

Texas Instruments

Soft Guidance; 4Q/1Q Should Be The Bottom; Lowering Estimates

Texas Instruments reported in-line revenues for the Sep-Qtr driven by continued strength in auto and personal electronics (PE) recovery but offset by a broadening of weakness in industrial and continued soft enterprise/comms equipment. Weakness was broad-based across geographies and the team has not seen a recovery in China. The team continues to see a weak demand environment persist into the Dec-Qtr. As a result, the Dec-Qtr rev guidance was down 10% Q/Q, twice the typical seasonal decline and below ours/consensus expectations. We do anticipate the business stabilizing at these lower levels through 1Q24 as the peak-to-trough revenue decline of ~22% is comparable to the 2018/19 semiconductor downcycle. TI's Embedded Processing segment (ie microcontrollers) remains resilient and was up 8% Y/Y helped by their restructuring/refocus efforts (focus on auto/industrial, catalog). On the supply side, the team is expanding its manufacturing footprint well ahead of demand and given the near-term revenue headwinds, the team is seeing the higher capex/depreciation expenses impact its profitability and free cash flow profile. Moreover given that inventory days are near the company's target level (205 days in Q3 vs target range of 130 to >200 days), the team began lowering its factory utilizations in 3Q and this quarter as well. As a result of under-utilization charges, higher depreciation expenses, and lower revenues, we see GMs bottoming at 59%+ in the 1H of next year but with a 200bps recovery in the 2H of the year driven by better revenue/fixed cost absorption and the unwinding of utilization charges. We lower our forward estimates and decrease our PT to \$170. Our forward earning estimates have now been cut by ~25%+ over the last three quarters, which we believe are sufficiently de-risked. Therefore, we see risk/reward attractive at these levels. We maintain our OW rating on TXN.

- **In-line 3Q results reflecting broadening of weakness in industrial and continued soft enterprise/comms equipment markets but partially offset by sustained auto demand and PE recovery.** TI reported sales of \$4.53B (flatish% Q/Q and down 14% Y/Y), was largely in-line with consensus of \$4.55B. Gross margin decreased Q/Q to 62.1% (Street 62.9%). Opex decreased Q/Q and resulted in OPM of 41.7%. EPS of \$1.85 was above consensus of \$1.82. Analog revenues decreased 16% Y/Y and Embedded Processing increased by 8% Y/Y, helped by their restructuring/refocus efforts (focus on auto/industrial, catalog) combined with continued tight supply dynamics in that segment of the market, in our view. By end markets, auto was up MSD% Q/Q, industrial down MSD% Q/Q, comms equipment down upper-teens% Q/Q, enterprise down upper single digit% Q/Q, and PE up 20% Q/Q.

Overweight

TXN, TXN US

Price (24 Oct 23):\$146.92

▼ **Price Target (Dec-24):\$170.00**

Prior (Dec-24):\$200.00

Semiconductors & Semiconductor Capital Equipment / IT Hardware

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Key Changes (FYE Dec)

	Prev	Cur
Adj. EPS - 23E (\$)	7.84	7.40
Adj. EPS - 24E (\$)	8.49	6.91

Quarterly Forecasts (FYE Dec)

Adj. EPS (\$)	2022A	2023E	2024E
Q1	2.42	1.95A	1.49
Q2	2.51	1.97A	1.61
Q3	2.53	1.93A	1.92
Q4	2.23	1.54	1.88
FY	9.70	7.40	6.91

Style Exposure

Quant Factors	Current	Hist %Rank (1=Top)			
	%Rank	6M	1Y	3Y	5Y
Value	63	64	62	70	74
Growth	90	76	78	81	72
Momentum	71	58	38	60	66
Quality	8	1	2	1	3
Low Vol	5	5	6	10	14
ESGQ	4	2	5	1	5

Sources for: Style Exposure – J.P. Morgan Quantitative and Derivatives Strategy; all other tables are company data and J.P. Morgan estimates.

See page 11 for analyst certification and important disclosures.

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Price Performance



	YTD	1m	3m	12m
Abs	-11.1%	-8.4%	-20.1%	-9.1%
Rel	-21.7%	-6.7%	-13.4%	-21.0%

Company Data

Shares O/S (mn)	916
52-week range (\$)	188.12-145.95
Market cap (\$ mn)	134,578.70
Exchange rate	1.00
Free float(%)	99.9%
3M - Avg daily vol (mn)	4.70
3M - Avg daily val (\$ mn)	777.1
Volatility (90 Day)	24
Index	S&P 500
BBG BUY HOLD SELL	11 23 4

Key Metrics (FYE Dec)

