity as quality and reliability of these connections will be dominant. The emerging 60 gigahertz band applications in Wi-Fi and automotive radar will expand the need for tester instruments, thereby increasing Teradyne's market share at both Semi Test and LitePoint.

A recovery in the core semiconductor business, long-term opportunities in the wireless test market, growing memory market exposure, strong product lineup, and lean cost structure are positives.

Risks

- The **HDD business remains sluggish** due to the weakness in the computing market, which is the primary consumer of HDDs. Teradyne supplies products to both the two big HDD makers, Western Digital and Seagate. Both these companies expect moderate increase in HDD shipments this year, which will therefore be largely satisfied with existing capacity. While SSD demand is also eating into HDD numbers, related capacity has not really taken off yet. The company is securing a growing number of customer wins in SSD, so this is an offsetting factor.
 - The **wireless test business** (LitePoint) remains weak and has been declining over a number of years. The weak demand in the smartphone and tablet markets as well as a slowdown of technology adoption is offsetting the positive impact of increased complexities to a certain extent. Also, there is a danger of oversupply in the particular market segment in which LitePoint plays. Though the management expects the weakness at these large customers to be offset by strength at others in China and Korea, it does not expect this to happen any time soon. The problem of oversupply remains but management is trying to grow the product portfolio to increase the TAM.
 - The **system test business** is very choppy, with high double-digit bookings increases often followed by high double-digit declines. Although revenues are relatively more stable, the typically high values of systems test equipment leads to lumpiness if even a single customer defers a shipment or pulls it forward. The business is therefore hard to track and can only be gauged through general performance in the sector, new product adoption and market share gains/losses.
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Last Earnings Report

Teradyne Q2 Earnings & Revenues Surpass Estimates

Teradyne Inc. reported second-quarter 2020 earnings of \$1.33 per share, surpassing the Zacks Consensus Estimate of \$1.04. The figure also increased 101.5% year over year and 33% sequentially.

Moreover, revenues of \$838.7 million increased 438.7% year over year. The figure surpassed the Zacks Consensus Estimate by 10.6%.

Quarter Ending 06/2020

Report Date	Jul 21, 2020
Sales Surprise	10.58%
EPS Surprise	27.88%
Quarterly EPS	1.33
Annual EPS (TTM)	3.98

Inside the Headlines

Approximately 79% of revenues came from semiconductor testing platforms, 9% from the System Test business, 7% from Industrial Automation and the remaining 5% from the Wireless Test business.

The increase in total revenues was driven by strong test revenues, which grew 59% year over year on Semiconductor Test strength. Also, stronger-than-expected System on a Chip (SOC) test shipments — driven by increased demand for mobility-related test capacity — aided revenue growth.

However, Teradyne's Industrial Automation segment declined 21% year over year in the second quarter due to manufacturing sector headwinds on a global basis.

Margins

Pro-forma gross margin was 56.2%, down 130 basis points (bps) from the prior-year quarter. The decrease was due to an unfavorable product mix.

Total operating expenses (selling and administrative & engineering and development) of \$207.4 million increased 9% year over year. As a percentage of sales, both selling & administrative expenses and engineering & development costs decreased from the year-ago quarter.

Operating margin came in at 31.5%, up 770 bps from the year-ago quarter.

Balance Sheet

At second quarter-end, Teradyne's cash and cash equivalents (including marketable securities) were \$958.1 million, higher than \$804.5 million in the prior quarter.

Net cash provided by operating activities were \$225.8 million in the second quarter versus \$43.1 million in the prior quarter.

During the quarter, the company repurchased \$9.4 million of its common stock and paid \$16.6 million as dividends.

Guidance

Management expects third-quarter 2020 revenues in the band of \$745-\$805 million. Non-GAAP earnings per share from continuing operations are likely to be in the range of \$1.01-\$1.17.

Management provided encouraging third-quarter guidance to reflect increased memory and storage test shipments, along with production ramps of new product design wins in SOC test.

Recent News

On **Jun 2, 2020**, Teradyne ramped high volume production of its new Magnum EPIC memory tester. The tester provides increased flexibility to cover LPDDR5, DDR5, GDDR6, and future DRAM devices. These next-generation memories will further improve the performance of 5G smart phones, data centers, and high definition graphics applications.

Valuation

Teradyne shares are up 25% in the year-to-date period and 62% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 5.1% and 27.7% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and the sector is up 22.3% and 43.2%, respectively.

The S&P 500 index is up 8.3% in the year-to-date period and 19.5% in the past year.

The stock is currently trading at 21.15X forward 12-month earnings, which compares to 26.19X for the Zacks sub-industry, 27.62X for the Zacks sector and 23.37X for the S&P 500 index.

Over the past five years, the stock has traded as high as 26.65X and as low as 11.54X, with a 5-year median of 17.15X. Our Outperform recommendation indicates that the stock will perform better than the market. Our \$97 price target reflects 24.19X forward 12-month earnings.

