Gross Margin Boosts 3Q, But Guidance is Soft

Lowering Estimates, Reiterate Hold

Diluted Shares*(mil)*:	1,111
Market Cap*($mil)*:	$45,540
Avg Volume*(,000)*:	6,209
Net Cash/Share:	($1.41)
Dividend Yield:	2.9%

Closing Price 10/21/13
$40.99
Recommendation/Target
Hold/$37 from $35

fye Dec	**2013**	**2014**	**2015**
Revenue*($mil)*	$12,183	$12,740	$13,833
EPS	$1.96	$2.20	$2.47
Price/Sales	3.7	3.6	3.3
Price/EPS	20.9	18.6	16.6

Texas Instruments is the world's largest supplier of analog semiconductor products. It is also a leading supplier of microcontrollers, DSPs, ASICs, DLP and standard logic semiconductor devices, as well as handheld calculators.

Investment Opinion: TXN slightly exceeded 3Q expectations primarily due to gross margin gains. Industrial and automotive market strength continues, the comm infrastructure recovery persists, and tablets and game consoles recovered with new system launches. Management claims 4Q guidance for declining sales is consistent with seasonal norms, but is short of Street expectations. I am lowering my estimates but raising my 12-month target price due to the introduction of a 2015 estimate. My revised target price of $37, up from $35, continues to be based on 3-times expected sales and 15-times earnings, consistent with peer averages, and I reiterate my Hold recommendation.

The Free Cash Flow Company: TXN is now an analog and embedded company at 80% of sales; it expects to outperform market growth by gaining share; and it will continue to generate 20-25% of free cash flow on every dollar in sales and return all of it to shareholders via dividends and share repurchases after covering debt (at least on a trailing 12-month basis). I love this company: management, strategy, execution, track record, products, markets and financial structure and operation. While it is clearly angling for the lofty valuations of its LLTC, MXIM and ADI peers, I am not convinced it will be successful given inferior gross and operating margins.

3Q Review: Revenue of $3,244M grew by +6.5% across a wide variety of end markets. Gross margin of 54.8% improved by 330 basis points due to a richer mix of analog and embedded products and increasing factory utilization on higher volume as underutilization charges dropped by $30M to around $70M. Amortization charges of $86M associated with the National acquisition and restructuring charges of $16M due to the closing of older 6-inch fabs were consistent with guidance. GAAP EPS of $0.56 bettered my consensus estimate by three cents primarily due to gross margin strength, but included a penny of discrete tax benefits that were more than offset by slightly higher SG&A and interest and other charges. Orders grew by +1% and the book-to-bill ratio was 0.97 as orders seasonally tapered off toward the end of the quarter. Capital expenditures were $124M, operating cash flow totaled $1,151M, $734M worth of shares were repurchased, $308M in dividends were paid, and free cash flow totaled $1,027M. Cash totals $3.59B with 82% on-shore.

FYE December	**3Q13**					
in millions	**Estimate**	**Actual**	**EPS Impact**	**Guidance**	**Consensus**	**Range**
Revenue	$3,240	$3,244		$3,150-3,290	$3,230	$3,180-3,300
Revenue Growth	6.3%	6.5%		+3.4+8.0%	6.0%	+4.4+8.3%
Gross Margin	52.5%	54.8%	*$0.05*			
Operating Expenses	$819	$833	*($0.01)*			
Restructuring	$100	$102		$100		
Interest/Other	($10)	($28)	*($0.01)*			
Tax Rate	24.0%	22.9%		24.0%		
Diluted Shares	1,115	1,111				
Diluted EPS, GAAP	$0.53	$0.56	***$0.03***	$0.51-$0.55	$0.53	$0.52-$0.58

Analog sales of $1,931M grew by +10.7% across a wide variety of end markets from power management, HVAL, HPA and SVA products, in that order. Operating profit improved by 640 basis points to 30.2%. Embedded sales of $668M grew by +8.1% due to: application processors into consumer and automotive markets; DSPs and microcontrollers into industrial applications; microcontrollers into automotive as well; and connectivity products, in that order. Operating profit improved by 370 basis points to 12.4%. Other sales of $645M declined by -5.7% primarily due to a $91M decline in legacy wireless that was partially offset by growth from calculators (back-to-school seasonality), ASICs into communication infrastructure markets, and royalties, while DLPs were flat. Operating profit declined to 27.6% from the prior quarter's 63.7% that was unusually high due to a $315M gain on the sale of wireless product business to a customer.

Industrial and automotive markets continue to be healthy and the recovery in communication infrastructure persisted, while computing and game consoles recovered with new system launches after a weak 2Q. Automotive applications include infotainment and advanced driver-assist systems such as blind spot detection and parking assist. Comm infrastructure benefited from Chinese deployments that were split two-thirds to Chinese OEMs and one-third to European OEMs. Small cell trials continue and management expects deployments beginning mid-2014. Tablet strength offset notebook weakness in computing and consumer strength was mostly game consoles as digital television remains weak. Distribution resales grew by +10%. 1H13 revenue by market for TXN: communication 27%, computing 23%, industrial 23%, automotive 13%, consumer 11%, and education (calculators) 3%. Year-to-date analog product sales include HVAL at 35%, power management at 25%, and HPA and SBA each at 20%.