\$ in millions	FY22A	FY23E	FY24E
Financial Estimates			
Revenue	20,028	17,542	17,781
Adj. EBIT	10,140	7,338	6,934
Adj. EBITDA	11,408	31,148	630,415
Adj. net income	8,978	6,781	6,330
Adj. EPS	9.70	7.40	6.91
BBG EPS	9.35	7.39	7.88
Cashflow from operations	8,720	7,367	7,455
FCFF	5,923	2,188	2,455
Margins and Growth			
Revenue growth	9.2%	(12.4%)	1.4%
EBIT margin	50.6%	41.8%	39.0%
EBIT growth	13.2%	(27.6%)	(5.5%)
EBITDA margin	57.0%	177.6%	3545.4%
EBITDA growth	12.5%	173.0%	1923.9%
Net margin	44.8%	38.7%	35.6%
Adj. EPS growth	14.3%	(23.7%)	(6.7%)
Ratios			
Adj. tax rate	12.8%	12.7%	13.5%
Interest cover	-	-	-
Net debt/Equity	NM	0.1	0.3
Net debt/EBITDA	NM	0.1	0.0
ROE	64.3%	43.6%	36.8%
Valuation			
FCFF yield	4.4%	1.6%	1.8%
Dividend yield	-	-	-
EV/Revenue	6.7	7.8	7.8
EV/EBITDA	11.8	4.4	0.2
Adj. P/E	15.1	19.8	21.3

Summary Investment Thesis and Valuation

Investment Thesis

We believe Texas Instruments will continue to be one of the market leaders in high-value analog and embedded products. TXN is a high-quality stock with above-average leverage and an attractive dividend yield. We are Overweight TI due to superior leverage, broad-based end market exposure, and shareholder-friendly capital allocation. We expect gross margins to trend higher as the company increases factory loadings driven by secular growth from the automotive and industrial end markets and seasonally stronger demand from the consumer end market. Also, TI's payout ratio target of 100% is the highest in the industry.

Valuation

Our \$170 Dec 2024 PT assumes that TXN trades at a normalized analog multiple of 20-25x applied to ~\$7.20 of earnings power exiting CY24.

Performance Drivers



Factors	6M Corr	1Y Corr
Market: MSCI US	0.65	0.72
Sect: Technology	0.41	0.28
Ind: Semicond & S Equip	0.40	0.48
Macro:		
Economic Surprise	0.30	0.23
Non-Energy Commodity	0.05	0.15
US 10yr Breakeven	0.31	-0.15
Quant Styles:		
LowVol	-0.28	-0.22
Momentum	-0.21	-0.20
Size	-0.47	-0.18

Source: J.P. Morgan Quantitative and Derivatives Strategy for Performance Drivers; company data, Bloomberg Finance L.P. and J.P. Morgan estimates for all other tables. Note: Price history may not be complete or exact.

- **Continued soft demand into the Dec-Qtr - Q/Q guide below consensus and typical seasonality.** TI guided 4Q23 revenues of \$4.1B (down 10% Q/Q and down 12% Y/Y), below seasonal trends (down ~5% Q/Q) and consensus (\$4.49B). EPS guidance of \$1.46 at the midpoint was below Street estimates of \$1.77 on lower revenues and OPM. Outside of automotive, the team continues to see broad-based weakness.
- **Strong capex spending and lower revenue profile creating FCF and gross margin headwinds; FCF growth remains a key priority longer term.** The team is seeing higher capex/depreciation impact its profitability and free cash flow profile. Moreover given that inventory days are near the company's target level (205 days in Q3 vs target range of 130 to >200 days), the team began lowering its factory utilizations in 3Q and here in 4Q. As a result of under-utilization charges and higher depreciation expenses, we see GMs bottoming at 59%+ in the 1H of next year but with a 200bpts recovery in the 2H of the year driven by better revenue/fixed cost absorption and the unwinding of utilization charges. TI generated \$440M FCF in 3Q23 on strong capex spending. FCF margin of ~9% (TTM) in 2Q23 vs lower Q/Q (~17% in 2Q23). 3Q23 capex was \$1495 million or 33% of revenue. The company remains committed to returning all FCF to shareholders as TI returned \$1.17B to shareholders in dividends/buyback with a payout ratio in the TTM of ~338%.
- **Decreasing forward estimates and price target.** We are decreasing our forward estimates and decreasing our PT to \$170 (from our prior PT of \$200). Our PT assumes that TXN trades at a normalized analog multiple of 20-25x applied to ~\$7.20 of earnings power exiting CY24.