The table below shows summary valuation data for TER

Valuation Multiples - TER					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	21.15	26.19	27.62	23.37
	5-Year High	26.65	26.46	27.62	23.37
	5-Year Low	11.54	18.3	16.72	15.25
	5-Year Median	17.15	22.09	19.6	17.58
P/S F12M	Current	4.82	4.38	4.31	3.82
	5-Year High	5.51	4.38	4.31	3.82
	5-Year Low	2	2.63	2.32	2.53
	5-Year Median	3.37	3.54	3.14	3.05
EV/EBITDA TTM	Current	14.47	17.53	14.11	13.27
	5-Year High	19.54	19.06	14.21	13.27
	5-Year Low	4.46	9.15	7.59	8.25
	5-Year Median	8.94	15.19	10.94	10.92

As of 08/27/2020

Industry Analysis Zacks Industry Rank: Top 48% (122 out of 252)



Top Peers

Company (Ticker)	Rec	Rank
Advanced Energy Industries, Inc. (AEIS)	Outperform	1
KLA Corporation (KLAC)	Outperform	2
Lam Research Corporation (LRCX)	Outperform	1
Agilent Technologies, Inc. (A)	Neutral	3
Keysight Technologies Inc. (KEYS)	Neutral	2
National Instruments Corporation (NATI)	Neutral	4
Seagate Technology PLC (STX)	Neutral	3
Advantest Corp. (ATEYY)	Underperform	5

Industry Comparison Industry: Electronics - Testing Equipment				Industry Peers		
	TER	X Industry	S&P 500	ATEYY	KEYS	NATI
Zacks Recommendation (Long Term)	Outperform	-	-	Underperform	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	5	2	4
VGM Score	A	-	-	B	B	B
Market Cap	14.08 B	12.80 B	23.67 B	9.05 B	17.88 B	4.67 B
# of Analysts	8	7	14	2	6	3
Dividend Yield	0.47%	0.43%	1.64%	1.27%	0.00%	2.93%
Value Score	C	-	-	D	C	C
Cash/Price	0.07	0.05	0.07	0.15	0.09	0.13
EV/EBITDA	20.26	18.77	13.33	12.07	16.30	16.33
PEG Ratio	2.25	3.07	3.05	NA	2.36	NA
Price/Book (P/B)	8.07	4.22	3.18	4.47	5.33	3.68
Price/Cash Flow (P/CF)	23.14	19.28	12.81	16.10	15.79	18.77
P/E (F1)	22.04	30.72	21.68	20.58	20.65	33.01
Price/Sales (P/S)	5.06	4.83	2.50	3.64	4.34	3.54
Earnings Yield	4.56%	3.25%	4.43%	4.86%	4.84%	3.04%
Debt/Equity	0.26	0.46	0.74	0.03	0.53	0.07
Cash Flow (\$/share)	3.66	3.96	6.94	2.90	6.05	1.89
Growth Score	A	-	-	A	B	B
Hist. EPS Growth (3-5 yrs)	24.42%	14.47%	10.41%	NA	18.31%	12.86%
Proj. EPS Growth (F1/F0)	35.36%	-9.13%	-4.94%	3.42%	-1.91%	-33.94%
Curr. Cash Flow Growth	9.31%	9.31%	5.22%	169.43%	-28.59%	-0.24%
Hist. Cash Flow Growth (3-5 yrs)	3.50%	9.18%	8.50%	37.88%	15.69%	3.60%
Current Ratio	2.87	2.47	1.35	4.19	3.34	3.27
Debt/Capital	20.36%	31.43%	43.86%	3.05%	34.78%	6.28%
Net Margin	22.94%	18.52%	10.25%	17.59%	14.68%	19.25%
Return on Equity	43.96%	16.22%	14.66%	22.99%	25.02%	12.46%
Sales/Assets	0.96	0.55	0.50	0.86	0.60	0.77
Proj. Sales Growth (F1/F0)	23.98%	-4.28%	-1.43%	2.46%	-2.77%	-7.32%
Momentum Score	A	-	-	A	A	A
Daily Price Chg	-5.66%	-1.10%	0.43%	-2.50%	-2.51%	-1.25%
1 Week Price Chg	-2.29%	-2.23%	-1.45%	-8.67%	-6.87%	-3.12%
4 Week Price Chg	-4.32%	-3.08%	3.75%	-19.45%	-3.40%	-6.08%
12 Week Price Chg	15.84%	6.06%	3.95%	-13.03%	-6.61%	-14.18%
52 Week Price Chg	61.03%	8.70%	2.75%	18.94%	-1.25%	-16.18%
20 Day Average Volume	1,478,069	1,147,213	1,887,168	3,009	1,917,675	686,495
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	4.24%	0.00%
(F1) EPS Est 4 week change	0.00%	3.42%	0.79%	-9.02%	9.90%	-19.32%
(F1) EPS Est 12 week change	25.74%	4.72%	3.43%	2.48%	9.90%	-12.88%
(Q1) EPS Est Mthly Chg	0.00%	2.27%	0.00%	0.00%	8.44%	-62.50%

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	C
Growth Score	A
Momentum Score	A
VGM Score	A

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

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