4Q Guidance: Management guidance for 4Q13 calls for revenue of $2.86-3.10B and EPS of $0.42-0.50. Legacy wireless revenue is expected to decline by -$7M to $50M and the mid-point of revenue guidance reflects a sequential decline of -8%, half of which is due to calculators and half due to semiconductors—both consistent with seasonal norms in recent years. While it may be consistent with company and industry averages over the last three years, it is still below consensus expectations. Amortization charges are expected at $85M, restructuring charges at $20M, operating expenses will come down by 3-5% (20-30% of sales over the long run), and gross margin will soften on lower sales and factory utilization. R&D for 2013 remains at $1.5B, cap ex at $500M, depreciation at $900M, and the tax rate remains at 24%. Legacy wireless business is reported in the 'other' product category and is expected to zero-out at year-end. Amortization associated with the acquisition of National Semiconductor is expected to continue at $80M per quarter over the next six years, while restructuring associated with the fab closures in Hiji, Japan and Houston, TX will be complete this quarter. Recall that wireless restructuring was expected to yield $450M in annual savings by 1Q14 split 75% from R&D, 15% SG&A and 10% COGS, and gross margin fall-through approximates 75%. A mid-quarter update is scheduled for December 9.

Lowering Estimates: My revised 4Q13 estimate is just above the mid-point of guidance in terms of both revenue and EPS, and my revenue assumptions are detailed on Page 7. Notice that revenue has softened and margins have strengthened consistent with near-term guidance, and I am introducing 2015 estimates with this report.

FYE December	4Q13		2013		2014		2015
in millions	Previous	Update	Previous	Update	Previous	Update	New
Revenue	$3,048	$3,007	$12,220	$12,183	$13,004	$12,740	$13,833
Revenue Growth	-5.9%	-7.3%	-4.7%	-5.0%	6.4%	4.6%	8.6%
Gross Margin	53.5%	54.0%	51.4%	52.1%	54.3%	54.4%	55.2%
Operating Expenses	$784	$798	$3,341	$3,369	$3,285	$3,329	$3,672
Restruct/Impairment	$80	$105	$85	$112	$320	$320	$320
Interest/Other	($10)	($25)	($65)	($98)	($40)	($100)	($100)
Tax Rate	24.0%	24.0%	21.6%	21.2%	24.0%	24.0%	24.0%
Diluted Shares	1,112	1,108	1,117	1,115	1,105	1,101	1,089
Diluted EPS, GAAP	$0.52	$0.48	$1.96	$1.96	$2.35	$2.20	$2.47

Reiterate Hold: Valuation tables for TXN are shown on Page 8 of this report. The bottom table, Historical Valuation, details unrealistic historical averages given equity market stresses at this time, in my opinion. Nevertheless, TXN is currently trading above historical average trailing price-sales and price-book ratios. The top table, Relative Valuation, is considerably more relevant as a peer group of predominantly analog semiconductor competitors that includes ADI, FCS, FSL, INTC, ISIL, LLTC, MXIM, NXPI and STM.

TXN is trading above the average of its peers in terms of price-sales and price-earnings ratios across the board, except it is slightly below peer-average price-earnings for 2013. I consider the 2.5-3.0-times price-sales ratio and 15-20-times price-earnings ratio peer averages to be appropriate valuation levels in the current equity market environment, and my revised 12-month target price for TXN of $37 (up from $35) is consistent with 3-times 2015 sales and 15-times 2015 EPS estimates. I do not consider upside potential significantly greater than downside risk at current price levels for TXN based on valuation fundamentals at this time, and reiterate my Hold recommendation.

Diluted EPS	4Q13	2013	2014
Tokeneke-revised	*$0.48*	*$1.96*	*$2.20*
Tokeneke-previous	$0.52	$1.96	$2.35
Consensus-previous	$0.51	$1.95	$2.24
Highest Est-previous	$0.58	$2.07	$2.61
Lowest Est-previous	$0.46	$1.88	$1.90

Revenue (30+ est.)	4Q13	2013	2014
Tokeneke-revised	*$3,007*	*$12,183*	*$12,740*
Tokeneke-previous	$3,048	$12,220	$13,004
Consensus-previous	$3,120	$12,290	$12,940
Highest Est-previous	$3,280	$12,920	$13,700
Lowest Est-previous	$3,030	$12,010	$12,330

—Dan K. Scovel
Semiconductor Analyst

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Income Statement | **www.ti.com**