Texas Instruments 3Q23 Earnings/4Q23 Outlook

Table 1: Texas Instruments 3Q23 Earnings Summary and 4Q23 Outlook

\$ in millions except per-share data

	3Q23				4Q23E	
	Consensus	JPM Est	Actual	Delta	Consensus	Guidance
Revenue (\$B)	\$4,553	\$4,600	\$4,532	(\$68.0)	\$4,100	\$4,493
Q/Q Change		1.5%	0.0%	-1.5%		
Gross Margin	62.9%	63.0%	62.1%	-0.9%		
Op Margin		42.5%	41.7%	-0.8%		
EPS (inc. SBC)	\$1.82	\$1.83	\$1.85	\$0.02	\$1.46	\$1.77
EPS (ex. SBC)		\$1.91	\$1.93	\$0.02		

Source: Company reports, Bloomberg Finance L.P. and J.P. Morgan estimates

Table 2: Texas Instruments Market Segment Summary – 3Q23

in millions

	3Q23			Operating
	Revenue	% of Total	Op Margin	Income
Analog	\$3,353	74.0%	44.9%	\$1,504
Embedded Processing	\$890	19.6%	29.0%	\$258
Other	\$289	6.4%	45.0%	\$130
TOTAL	\$4,532	100.0%	41.7%	\$1,892

Source: Company reports and J.P. Morgan estimates

Balance Sheet and Cash Flow Statements

Cash, cash equivalents and short-term investments was down 6% Q/Q at \$8.95B in 3Q23 vs. \$9.55B in 2Q23. Cash flow from operations was \$1.9B (up from \$1.4B in 2Q23). Capex increased to \$1495 in 3Q23 from \$1446M in 2Q23, resulting in FCF of \$442M vs. -\$47M in 2Q23. On return of capital, dividends were \$1126M and share repurchases were \$46M. TTM payout ratio was ~338%.

Inventory days were 205 days (from 207), down 2 days sequentially (at the high-end of TI's target range of 130 to >200 days).

