

# Life Sciences and Diagnostics

## Alert: Positive for Tools, August Semi Trends Exceed Forecast

- **Semi Trends Remain Robust** — As detailed in a report released yesterday morning by Citi's US Semiconductor research team led by Chris Danely ([Semiconductors - August Semi Sales Above Seasonal. Raising 2017 Forecast from up 19% YoY to up 21% YoY](#)), global August semi sales increased 6.8% m/m to \$35.9 bn (+24.7% y/y), exceeding their estimate of \$34.1bn (up 1.4% m/m) and the avg Aug m/m increase of 3.0%. The results were propelled by higher unit growth (ex-discretes) of +4.8% m/m (+18.6% y/y), which came in above seasonal trends and Citi's +1.2% m/m (+14.5% y/y) forecast, and solid pricing +2.1% m/m (+5.8% y/y) vs. Citi's +0.5% m/m and normal seasonality of +2.7% m/m.
- **Semi Unit Demand Trends** — Underpinning the August beat was reportedly higher microcontroller, analog, and flash memory demand. Microcontroller sales were reportedly above normal seasonality of down 3% m/m due to higher units & ASPs. Meanwhile, analog sales were above normal seasonality of down 2% m/m due to higher units; whereas, flash memory sales were slightly above normal seasonality of up 17% m/m due to higher units. Interestingly to us, DRAM sales were slightly below normal seasonality of up 13% m/m due to lower units.
- **BRKR and TMO Likely to Benefit Most** — As we detailed in our [Sizing Up Semi Trends, And What It Means For Tools Players](#) Deep Dive report published in June, we continue to believe that improving semi demand will be a source of top- and bottom-line strength for some Tools companies in 2H17 and into 2018. BRKR is our highest exposed Tools name to the evolving semi trends (~5% of sales); TMO (mostly through FEI) is second at ~3% of sales; DHR is third at ~2%; and PKI and A have an estimated ~1-2% exposure.
- **Citi Raises Semi Growth Forecast to Highest Since 2010** — Driven by strong August results, Citi's US semiconductor team now expects CY2017 semis growth (Figure 1) of +21% y/y (to \$409.6bn), which is up from their prior +19% y/y forecast and the team's +13% growth estimate in June. Embedded in this new forecast rate is 16% y/y unit growth (ex-discretes) and 5% ASP growth. Citi remains bullish on the semiconductor sector as business conditions are reportedly the best since 2010 due to a combination of positive demand trends and inventory declines in 2016. In addition, recent industry checks at Citi's Semiconductor conference indicated no slowdown in demand ([Tech Conf. Wrap](#)). In our view, this better-than-expected recent semiconductor demand momentum could lead to continued (if not improved) positive commentary by Tools management teams on upcoming 3Q17 earnings calls.

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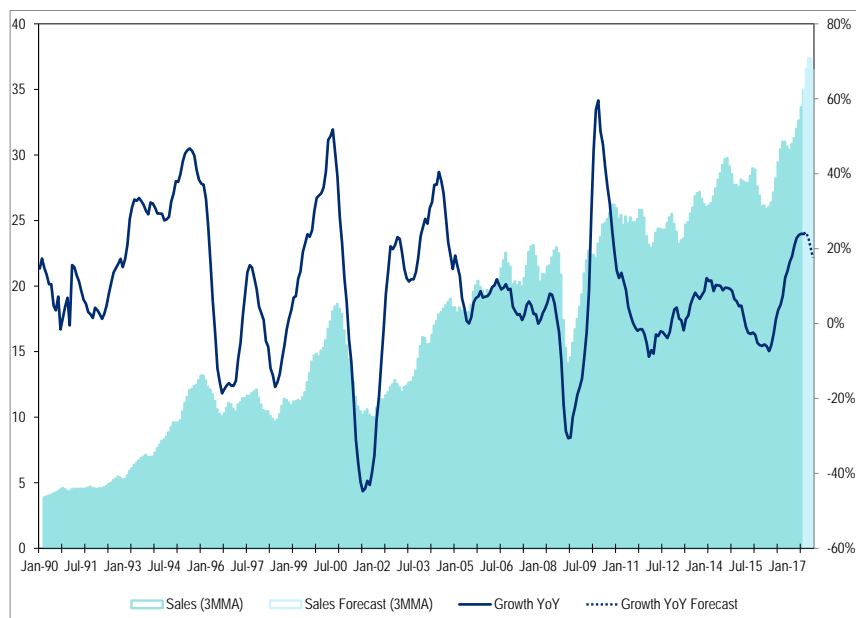
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## Semi Sales + Citi's Updated CY17 Outlook

Figure 1. Semiconductor Sales (\$ bn | left) & Three-Month Rolling Avg YoY Growth (%) | right)



Source: WSTS, Citi Research Estimates

Figure 2. Semiconductor Sales (\$ bn) & YoY Change in Sales, Units, and ASPs

	Revenue	Revenue Growth	Unit Growth*	ASP Growth*
1991	\$54.6	8%	5%	4%
1992	\$59.9	10%	-2%	13%
1993	\$77.3	29%	13%	17%
1994	\$101.9	32%	9%	22%
1995	\$144.4	42%	20%	19%
1996	\$132.0	-9%	3%	-11%
1997	\$137.2	4%	24%	-16%
1998	\$125.6	-8%	2%	-10%
1999	\$149.4	19%	18%	1%
2000	\$204.4	37%	26%	9%
2001	\$139.0	-32%	-19%	-16%
2002	\$140.7	1%	13%	-10%
2003	\$166.4	18%	17%	2%
2004	\$213.0	28%	20%	7%
2005	\$227.5	7%	12%	-4%
2006	\$247.7	9%	20%	-9%
2007	\$255.6	3%	13%	-9%
2008	\$248.6	-3%	6%	-8%
2009	\$226.3	-9%	1%	-10%
2010	\$298.2	32%	22%	7%
2011	\$299.5	0%	4%	-4%
2012	\$291.6	-3%	7%	-8%
2013	\$305.6	5%	7%	-1%
2014	\$335.8	10%	10%	0%
2015	\$335.2	0%	10%	-8%
2016	\$338.9	1%	5%	-4%
2017E	\$409.6	21%	16%	5%
Avg. '00-'16		6%	10%	-4%

Source: WSTS, Citi Research Estimates \*Unit growth and ASP growth exclude discrete components.