dollars in millions, except per share data

fiscal year ends December

					2013 est					2014					2015				
	2009	2010	2011	2012	Q1A	Q2A	Q3A	Q4	2013	Q1	Q2	Q3	Q4	2014	Q1	Q2	Q3	Q4	2015
Total Revenue	10,428	13,966	13,736	12,825	2,885	3,047	3,244	3,007	12,183	2,920	3,226	3,382	3,212	12,740	3,170	3,497	3,668	3,498	13,833
COGS	5,428	6,475	6,963	6,458	1,511	1,477	1,465	1,383	5,836	1,358	1,468	1,522	1,461	5,809	1,458	1,556	1,614	1,574	6,203
Gross Profit	5,000	7,491	6,773	6,367	1,374	1,570	1,779	1,624	6,347	1,562	1,758	1,860	1,750	6,931	1,712	1,941	2,054	1,924	7,631
R&D	1,478	1,572	1,716	1,877	419	389	368	342	1,518	355	373	391	391	1,511	403	423	432	432	1,690
SG&A	1,319	1,517	1,638	1,801	459	471	465	456	1,851	440	449	462	467	1,818	481	491	505	505	1,982
Restructuring/Amort	212	(112)	427	715	101	(196)	102	105	112	80	80	80	80	320	80	80	80	80	320
Operating Expenses	3,009	2,977	3,781	4,393	979	664	935	903	3,481	875	902	934	938	3,648	964	994	1,017	1,017	3,992
Operating Income	1,991	4,514	2,992	1,974	395	906	844	721	2,866	687	857	927	812	3,283	748	947	1,037	907	3,639
Interest/Other	26	37	(36)	(38)	(21)	(24)	(28)	(25)	(98)	(25)	(25)	(25)	(25)	(100)	(25)	(25)	(25)	(25)	(100)
Pre-tax Income	2,017	4,551	2,956	1,936	374	882	816	696	2,768	662	832	902	787	3,183	723	922	1,012	882	3,539
Taxes	547	1,323	719	177	12	222	187	167	588	159	200	216	189	764	173	221	243	212	849
Net Income	1,470	3,228	2,237	1,759	362	660	629	529	2,180	503	632	685	598	2,419	549	701	769	670	2,690
EPS-basic	$1.17	$2.66	$1.91	$1.53	$0.32	$0.59	$0.56	$0.48	$1.98	$0.46	$0.58	$0.63	$0.55	$2.23	$0.51	$0.65	$0.72	$0.63	$2.51
Shares-basic	1,260	1,199	1,151	1,132	1,107	1,103	1,096	1,093	1,100	1,090	1,087	1,084	1,081	1,086	1,078	1,075	1,072	1,069	1,074
EPS-diluted	$1.16	$2.62	$1.88	$1.51	$0.32	$0.58	$0.56	$0.48	$1.96	$0.46	$0.57	$0.62	$0.55	$2.20	$0.50	$0.64	$0.71	$0.62	$2.47
Shares-diluted	1,269	1,213	1,171	1,147	1,123	1,117	1,111	1,108	1,115	1,105	1,102	1,099	1,096	1,101	1,093	1,090	1,087	1,084	1,089
EPS-pro forma	$1.26		$2.21	$1.64		$0.42			$1.80										
Margin Analysis																			
Gross Margin	47.9%	53.6%	49.3%	49.6%	47.6%	51.5%	54.8%	54.0%	52.1%	53.5%	54.5%	55.0%	54.5%	54.4%	54.0%	55.5%	56.0%	55.0%	55.2%
R&D	14.2%	11.3%	12.5%	14.6%	14.5%	12.8%	11.3%	11.4%	12.5%	12.2%	11.6%	11.6%	12.2%	11.9%	12.7%	12.1%	11.8%	12.3%	12.2%
SG&A	12.6%	10.9%	11.9%	14.0%	15.9%	15.5%	14.3%	15.2%	15.2%	15.1%	13.9%	13.7%	14.5%	14.3%	15.2%	14.0%	13.8%	14.4%	14.3%
Operating Income	19.1%	32.3%	21.8%	15.4%	13.7%	29.7%	26.0%	24.0%	23.5%	23.5%	26.6%	27.4%	25.3%	25.8%	23.6%	27.1%	28.3%	25.9%	26.3%
Pre-tax Income	19.3%	32.6%	21.5%	15.1%	13.0%	28.9%	25.2%	23.1%	22.7%	22.7%	25.8%	26.7%	24.5%	25.0%	22.8%	26.4%	27.6%	25.2%	25.6%
Tax Rate	27.1%	29.1%	24.3%	9.1%	3.2%	25.2%	22.9%	24.0%	21.2%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%
Net Income	14.1%	23.1%	16.3%	13.7%	12.5%	21.7%	19.4%	17.6%	17.9%	17.2%	19.6%	20.3%	18.6%	19.0%	17.3%	20.0%	21.0%	19.2%	19.4%
Qtr-to-Qtr Growth																			
Revenue					-3.2%	5.6%	6.5%	-7.3%		-2.9%	10.5%	4.8%	-5.0%		-1.3%	10.3%	4.9%	-4.6%	
Operating Expenses					-25.0%	-32.2%	40.8%	-3.4%		-3.1%	3.0%	3.6%	0.5%		2.7%	3.1%	2.3%	0.0%	
Operating Income					184%	129%	-6.8%	-14.6%		-4.7%	24.7%	8.1%	-12.4%		-7.9%	26.7%	9.5%	-12.5%	
Pre-tax Income					141%	136%	-7.5%	-14.7%		-4.8%	25.6%	8.4%	-12.7%		-8.2%	27.6%	9.8%	-12.9%	
Net Income					37.1%	82.3%	-4.7%	-15.9%		-4.8%	25.6%	8.4%	-12.7%		-8.2%	27.6%	9.8%	-12.9%	
EPS					37.1%	83.8%	-4.3%	-14.2%		-4.6%	25.9%	8.7%	-12.5%		-7.9%	28.0%	10.1%	-12.6%	
Year-to-Year Growth																			
Revenue	-16.6%	33.9%	-1.6%	-6.6%	-7.6%	-8.6%	-4.3%	0.9%	-5.0%	1.2%	5.9%	4.3%	6.8%	4.6%	8.5%	8.4%	8.5%	8.9%	8.6%
Operating Expenses	-21.0%	-1.1%	27.0%	16.2%	-13.7%	-36.9%	3.9%	-30.9%	-20.8%	-10.6%	35.8%	-0.1%	3.9%	4.8%	10.2%	10.2%	8.9%	8.4%	9.4%
Operating Income	-18.3%	127%	-33.7%	-34.0%	-0.5%	51.5%	0.5%	419%	45.2%	74.0%	-5.4%	9.8%	12.7%	14.5%	8.8%	10.5%	12.0%	11.7%	10.9%
Pre-tax Income	-18.7%	126%	-35.0%	-34.5%	3.3%	53.1%	-3.2%	349%	43.0%	77.1%	-5.7%	10.5%	13.1%	15.0%	9.1%	10.8%	12.3%	12.1%	11.2%
Net Income	-23.4%	120%	-30.7%	-21.4%	36.6%	48.0%	-19.8%	100%	23.9%	39.0%	-4.2%	8.9%	13.1%	11.0%	9.1%	10.8%	12.3%	12.1%	11.2%
EPS	-20.1%	127%	-28.3%	-19.9%	41.1%	53.1%	-17.6%	107%	29.8%	44.1%	-1.3%	12.1%	14.3%	12.4%	10.3%	12.1%	13.5%	13.3%	12.4%