Appendix I: Valuation and Comp Table

Table 3: Semiconductor Comp and Group Valuation Table

JPM		Market	10/24/23 Price	Non-GAAP EPS		P/E		Revenue		P/S		Consensus Non-GAAP EPS		Consensus Sales		Consensus P/E		Consensus P/S	
Rating	Cap	C23E		C24E	C23E	C24E	C23E	C24E	C23E	C24E	C23E	C24E	C23E	C24E	C23E	C24E	C23E	C24E	
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PC Semiconductors																			
INTC	UW	\$145,140	\$34.59	\$0.61	\$1.74	56.4	19.9	\$52,143	\$59,724	2.8	2.4	\$0.55	\$1.71	\$52,522	\$58,798	62.4	20.2	2.8	2.5
NVDA	OW	\$1,091,138	\$436.63	\$10.49	\$14.95	41.6	29.2	\$53,488	\$72,981	20.4	15.0	\$9.91	\$16.97	\$50,550	\$80,407	44.0	25.7	21.6	13.6
AMD	N	\$165,417	\$101.67	\$2.84	\$4.20	35.8	24.2	\$22,861	\$27,005	7.2	6.1	\$2.76	\$4.12	\$22,832	\$27,498	36.9	24.7	7.2	6.0
Memory																			
MU	OW	\$74,537	\$68.07	N/A	N/A	N/A	N/A	\$15,856	\$21,931	4.7	3.4	(\$5.10)	\$1.00	\$16,188	\$24,474	(13.3)	67.8	4.6	3.0
WDC	N	\$13,790	\$42.96	N/A	N/A	N/A	N/A	\$11,033	\$13,456	1.2	1.0	(\$6.64)	(\$0.25)	\$11,050	\$14,053	(6.5)	(170.5)	1.2	1.0
Enterprise/Networking/Datacenter Semiconductors																			
MRVL	OW	\$42,606	\$49.49	\$1.53	\$2.32	32.3	21.3	\$5,525	\$6,419	7.7	6.6	\$1.53	\$2.26	\$5,513	\$6,401	32.5	21.9	7.7	6.7
AVGO	NR	\$376,234	\$881.11	\$43.02	\$49.57	20.5	17.8	\$36,183	\$40,519	10.4	9.3	\$42.65	\$46.68	\$36,201	\$39,630	20.7	18.9	10.4	9.5
Mobile Devices																			
SWKS	N	\$14,643	\$91.52	\$8.20	\$9.70	11.2	9.4	\$4,739	\$5,174	3.1	2.8	\$8.14	\$9.36	\$4,732	\$5,081	11.3	9.8	3.1	2.9
QRVO	UW	\$8,752	\$88.84	\$3.98	\$6.97	22.3	12.7	\$3,284	\$4,000	2.7	2.2	\$3.99	\$7.11	\$3,279	\$4,073	22.3	12.5	2.7	2.1
Analog/Microcontrollers																			
TXN	OW	\$134,579	\$146.92	\$7.04	\$6.58	20.9	22.3	\$17,542	\$17,781	7.7	7.6	\$7.41	\$7.89	\$17,953	\$19,186	19.8	18.6	7.5	7.0
ADI	OW	\$83,043	\$164.93	\$9.19	\$8.95	17.9	18.4	\$11,739	\$11,498	7.1	7.2	\$9.54	\$8.55	\$11,936	\$11,182	17.3	19.3	7.0	7.4
NXPI	N	\$47,978	\$183.61	\$13.85	\$15.00	13.3	12.2	\$13,223	\$14,024	3.6	3.4	\$13.92	\$14.80	\$13,244	\$13,903	13.2	12.4	3.6	3.5
MCHP	OW	\$41,923	\$76.03	\$6.25	\$5.49	12.2	13.9	\$8,827	\$8,261	4.7	5.1	\$6.34	\$5.83	\$8,898	\$8,528	12.0	13.0	4.7	4.9
Diversified/Consumer/Standard Components/Other																			
ON	N	\$38,180	\$85.09	\$5.25	\$5.64	16.2	15.1	\$8,387	\$8,913	4.6	4.3	\$5.23	\$5.69	\$8,381	\$8,942	16.3	15.0	4.6	4.3
MTSI	N	\$5,353	\$74.96	\$2.45	\$3.10	30.6	24.2	\$622	\$709	8.6	7.6	\$2.49	\$2.96	\$625	\$701	30.1	25.3	8.6	7.6
Foundries																			
GFS	OW	\$30,241	\$54.39	\$2.07	\$2.50	26.3	21.8	\$7,399	\$7,855	4.1	3.8	\$2.05	\$2.55	\$7,425	\$8,218	26.6	21.3	4.1	3.7
Semiconductor Capital Equipment																			
AMAT	OW	\$113,721	\$134.90	\$7.73	\$8.72	17.4	15.5	\$25,895	\$27,610	4.4	4.1	\$7.79	\$7.88	\$26,065	\$26,584	17.3	17.1	4.4	4.3
LRDX	OW	\$80,435	\$604.02	\$26.82	\$29.81	22.5	20.3	\$14,259	\$15,558	5.6	5.2	\$26.77	\$29.95	\$14,265	\$15,712	22.6	20.2	5.6	5.1
KLAC	OW	\$64,733	\$470.26	\$21.66	\$24.42	21.7	19.3	\$9,503	\$10,150	6.8	6.4	\$21.80	\$23.24	\$9,535	\$9,888	21.6	20.2	6.8	6.5
Chip Design Automation Software																			
ARM	OW	\$53,869	\$52.37	\$0.81	\$1.12	65.0	46.7	\$2,831	\$3,281	19.0	16.4	\$0.89	\$1.07	\$2,886	\$3,384	59.0	49.2	18.7	15.9
CDNS	N	\$64,677	\$237.41	\$5.10	\$5.97	46.5	39.8	\$4,080	\$4,560	15.9	14.2	\$5.10	\$5.88	\$4,084	\$4,575	46.5	40.4	15.8	14.1
SNPS	OW	\$72,520	\$468.03	\$11.37	\$13.29	41.2	35.2	\$6,000	\$6,763	12.1	10.7	\$11.37	\$13.02	\$5,970	\$6,698	41.2	36.0	12.1	10.8
Large Cap Semi Average						26.2	18.9			7.5	6.6					27.0	18.4	7.6	6.4
Small-Mid Cap Semi Average						23.1	17.3			5.3	4.7					22.9	17.6	5.3	4.7
Semi Group Average (ex-outliers)						23.3	17.4			5.6	5.2					23.7	17.4	5.6	5.2
SOX Index			3,344	123	174	27.3	19.2			5.3	4.7					27.3	19.2	5.3	4.7
S&P500			4,248	216	243	19.7	17.5			2.4	2.3					19.7	17.5	2.4	2.3

Source: Bloomberg Finance L.P. and J.P. Morgan estimates. Prices are as of market close 10/24/23