Companies mentioned: Agilent (A.N; US\$64.87; 2; 02 Oct 17; 16:00); Bruker Corp (BRKR.O; US\$29.99; 2; 02 Oct 17; 16:00); Danaher Corporation (DHR.N; US\$86.52; 1; 02 Oct 17; 16:00); PerkinElmer, Inc. (PKI.N; US\$69.47; 1; 02 Oct 17; 16:00); Thermo Fisher Scientific (TMO.N; US\$191.54; 1; 02 Oct 17; 16:00)

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Covered since February 24 2017



	Date	Rating	Target Price	Closing Price
1	20-Jan-16 16:06:32	*2	*72.00	64.42
2	19-Apr-16 04:02:25	2	*76.55	71.87
3	21-Apr-16 21:37:28	2	*77.31	72.75

	Date	Rating	Target Price	Closing Price
4	10-Jun-16 11:09:22	2	*78.82	75.27
5	05-Jul-16 04:00:00	2	*81.00	80.40
6	26-Jul-16 08:57:27	2	*84.00	81.12

	Date	Rating	Target Price	Closing Price
7	12-Dec-16 04:00:00	2	*86.00	77.83
8	24-Feb-17 07:09:38	*1	*98.00	86.08
9	20-Jul-17 16:15:26	1	*96.00	83.20

\*Indicates Change

Rating/target price changes above reflect Eastern Time

#### Agilent (A)

##### Ratings and Target Price History Fundamental Research

Analyst: Daniel Arias



	Date	Rating	Target Price	Closing Price
1	03-Nov-14 13:33:58	2	*40.00	40.84
2	06-Jan-15 13:30:03	2	*42.00	39.18
3	14-Oct-15 14:08:44	2	*40.00	35.05

	Date	Rating	Target Price	Closing Price
4	06-Jan-16 04:38:11	2	*44.00	40.73
5	25-May-16 19:37:19	2	*46.00	45.42
6	14-Feb-17 21:23:36	2	*52.00	50.39

	Date	Rating	Target Price	Closing Price
7	22-May-17 22:12:14	2	*60.00	56.08
8	15-Aug-17 21:29:44	2	*63.00	59.38

\*Indicates Change

Rating/target price changes above reflect Eastern Time

## Bruker Corp (BRKR)

### Ratings and Target Price History

#### Fundamental Research

Analyst: Daniel Arias



	Date	Rating	Target Price	Closing Price
1	07-Nov-14 00:51:36	*2	*22.00	17.91
2	19-Feb-15 23:35:02	2	*21.00	19.37
3	05-Aug-15 20:33:28	2	*22.00	21.25

\*Indicates Change

	Date	Rating	Target Price	Closing Price
4	13-Oct-15 15:50:49	2	*20.00	17.57
5	06-Jan-16 04:41:37	2	*24.00	23.67
6	04-May-16 22:12:35	2	*28.00	27.65

	Date	Rating	Target Price	Closing Price
7	02-Aug-16 22:38:55	2	*26.00	24.72
8	03-May-17 23:14:23	2	*27.00	24.91
9	03-Aug-17 22:30:46	2	*29.00	28.47

Rating/target price changes above reflect Eastern Time

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### Ratings and Target Price History

#### Fundamental Research

Analyst: Daniel Arias



	Date	Rating	Target Price	Closing Price
1	20-May-15 21:38:59	1	*152.00	132.02
2	14-Oct-15 17:12:19	1	*149.00	123.97

\*Indicates Change

	Date	Rating	Target Price	Closing Price
3	05-Jan-16 08:51:02	1	*160.00	138.51
4	28-Jul-16 16:46:22	1	*182.00	158.82

	Date	Rating	Target Price	Closing Price
5	07-Jul-17 07:55:08	1	*201.00	177.49

Rating/target price changes above reflect Eastern Time

## PerkinElmer, Inc. (PKI)

### Ratings and Target Price History

#### Fundamental Research

Analyst: Daniel Arias



	Date	Rating	Target Price	Closing Price
1	30-Jul-15 22:00:36	1	*59.00	51.42
2	13-Oct-15 16:11:57	1	*56.00	47.59
3	05-Jan-16 09:57:43	1	*60.00	53.01

\*Indicates Change

	Date	Rating	Target Price	Closing Price
4	05-Feb-16 01:29:30	1	*55.00	43.26
5	30-Jun-16 16:36:06	1	*60.00	52.42
6	07-Nov-16 20:55:24	1	*57.00	51.87

	Date	Rating	Target Price	Closing Price
7	05-Apr-17 20:15:03	1	*67.00	57.26
8	04-Aug-17 11:23:06	1	*74.00	64.29
9	26-Sep-17 05:00:00	1	*80.00	68.18

Rating/target price changes above reflect Eastern Time

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