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Texas Instruments

Balance Sheet

dollars in millions

Fiscal year ends December

	2009	2010	2011	2012	3Q12	4Q12	1Q13	2Q13	3Q13
Assets									
Cash and equivalents	1,182	1,319	992	1,416	1,210	1,416	1,393	1,180	1,435
Short-term investments	1,743	1,753	1,943	2,549	2,451	2,549	2,469	2,064	2,158
Net accounts receivable	1,277	1,518	1,545	1,230	1,623	1,230	1,333	1,491	1,524
Quick Assets	4,202	4,590	4,480	5,195	5,284	5,195	5,195	4,735	5,117
Inventory	1,202	1,520	1,788	1,757	1,848	1,757	1,700	1,720	1,726
Other	710	950	1,560	1,321	1,452	1,321	1,310	1,583	1,258
Current Assets	6,114	7,060	7,828	8,273	8,584	8,273	8,205	8,038	8,101
Property, plant and eqt, net	3,158	3,680	4,428	3,912	4,055	3,912	3,739	3,611	3,509
Goodwill and intangibles	1,050	1,000	7,352	6,920	7,095	6,920	6,835	6,750	6,667
Long-term investments	637	453	265	215	225	215	204	203	210
Other	1,160	1,208	624	744	555	744	718	796	757
Total Assets	12,119	13,401	20,497	20,064	20,514	20,064	19,701	19,398	19,244
Liabilities and Shareholders Equity									
Current portion l-t debt	0	0	1,381	1,500	1,500	1,500	1,500	1,000	1,000
Accounts payable	503	621	625	444	501	444	440	437	426
Accrued comp and other	841	629	597	524	552	524	365	463	567
Income taxes payable	128	109	101	122	106	122	111	218	37
Underfunded retirement	115	622	795	883	766	883	694	684	693
Current Liabilities	1,587	1,981	3,499	3,473	3,425	3,473	3,110	2,802	2,723
Long-term debt	0	0	4,211	4,186	4,190	4,186	4,183	4,165	4,161
Other	810	983	1,835	1,444	1,496	1,444	1,456	1,363	1,309
Total Liabilities	2,397	2,964	9,545	9,103	9,111	9,103	8,749	8,330	8,193
Common stock	2,826	2,854	2,935	2,917	2,934	2,917	2,790	2,858	2,866
Retained earnings	22,066	24,695	26,278	27,205	27,179	27,205	27,330	27,677	27,993
Treasury stock	(14,549)	(16,411)	(17,485)	(18,462)	(18,093)	(18,462)	(18,518)	(18,877)	(19,236)
Other	(621)	(701)	(776)	(699)	(617)	(699)	(650)	(590)	(572)
Total Shareholders Equity	9,722	10,437	10,952	10,961	11,403	10,961	10,952	11,068	11,051
Total Liabilities and Equity	12,119	13,401	20,497	20,064	20,514	20,064	19,701	19,398	19,244
Sales and Income									
Revenue	10,427	13,966	13,735	12,825	3,390	2,979	2,885	3,047	3,244
COGS	5,428	6,474	6,963	6,457	1,650	1,534	1,511	1,477	1,465
Net income	1,470	3,228	2,236	1,759	784	264	362	660	629
Other									
Capital Expenditures	753	1,199	815	494	149	96	84	97	124
Depreciation and Amortization	925	912	1,015	1,300	327	317	314	221	217
Shares (weighted average diluted)	1,269	1,213	1,171	1,146	1,141	1,124	1,123	1,117	1,111
Employees (units)	26,584	28,412	34,759	34,151					
Dividends Paid	567	592	644	819	194	235	232	309	308
Dividend per Share	$0.45	$0.49	$0.56	$0.72	$0.17	$0.21	$0.21	$0.28	$0.28
Stock Repurchased	954	2,454	1,973	1,800	600	600	679	721	734
Number of Shares Repurchased *(mil)*	45.3	93.8	59.4	59.9	20.6	20.6			
Cash Flow from Operations	2,643	3,820	3,255	3,410	1,201	1,085	360	674	1,151
Ratios									
Liquidity									
Quick Ratio	2.65	2.32	1.28	1.50	1.54	1.50	1.67	1.69	1.88
Current Ratio	3.85	3.56	2.24	2.38	2.51	2.38	2.64	2.87	2.98
Leverage									
Debt Ratio	0.20	0.22	0.47	0.45	0.44	0.45	0.44	0.43	0.43
Long-term Debt/Capital	0.07	0.07	0.29	0.28	0.28	0.28	0.29	0.28	0.28
Asset Management									
Fixed Asset Turnover	3.2	4.1	3.4	3.1	3.30	2.99	3.02	3.32	3.64
Total Asset Turnover	0.9	1.1	0.8	0.6	0.68	0.59	0.58	0.62	0.67
Receivables DSO	44	39	40	35	43	37	42	44	42
Inventory Days	80	85	92	98	101	103	101	105	106
Inventory Turnover	4.2	4.8	4.2	3.6	3.54	3.40	3.50	3.45	3.40
Revenue/Employee	0.372	0.508	0.435	0.372					
Profitability									
Gross Margin	47.9%	53.6%	49.3%	49.7%	51.3%	48.5%	47.6%	51.5%	54.8%
Net Margin	14.1%	23.1%	16.3%	13.7%	23.1%	8.9%	12.5%	21.7%	19.4%
Return on Assets	12.2%	25.3%	13.2%	8.7%	15.7%	5.2%	7.3%	13.5%	13.0%
Return on Equity	15.4%	32.0%	20.9%	16.1%	27.8%	9.4%	13.2%	24.0%	22.7%
Per Share Data									
Book Value/Share	$7.66	$8.60	$9.35	$9.56	$9.99	$9.75	$9.75	$9.91	$9.95
Tangible Book Value/Share	$6.83	$7.78	$3.07	$3.53	$3.78	$3.60	$3.67	$3.87	$3.95
Cash/Share (gross)	$2.30	$2.53	$2.51	$3.46	$3.21	$3.53	$3.44	$2.90	$3.23
Cash/Share (net)	$2.30	$2.53	($2.27)	($1.50)	($1.78)	($1.53)	($1.62)	($1.72)	($1.41)
Earnings/Share	$1.16	$2.66	$1.91	$1.53	$0.69	$0.23	$0.32	$0.59	$0.57