Appendix II: Financial Tables

Table 4: Texas Instruments Income Statement

\$ in millions, except per-share data

	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23E	2023E	1Q24E	2Q24E	3Q24E	4Q24E	2024E
Total Revenue	4,905	5,212	5,241	4,670	20,028	4,379	4,531	4,532	4,100	17,542	4,100	4,305	4,736	4,641	17,781
% Change Y/Y	14.4%	13.8%	12.9%	-3.4%	9.2%	-10.7%	-13.1%	-13.5%	-12.2%	-12.4%	-6.4%	-5.0%	4.5%	13.2%	1.4%
% Change Q/Q	1.5%	6.3%	0.6%	-10.9%		-6.2%	3.5%	0.0%	-9.5%		0.0%	5.0%	10.0%	-2.0%	
Cost of Sales	1,463	1,587	1,624	1,583	6,257	1,516	1,621	1,717	1,640	6,494	1,669	1,748	1,847	1,787	7,050
% Change Y/Y	-1.9%	5.6%	8.9%	6.8%	4.8%	3.6%	2.1%	5.7%	2.0%	3.8%	-3.0%	-3.0%	4.0%	2.0%	8.6%
% Change Q/Q	-1.3%	8.5%	2.3%	-2.5%		-4.2%	6.9%	5.9%	-4.5%		1.8%	4.7%	5.7%	-3.3%	
Gross Margin Dollars	\$3,442	\$3,595	\$3,617	\$3,087		\$2,863	\$2,880	\$2,815	\$2,460		\$2,431	\$2,557	\$2,889	\$2,854	
Depreciation					0.0					0.0					0.0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross Margin	70.2%	69.6%	69.0%	66.1%	68.8%	65.4%	64.2%	62.1%	60.0%	63.0%	59.3%	59.4%	61.0%	61.5%	60.4%
SG&A	422	422	431	429	1,704	474	461	471	468	1,874	472	472	475	478	1,897
% Total Revenue	8.6%	8.1%	8.2%	9.2%	8.5%	10.8%	10.2%	10.4%	11.4%	10.7%	11.5%	11.0%	10.0%	10.3%	10.7%
R&D	391	414	431	434	1,670	455	477	452	452	1,836	470	470	480	480	1,900
% Total Revenue	8.0%	7.9%	8.2%	9.3%	8.3%	10.4%	10.5%	10.0%	11.0%	10.5%	11.5%	10.9%	10.1%	10.3%	10.7%
	813.0	836.0	862.0	863.0		929.0	938.0	923.0	920.0		942.00	942.00	955.00	958.00	
Restructuring/Other	66	66	77	48	257	0	0	0	0	0	0	0	0	0	0
Operating Income	2563	2723	2678	2176	10140	1934	1972	1892	1540	7338	1489	1615	1934	1896	6934
% Total Revenue	52.3%	52.2%	51.1%	46.6%	50.6%	44.2%	43.5%	41.7%	37.6%	41.8%	36.3%	37.5%	40.8%	40.9%	39.0%
Other Income	-37	-42	-20	-9	-108	12	30	30	20	92	20	20	20	20	80
Pretax Income	2526	2681	2658	2167	10032	1946	2002	1922	1560	7430	1509	1635	1954	1916	7014
% Total Revenue	51.5%	51.4%	50.7%	46.4%	50.1%	44.4%	44.2%	42.4%	38.0%	42.4%	36.8%	38.0%	41.3%	41.3%	39.4%
Income Taxes	325	390	363	205	1,283	238	280	213	211	942	204	221	264	259	947
Tax Rate *	12.9%	14.5%	13.7%	9.5%	12.8%	12.2%	14.0%	11.1%	13.5%	12.7%	13.5%	13.5%	13.5%	13.5%	13.5%
Net Income	2201	2291	2295	1962	8749	1708	1722	1709	1349	6488	1306	1414	1690	1657	6067
% Total Revenue	44.9%	44.0%	43.8%	42.0%	43.7%	39.0%	38.0%	37.7%	32.9%	37.0%	31.8%	32.9%	35.7%	35.7%	34.1%
Less Income Allocated to RSUs	9	10	11	9	39.0	9	8	10	10	37.0	10	10	10	10	40.0
No. of Common Shares	934	930	923	916	926	916	916	916	916	916	916	916	916	916	916
Pro-forma EPS	\$2.35	\$2.45	\$2.47	\$2.13	\$9.41	\$1.85	\$1.87	\$1.85	\$1.46	\$7.04	\$1.41	\$1.53	\$1.83	\$1.80	\$6.58
% Change Y/Y	25.7%	19.5%	19.3%	-6.2%	13.9%	-21.3%	-23.7%	-25.1%	-31.5%	-25.2%	-23.8%	-18.2%	-1.1%	23.3%	-6.5%
% Change Q/Q	3.5%	4.3%	0.8%	-13.8%		-13.1%	1.1%	-1.1%	-21.1%		-3.4%	8.5%	19.6%	-1.6%	

Source: Company reports and J.P. Morgan estimates

Table 5: Texas Instruments Balance Sheet

\$ in millions

Texas Instruments												
Balance Sheet (in Millions \$)												
FY End - December	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23E	1Q24E	2Q24E	3Q24E	4Q24E
ASSETS												
Cash & equivalents & ST investments	9,825	8,387	9,090	9,067	9,545	9,552	8,948	9,381	8,523	7,695	6,937	6,552
Accounts receivable, net	1,795	2,190	2,040	1,895	1,877	1,956	1,976	1,721	1,720	1,827	2,023	1,981
Inventories	2,060	2,199	2,404	2,757	3,288	3,729	3,908	3,140	3,342	3,653	3,967	3,831
Deferred income taxes	0	0	0	0	0	0	0	0	0	0	0	0
Other current assets	330	267	238	302	313	277	265	265	265	265	265	265
Total Current Assets	14,010	13,043	13,772	14,021	15,023	15,514	15,097	14,507	13,850	13,440	13,192	12,629
Quick Assets	11,950	10,844	11,368	11,264	11,735	11,785	11,189	11,367	10,508	9,787	9,225	8,798
Fixed assets, net	5,439	5,931	6,485	6,876	7,665	8,525	9,320	9,923	10,803	11,653	12,473	13,263
Long-term investments	0	0	0	0	0	0	0	0	0	0	0	0
Deferred income taxes	273	293	291	473	486	537	632	632	632	632	632	632
Goodwill & Intangibles	4,362	4,362	4,362	4,362	4,362	4,362	4,362	4,362	4,362	4,362	4,362	4,362
Other assets	1,192	1,094	1,147	1,475	1,684	2,001	2,227	2,227	2,227	2,227	2,227	2,227
Total Assets	25,276	24,723	26,057	27,207	29,220	30,939	31,638	31,651	31,874	32,314	32,886	33,113
LIABILITIES												
Accounts payable	641	712	780	851	952	923	713	848	882	938	991	932
Current portion of LT debt	500	499	499	500	500	299	300	300	300	300	300	300
Other ST liabilities	1,387	1,349	1,519	1,634	1,452	1,489	1,639	1,639	1,639	1,639	1,639	1,639
Total Current Liabilities	2,528	2,560	2,798	2,985	2,904	2,711	2,652	2,787	2,821	2,877	2,930	2,871
Long-term debt	7,242	6,745	7,438	8,235	9,626	10,920	10,922	10,922	10,922	10,922	10,922	10,922
Deferred income taxes	94	90	92	66	73	69	66	66	66	66	66	66
Other LT liabilities	1,395	1,236	1,222	1,344	1,374	1,299	1,367	1,367	1,367	1,367	1,367	1,367
Total Liabilities	11,259	10,631	11,550	12,630	13,977	14,999	15,007	15,142	15,176	15,232	15,285	15,226
Shareholders' Equity	14,017	14,092	14,507	14,577	15,243	15,940	16,631	16,509	16,698	17,082	17,601	17,888
Total Liabilities & Shareholders' Equity	25,276	24,723	26,057	27,207	29,220	30,939	31,638	31,651	31,874	32,314	32,886	33,113

Source: Company reports and J.P. Morgan estimates

Table 6: Texas Instruments Cash Flow Statement

\$ in millions

(Year End: December, \$ millions)	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23E	1Q24E	2Q24E	3Q24E	4Q24E
GAAP net income (loss)	2,201	2,291	2,295	1,962	1,708	1,722	1,709	1,349	1,306	1,414	1,690	1,657
Adjustments												
Options expense (stock based comp)	74	85	68	62	104	111	79	85	85	88	92	90
Pro-forma net income												
Depreciation	200	227	249	249	265	285	303	340	370	400	430	460
Amortization	14	13	13	14	16	15	17	16	16	16	16	16
Other	(3)	(15)	(3)	(173)	(8)	(53)	(99)					
Changes in working capital	(342)	(833)	144	(72)	(925)	(681)	(72)	768	(202)	(311)	(314)	135
Receivable	(94)	(395)	150	145	18	(79)	(20)	(135)	(34)	(56)	(53)	59
Inventories	(150)	(139)	(205)	(353)	(531)	(441)	(179)	768	(202)	(311)	(314)	135
Other assets	21	(1)	25	(39)	(4)	14	28	0	0	0	0	0
Account payable and accrued liabilities	(377)	(126)	182	34	(531)	(4)	172	135	34	56	53	(59)
Other liabilities	258	(172)	(8)	141	123	(171)	(73)	0	0	0	0	0
Net cash from operating activities	2,144	1,768	2,766	2,042	1,160	1,399	1,937	2,558	1,574	1,608	1,914	2,359
Purchase of property and equipment	(443)	(597)	(790)	(967)	(982)	(1,446)	(1,495)	(943)	(1,250)	(1,250)	(1,250)	(1,250)
Net change in investments	(1,225)	1,822	(1,323)	(60)	1,010	(939)	(199)					
Acquisitions												
Net cash from investing activities	(1,668)	1,225	(2,113)	(1,027)	28	(2,385)	(1,694)	(943)	(1,250)	(1,250)	(1,250)	(1,250)
Issuance/(buyback) of common and pref stocks	(589)	(1,126)	(223)	0	(103)	(14)	22	0	0	0	0	0
Dividends	(1,063)	(1,060)	(1,051)	(1,123)	(1,125)	(1,125)	(1,126)	(1,182)	(1,182)	(1,185)	(1,422)	(1,493)
Debt repayment	0	(500)		(49)	1,397	1,103						
Other financing	50	(10)	(12)	38	70	(16)	(12)					
Net cash from financing activities	(1,602)	(2,696)	(1,286)	(1,134)	239	(52)	(1,116)	(1,182)	(1,182)	(1,185)	(1,422)	(1,493)
Net change in cash	(1,126)	297	(633)	(119)	1,427	(1,038)	(873)	433	(858)	(828)	(759)	(385)
Cash and cash equiv. at beginning of period	4,631	3,505	3,802	3,169	3,050	4,477	3,439	2,566	2,999	2,141	1,314	555
Effect of exchange rates on cash +disc operations	0	0	0	0	0	0	0	0	0	0	0	0
Cash and cash equiv. at end of period	3,505	3,802	3,169	3,050	4,477	3,439	2,566	2,999	2,141	1,314	555	170