Texas Instruments

Sales Analysis

dollars in millions, operating profit excludes restructuring charges, * restated

Fiscal year ends December

			2010					2011					2012					2013		
	2008	2009	1Q	2Q	3Q	4Q	2010	1Q	2Q	3Q	4Q	2011	1Q*	2Q	3Q	4Q*	2012	1Q	2Q	3Q
Revenue by Product																				
Analog	4,856	4,232	1,367	1,512	1,581	1,518	5,978	1,536	1,588	1,557	1,695	6,376	1,686	1,800	1,843	1,669	6,998	1,648	1,745	1,931
Power Mgmt	*1,215*	*30%*	+	+	+	- -		+	+	-	-	+	*flat*	+	+	-	+	-	*flat*	++
HPA	*1,458*	*30%*	+	++	++	-		-	+	-	-	-	*flat*	+	-	-	-	+	+	+
HVAL	*2,187*	*40%*	+	+	+	-		*flat*	*flat*	+	-	+	-	+	+	-	*flat*	-	+	+
SVA (National)			*(368)*	*(404)*	*(401)*	*(373)*	*(1,546)*	*(358)*	*(383)*	*(333)*	+	++	+	*flat*	-	-	+	+	+	+
Embedded			514	590	647	608	2,359	602	667	608	504	2,381	540	580	591	546	2,257	561	618	668
Catalog DSP/MCU	*814*		++	+	+	-		-	+	- -	-	*- (55%)*	*flat*	+	+	-	*- (55%)*	-	++	++
Automotive (MCU)	*326*					*flat*		+	++	-	*flat*	*++(15%)*	+	-	*flat*	-	*+ (20%)*	+	+	+
Comm Infr (DSP)	*488*				+	*flat*		-	+	-	-	*+ (30%)*	+	++	-	-	*- -(25%)*			
Connectivity			*flat*	+		-	+	+	+	-	+	-	-	-	-	-	-	*flat*	+	+
Other			1,324	1,394	1,512	1,399	5,629	1,254	1,203	1,301	1,221	4,979	895	955	956	764	3,570	676	684	645
Baseband/Nokia	*2,538*	*1,725*	*424*	*416*	*438*	*435*	*1,713*	*334*	*228*	*263*	*279*	*1,104*	*87*	*90*	*54*	*64*	*295*			
Total Legacy Wireless			*683*	*700*	*744*	*742*	*2,869*	*631*	*524*	*547*	*690*	*2,392*	*339*	*305*	*286*	*270*	*1,200*	*210*	148	57
DLP			+		+	-		+	-	+	-	-	-	+	-	-	-	*flat*	+	*flat*
ASIC	*>424*		++		+			-			-	-	+		-	-	+	-	*flat*	+
Calculators	*500*		+	+	+	-		+	+		-	-		+	+	-	-	+	+	+
Royalties/other			++	-				-		*23 ins*		-	*65 ins*	-	*+60 ins*	+	-	-	-	+
Total			3,205	3,496	3,740	3,525	13,966	3,392	3,458	3,466	3,420	13,736	3,121	3,335	3,390	2,979	12,825	2,885	3,047	3,244
Growth																				
Analog			8.2%	10.6%	4.6%	-4.0%	41.3%	1.2%	3.4%	-2.0%	8.9%	6.7%	-0.5%	6.8%	2.4%	-9.4%	9.8%	-1.3%	5.9%	10.7%
Embedded				14.8%	9.7%	-6.0%		-1.0%	10.8%	-8.8%	-17.1%	0.9%	7.1%	7.4%	1.9%	-7.6%	-5.2%	2.7%	10.2%	8.1%
Other				5.3%	8.5%	-7.5%		-10.4%	-4.1%	8.1%	-6.1%	-11.5%	-26.7%	6.7%	0.1%	-20.1%	-28.3%	-11.5%	1.2%	-5.7%
Total				9.1%	7.0%	-5.7%		-3.8%	1.9%	0.2%	-1.3%	-1.6%	-8.7%	6.9%	1.6%	-12.1%	-6.6%	-3.2%	5.6%	6.5%
Revenue Percent																				
Analog			42.7%	43.2%	42.3%	43.1%	42.8%	45.3%	45.9%	44.9%	49.6%	46.4%	54.0%	54.0%	54.4%	56.0%	54.6%	57.1%	57.3%	59.5%
Embedded			16.0%	16.9%	17.3%	17.2%	16.9%	17.7%	19.3%	17.5%	14.7%	17.3%	17.3%	17.4%	17.4%	18.3%	17.6%	19.4%	20.3%	20.6%
Other			41.3%	39.9%	40.4%	39.7%	40.3%	37.0%	34.8%	37.5%	35.7%	36.2%	28.7%	28.6%	28.2%	25.6%	27.8%	23.4%	22.4%	19.9%
Total			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Operating Profit																				
Analog	1,110	844	398	472	520	486	1,876	418	446	414	414	1,692	335	437	460	419	1,651	300	416	583
Embedded			86	129	169	151	535	105	148	119	16	388	35	52	60	11	158	7	54	83
Other			466	506	538	593	2,103	385	311	281	(65)	912	27	109	320	(291)	165	88	436	178
Total			950	1,107	1,227	1,230	4,514	908	905	814	365	2,992	397	598	840	139	1,974	395	906	844
Operating Margin																				
Analog	22.9%	19.9%	29.1%	31.2%	32.9%	32.0%	31.4%	27.2%	28.1%	26.6%	24.4%	26.5%	19.9%	24.3%	25.0%	25.1%	23.6%	18.2%	23.8%	30.2%
Embedded			16.7%	21.9%	26.1%	24.8%	22.7%	17.4%	22.2%	19.6%	3.2%	16.3%	6.5%	9.0%	10.2%	2.0%	7.0%	1.2%	8.7%	12.4%
Other			35.2%	36.3%	35.6%	42.4%	37.4%	30.7%	25.9%	21.6%	-5.3%	18.3%	3.0%	11.4%	33.5%	-38.1%	4.6%	13.0%	63.7%	27.6%
Total			29.6%	31.7%	32.8%	34.9%	32.3%	26.8%	26.2%	23.5%	10.7%	21.8%	12.7%	17.9%	24.8%	4.7%	15.4%	13.7%	29.7%	26.0%
Revenue by Region																				
US	1,551	1,140					1,539					1,468					1,596			
Asia	7,387	6,575					8,903					8,619					7,808			
Europe	1,875	1,408					1,760					1,822					1,861			
Japan	1,268	976					1,366					1,462					1,357			
ROW	420	328					398					364					203			
Total	12,501	10,427					13,966					13,735					12,825			
Revenue Percent																				
US	12.4%	10.9%					11.0%					10.7%					12.4%			
Asia	59.1%	63.1%					63.7%					62.8%					60.9%			
Europe	15.0%	13.5%					12.6%					13.3%					14.5%			
Japan	10.1%	9.4%					9.8%					10.6%					10.6%			
ROW	3.4%	3.1%					2.8%					2.7%					1.6%			
Total	100.0%	100.0%					100.0%					100.0%					100.0%			
Revenue by Market																				
Communications	48%	45%					42%					40%					31%			
Computation	22%	23%					22%					23%					25%			
Industrial	10%	11%					14%					14%					17%			
Consumer	10%	11%					11%					11%					13%			
Automotive	6%	6%					8%					8%					11%			
Education *(Calc.)*	4%	4%					3%					4%					3%			
Total	100%	100%					100%					100%					100%			
Other																				
Orders			3,640	3,700	3,430	3,130		3,580	3,600	3,070	2,860		3,240	3,410	3,240	2,720		2,960	3,138	3,169
Book:Bill ratio			1.14	1.07	0.92	0.89		1.06	1.04	0.89	0.84		1.04	1.02	0.96	0.91		1.03	1.03	0.97
Distribution							37%					40%					50%			
Nokia *(incl. CMs)*	18%	24%					19%					13%					<10%			

Texas Instruments

Company Summary

Products

Analog *(market leader, 18% share)*
- Power Management
- HPA (High-Performance Analog)
  - *amplifiers*
  - *data converters*
  - *RF*
  - *interface*
- HVAL *(standard parts)*
  - *High-Volume Analog and Logic*
- Silicon Valley Analog (SVA)
  - *former National Semi*

Embedded *(DSPs, MCUs, #2/12% share)*
- Catalog DSP/MCU
- Automotive *(MCUs)*
- Communications Infrastructure
  - *DSPs*

Wireless *(handsets)*
- Digital Basebands *(Nokia)*
- Application Processors *(OMAP)*
- Mobile Connectivity
  - *Bluetooth, GPS, WiFi, NFC*

Other
- Digital Light Processors *(DLPs)*
- Calculators
- ASICs
- Royalties
- Supply Agreements
- Insurance Proceeds
- Litigation
- Restructuring
- Acquisition/Divestiture-related

Markets and Applications

Communications
phones and infrastructure eqt, WLAN, GPS, Bluetooth, NFC, video conferencing

Computation
PCs, netbooks, servers, printers, HDDs, monitors, projectors, tablets

Industrial
digital power controls
- *switch-mode, uninterruptible*

motor controls
- *HVAC, industrial motor drives, power tools, copiers*

security *(video surveillance, fingerprint ID/authentication, smoke/broken-glass detection)*
smart metering, POS/terminals, test/measurement, LED, factory automation, medical diag/monitor

Consumer
DSC, games, audio/visual eqt, MP3, car audio, home appliances, navigation, eBook readers

Automotive
body, chassis, telemetrics, entertainment, powertrain, safety, security, driver info

Education
calculators, software

Competitors

Analog
Analog Devices
Fairchild
Freescale
Infineon
Intersil
Linear Tech
Maxim
NXP
Qualcomm
Richtek
STMicro

Embedded
Atmel
Infineon
Freescale
Microchip
NXP
Renesas
STMIcro

Wireless
Broadcom
CSR
Intel
Marvell
NVIDIA
Qualcomm
Samsung

Manufacturing Facilities

North America
Dallas, Texas
Richardson, Texas *(RFAB, 300mm)*
Sherman, Texas
Houston, Texas *(fab closing)*
Tucson, Arizona
Santa Clara, California *(fab, NSM)*
South Portland, Maine *(fab, NSM)*
Aguascalientes, Mexico

Europe
Freising, Germany
Nice, France
Greenock, Scotland *(fab, NSM)*

Asia
Aizu, Japan *(fab Jul'10)*
Miho, Japan
Hiji, Japan *(fab closing)*
Tokyo, Japan
Chengdu, China *(fab Oct'10)*
Shanghai, China
Bangalore, India
Kuala Lumpur, Malaysia *(assy/test, NSM)*
Melaka, Malaysia
Baguio, Philippines *(assy/test)*
Pampanga(Clark), Philippines *(assy/test)*
Taipei, Taiwan