Source: Company reports and J.P. Morgan estimates

Investment Thesis, Valuation and Risks

Texas Instruments *(Overweight; Price Target: \$170.00)*

Investment Thesis

We believe Texas Instruments will continue to be one of the market leaders in high-value analog and embedded products. TXN is a high-quality stock with above-average leverage and an attractive dividend yield. We are Overweight TI due to superior leverage, broad-based end market exposure, and shareholder-friendly capital allocation. We expect gross margins to trend higher as the company increases factory loadings driven by secular growth from the automotive and industrial end markets and seasonally stronger demand from the consumer end market. Also, TI's payout ratio target of 100% is the highest in the industry.

Valuation

Our \$170 Dec 2024 PT assumes that TXN trades at a normalized analog multiple of 20-25x applied to our revised ~\$7.20 of earnings power estimate exiting CY24.

Risks to Rating and Price Target

TI's products are sold to a broad end-market base. Therefore, a sudden economic decline in a particular country or geographic region could have a significant impact on TI's revenues. If the global economic recovery is weaker than expected, sales for Texas Instruments may decrease accordingly, causing us to reevaluate our Overweight rating.

TXN derives over ~90% of its revenues from the analog and embedded segment. Therefore, any material share losses to its analog and embedded competitors such as ADI, NXPI, and others could result in downside to our estimates.