Acquisitions

Sep'11	National Semi
May'09	Luminary Micro
Feb'09	CICLON Semi
Jun'08	Innovative Design Solutions
May'08	Commergy Technologies
Oct'07	POWERPRECISE Solutions
Aug'07	Integrated Circuit Designs
Jan'06	Chipcon
Jul'03	Radia Communications
Jun'02	Condat
Apr'02	Ditech software unit
Feb'02	Envoy Networks
Sep'01	Graychip
Sep'00	Alantro Communications
Aug'00	Dot Wireless
Aug'00	Burr-Brown
Jul'00	VLSI Tech design team
Mar'00	Toccata
Nov'99	Power Trends
Oct'99	Unitrode
Aug'99	Telogy Networks
Aug'99	Integrated Sensors Solutions
Jul'99	ATL Research
Jun'99	Libit Signal Processing
Feb'99	Butterfly VLSI
Nov'98	Adaptec HDD business
Feb'98	Amati Communications
Feb'98	Spectron Microsystems
Jan'98	GO DSP
Dec'97	Oasix & Arisix Corporations
Jan'97	Intersect Technologies
Jul'96	Silicon Systems
May'96	Tartan
	Benchmarq

Divestitures

Aug'10	Cable modem to Intel
Jun'07	DSL CPE to Infineon
Jan'06	Sensors & Controls to Bain Cap.
Feb'05	LCD drivers to Oki
Sep'00	Materials business to Blue Point Cap.
Nov98	Aversa (M&C) to Telital
Jun'98	DRAMs to Micron
May'98	ControlWORKS to Gores Tech
Aug'97	Mold manufacturing to Jade Tech
Jun'97	Inspection equipment to Flextech
May'97	Telecom to DSC Communications
May'97	Multipoint systems to Bosch Telecom
Apr'97	Software to Sterling Software
Apr'97	Chemical operations to Air Liquide
Jan'97	Mobile computing business to Acer
Jan'97	Defense business to Raytheon
Jul'96	Printer business to GENICOM
Jan'96	Custom manufacturing to Solectron

Texas Instruments

Revenue Forecast

		2012 act					2013 est					2014					2015				
	2011	1Q*	2Q	3Q	4Q*	2012	1QA	2QA	3QA	4Q	2013	1Q	2Q	3Q	4Q	2014	1Q	2Q	3Q	4Q	2015
Revenue by Product																					
Analog	6,376	1,686	1,800	1,843	1,669	6,998	1,648	1,745	1,931	1,854	7,178	1,817	1,980	2,099	2,099	7,995	2,057	2,242	2,377	2,377	9,053
Power Mgmt	+	*flat*	+	+	-	+	-	*flat*	++												
HPA	-	*flat*	+	-	-	-	+	+	+												
HVAL	+	-	+	+	-	*flat*	-	+	+												
SVA (National)	++	+	*flat*	-	-	+	+	+	+												
Embedded	2,381	540	580	591	546	2,257	561	618	668	641	2,488	641	699	706	635	2,682	635	693	699	630	2,657
Catalog DSP/MCU	*- (55%)*	*flat*	+	+	-	*- (55%)*	-	++	++												
Automotive (MCU)	*++(15%)*	+	-	*flat*	-	*+ (20%)*	+	+	+												
Comm Infr (DSP)	*+ (30%)*	+	++	-	-	*- -(25%)*															
Connectivity	-	-	-	-	-	-	*flat*	+	+												
Other	4,979	895	955	956	764	3,570	676	684	645	512	2,517	462	547	577	477	2,064	477	562	592	492	2,124
Baseband/Nokia	*1,104*	*87*	*90*	*54*	*64*	*295*															
Total Legacy Wireless	*2,392*	*339*	*305*	*286*	*270*	*1,200*	*210*	148	*57*	*50*	*465*	-					-				
DLP	-	-	+	-	-	-	*flat*	+	*flat*												
ASIC	-	+		-	-	+	-	*flat*	+												
Calculators	-		+	+	-	-	+	+	+	*(100)*			*70*	*30*	*(100)*			*70*	*30*	*(100)*	
Royalties/other	-	*65 ins*	-	*+60 ins*	+	-	-	-	+												
Total	13,736	3,121	3,335	3,390	2,979	12,825	2,885	3,047	3,244	3,007	12,183	2,920	3,226	3,382	3,212	12,740	3,170	3,497	3,668	3,498	13,833
Growth																					
Analog	6.7%	-0.5%	6.8%	2.4%	-9.4%	9.8%	-1.3%	5.9%	10.7%	-4.0%	2.6%	-2.0%	9.0%	6.0%	0.0%	11.4%	-2.0%	9.0%	6.0%	0.0%	13.2%
Embedded	0.9%	7.1%	7.4%	1.9%	-7.6%	-5.2%	2.7%	10.2%	8.1%	-4.0%	10.2%	0.0%	9.0%	1.0%	-10.0%	7.8%	0.0%	9.0%	1.0%	-10.0%	-0.9%
Other	-11.5%	-26.7%	6.7%	0.1%	-20.1%	-28.3%	-11.5%	1.2%	-5.7%	-20.6%	-29.5%	-9.8%	18.4%	5.5%	-17.3%	-18.0%	0.0%	17.8%	5.3%	-16.9%	2.9%
Total	-1.6%	-8.7%	6.9%	1.6%	-12.1%	-6.6%	-3.2%	5.6%	6.5%	-7.3%	-5.0%	-2.9%	10.5%	4.8%	-5.0%	4.6%	-1.3%	10.3%	4.9%	-4.6%	8.6%
Revenue Percent																					
Analog	46.4%	54.0%	54.0%	54.4%	56.0%	54.6%	57.1%	57.3%	59.5%	61.6%	58.9%	62.2%	61.4%	62.1%	65.4%	62.8%	64.9%	64.1%	64.8%	67.9%	65.4%
Embedded	17.3%	17.3%	17.4%	17.4%	18.3%	17.6%	19.4%	20.3%	20.6%	21.3%	20.4%	22.0%	21.7%	20.9%	19.8%	21.0%	20.0%	19.8%	19.1%	18.0%	19.2%
Other	36.2%	28.7%	28.6%	28.2%	25.6%	27.8%	23.4%	22.4%	19.9%	17.0%	20.7%	15.8%	17.0%	17.1%	14.9%	16.2%	15.1%	16.1%	16.1%	14.1%	15.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Texas Instruments

Valuation

Relative Valuation

Company	Ticker	Price 10/21/13	52-Week Low	52-Week High	CY EPS 2011	CY EPS 2012	CY EPS 2013	CY EPS 2014	CY P/E 2011	CY P/E 2012	CY P/E 2013	CY P/E 2014	Shares (mil)	CAP ($ mil)	Price-Sales TTM	Price-Sales Cur FY	Price-Sales Nxt FY	FY Ends	Qtr Div/sh	Div Yield
Texas Instruments *	**TXN**	**40.99**	**27.21**	**41.22**	**2.19**	**1.50**	**1.96**	**2.20**	**18.7**	**27.3**	**20.9**	**18.6**	**1,111**	**45,540**	**3.7**	**3.7**	**3.6**	**Dec**	**$0.300**	**2.9%**
Analog Devices	ADI	47.75	38.00	50.00	2.53	2.11	2.24	2.65	18.9	22.6	21.3	18.0	315	15,056	5.7	5.7	5.2	Oct	$0.340	2.8%
Fairchild Semiconductor	FCS	12.50	11.14	15.75	1.29	0.55	0.26	0.74	9.7	22.7	48.1	16.9	128	1,605	1.1	1.1	1.1	Dec		
Freescale Semiconductor	FSL	17.73	7.63	17.82	0.98	-0.08	0.52	1.49	18.1	NM	34.1	11.9	259	4,592	1.2	1.1	1.0	Dec		
Intel *	INTC	24.14	19.23	25.98	2.39	2.13	1.91	2.14	10.1	11.3	12.6	11.3	5,100	123,089	2.4	2.3	2.2	Dec	$0.225	3.7%
Intersil	ISIL	11.08	6.31	11.46	0.89	0.30	0.53	0.62	12.4	36.9	20.9	17.9	127	1,409	2.5	2.5	2.4	Dec	$0.120	4.3%
Linear Technology	LLTC	39.32	30.79	42.82	2.43	1.94	2.00	2.03	16.2	20.3	19.7	19.4	239	9,409	7.3	6.8	6.2	Jun	$0.260	2.6%
Maxim Integrated Products	MXIM	29.92	26.13	33.67	1.65	1.67	1.70	1.85	18.1	17.9	17.6	16.2	297	8,880	3.6	3.7	3.4	Jun	$0.260	3.5%
NXP Semiconductor	NXPI	38.29	20.57	39.46	1.71	1.84	3.02	3.94	22.4	20.8	12.7	9.7	255	9,775	2.1	2.0	1.9	Dec-ADR		
STMicroelectronics	STM	8.80	5.31	10.05	0.42	-0.33	-0.13	0.59	21.0	NM	NM	14.9	889	7,823	0.9	1.0	0.9	Dec-ADR	$0.100	4.5%
Average									16.3	21.8	23.4	15.1			3.0	2.9	2.7			3.6%

** Tokeneke estimate*
Source: consensus as of 10/21/13

Historical Valuation

Company	Ticker	Price 10/21/13	Trailing 12-month Price/Earnings Current	Price/Earnings Historical*	Price/Sales Current	Price/Sales Historical*	Price/Book Current	Price/Book Historical*
Texas Instruments	TXN	$40.99	26.8		3.7		4.1	
			Average	35.5	**Average**	3.0	**Average**	3.7
			High	298.0	**High**	15.9	**High**	16.7
			Low	8.1	**Low**	0.3	**Low**	1.0

** weekly since 1990*

Tokeneke Research LLC — *Company Overview*

Semiconductor Industry Analysis and Insight

The Company

Tokeneke Research is an independent research firm specializing in semiconductor industry business issues, providing fundamental research focused on US equities across all market capitalizations within the sector to investors. The company was founded in 2005 and is based in Connecticut.

The Offering

- *Monthly Newsletter:* A summarized review of noteworthy industry business developments, sales statistics, and sector equity market performance, as well as a near-term and annual outlook for sector business fundamentals and share prices. This report typically includes two pages of text and a handful of recurring charts and tables. It is intended for relatively broad-based distribution.
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My Background

I have an electrical engineering background, nearly 12 years of semiconductor industry experience, and was on Wall Street for nearly eight years where I was selected as the Best On The Street semiconductor analyst for 2002 by The Wall Street Journal, and third-rated Best of the Best across all sectors.

I obtained my undergraduate BS degree in electrical engineering from the University of Washington, and my MBA from Santa Clara University. My industry experience consists of nearly 12 years in various technical sales and marketing roles at four different semiconductor firms located in Silicon Valley beginning with Advanced Micro Devices in 1984, followed by two small start-up companies, and ending at Cirrus Logic where I supported the firm's Japanese market development. I joined Fahnestock & Co. as a senior semiconductor analyst in 1996 and was recruited by Needham & Co. in April 2000.

My formal coverage list as a sell-side analyst included the following equities: AMD, ALSC, ALTR, ARTI, ATML, CUBE, CY, ESST, GNSS, INTC, ISSI, LSI, MOSY, MU, OIIM, OVTI, RMTR, SIII, SMSC, STEC, SVTG, TDFX, TSRA, TXN, and ZRAN.

—Dan K. Scovel
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