Texas Instruments: Summary of Financials

Income Statement - Annual						Income Statement - Quarterly				
	FY21A	FY22A	FY23E	FY24E	FY25E		1Q23A	2Q23A	3Q23A	4Q23E
Revenue	18,344	20,028	17,542	17,781	-	Revenue	4,379A	4,531A	4,532A	4,100
COGS	(5,968)	(6,257)	(6,494)	(7,050)	-	COGS	(1,516)A	(1,621)A	(1,717)A	(1,640)
Gross profit	12,376	13,771	11,048	10,731	-	Gross profit	2,863A	2,910A	2,815A	2,460
SG&A	(1,666)	(1,704)	(1,874)	(1,897)	-	SG&A	(474)A	(461)A	(471)A	(468)
Adj. EBITDA	10,144	11,408	31,148	630,415	-	Adj. EBITDA	3,782A	5,331A	8,205A	13,830
D&A	(954)	(979)	(23,431)	(623,127)	-	D&A	(1,744)A	(3,248)A	(6,234)A	(12,205)
Adj. EBIT	8,960	10,140	7,338	6,934	-	Adj. EBIT	1,934A	1,972A	1,892A	1,540
Net Interest	-	-	-	-	-	Net Interest	-	-	-	-
Adj. PBT	8,919	10,032	7,430	7,014	-	Adj. PBT	1,946A	2,002A	1,922A	1,560
Tax	(1,150)	(1,283)	(942)	(947)	-	Tax	(238)A	(280)A	(213)A	(211)
Minority Interest	-	-	-	-	-	Minority Interest	-	-	-	-
Adj. Net Income	7,942	8,978	6,781	6,330	-	Adj. Net Income	1,791A	1,806A	1,772A	1,413
Reported EPS	8.26	9.41	7.04	6.58	-	Reported EPS	1.85A	1.87A	1.85A	1.46
Adj. EPS	8.48	9.70	7.40	6.91	-	Adj. EPS	1.95A	1.97A	1.93A	1.54
DPS	-	-	-	-	-	DPS	-	-	-	-
Payout ratio	-	-	-	-	-	Payout ratio	-	-	-	-
Shares outstanding	936	926	916	916	-	Shares outstanding	916A	916A	916A	916
Balance Sheet & Cash Flow Statement						Ratio Analysis				
	FY21A	FY22A	FY23E	FY24E	FY25E		FY21A	FY22A	FY23E	FY24E
Cash and cash equivalents	9,739	9,067	9,381	6,552	-	Gross margin	67.5%	68.8%	63.0%	60.4%
Accounts receivable	1,701	1,895	1,721	1,981	-	EBITDA margin	55.3%	57.0%	177.6%	3545.4%
Inventories	1,910	2,757	3,140	3,831	-	EBIT margin	48.8%	50.6%	41.8%	39.0%
Other current assets	335	302	265	265	-	Net profit margin	43.3%	44.8%	38.7%	35.6%
Current assets	13,685	14,021	14,507	12,629	-	ROE	70.5%	64.3%	43.6%	36.8%
PP&E	5,141	6,876	9,923	13,263	-	ROA	36.1%	34.6%	23.0%	19.5%
LT investments	0	0	0	0	-	ROCE	42.1%	39.8%	25.1%	21.1%
Other non current assets	5,850	6,310	7,221	7,221	-	SG&A/Sales	9.1%	8.5%	10.7%	10.7%
Total assets	24,676	27,207	31,651	33,113	-	Net debt/equity	NM	NM	0.1	0.3
Short term borrowings	500	500	300	300	-	P/E (x)	17.3	15.1	19.8	21.3
Payables	653	851	848	932	-	P/BV (x)	10.3	9.2	8.2	7.5
Other short term liabilities	1,416	1,634	1,639	1,639	-	EV/EBITDA (x)	13.1	11.8	4.4	0.2
Current liabilities	2,569	2,985	2,787	2,871	-	Dividend Yield	-	-	-	-
Long-term debt	7,241	8,235	10,922	10,922	-	Sales/Assets (x)	0.8	0.8	0.6	0.5
Other long term liabilities	1,533	1,410	1,433	1,433	-	Interest cover (x)	-	-	-	-
Total liabilities	11,343	12,630	15,142	15,226	-	Operating leverage	193.7%	143.5%	222.6%	(403.4%)
Shareholders' equity	13,333	14,577	16,509	17,888	-	Revenue y/y Growth	26.9%	9.2%	(12.4%)	1.4%
Minority interests	-	-	-	-	-	EBITDA y/y Growth	42.7%	12.5%	173.0%	1923.9%
Total liabilities & equity	24,676	27,207	31,651	33,113	-	Tax rate	12.9%	12.8%	12.7%	13.5%
BVPS	14.24	15.91	18.02	19.53	-	Adj. Net Income y/y Growth	37.6%	13.1%	(24.5%)	(6.7%)
y/y Growth	44.5%	11.7%	13.3%	8.4%	-	EPS y/y Growth	37.1%	14.3%	(23.7%)	(6.7%)
Net debt/(cash)	(1,998)	(332)	1,841	4,670	-	DPS y/y Growth	-	-	-	-
Cash flow from operating activities	8,756	8,720	7,367	7,455	-					
o/w Depreciation & amortization	954	979	1,257	1,725	-					
o/w Changes in working capital	(155)	(1,103)	(1,534)	(691)	-					
Cash flow from investing activities	(4,095)	(3,583)	(4,994)	(5,000)	-					
o/w Capital expenditure	(2,462)	(2,797)	(4,866)	(5,000)	-					
as % of sales	13.4%	14.0%	27.7%	28.1%	-					
Cash flow from financing activities	(3,137)	(6,718)	(2,111)	(5,283)	-					
o/w Dividends paid	(3,886)	(4,297)	(4,558)	(5,283)	-					
o/w Net debt issued/(repaid)	739	(549)	2,500	0	-					
Net change in cash	1,524	(1,581)	262	(2,829)	-					
Adj. Free cash flow to firm	6,294	5,923	2,188	2,455	-					
y/y Growth	14.6%	(5.9%)	(63.1%)	12.2%	-					

Source: Company reports and J.P. Morgan estimates.

Note: \$ in millions (except per-share data). Fiscal year ends Dec. o/w - out of which

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Texas Instruments (TXN, TXN US) Price Chart



Date	Rating	Price (\$)	Price Target (\$)
27-Jan-21	OW	171.47	200
28-Apr-21	OW	190.21	215
22-Jul-21	OW	194.24	220
26-Jan-22	OW	173.96	225
27-Apr-22	OW	168.44	200
27-Jul-22	OW	160.84	195
26-Jul-23	OW	186.08	200

Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
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