

Equities

25 March 2011 | 51 pages

Semi Beat

Semiconductors 1Q11 Preview: 2Q11 Est. at Risk But 2H Optimism Growing—AMD, ALTR, QCOM

- **2Q11 Estimates At Risk...** — Whereas we expect chip companies to meet 1Q11 consensus, we see broad risk to estimates across the sector for 2Q11. We adjust our 2Q11 revenue estimates downward across the sector by 5% as a preliminary assessment of the Japan demand & supply impact, metered back into estimates in 2H11. The SOX is above pre-earthquake levels, suggesting investors are currently looking through the impact of the earthquake for now.
- **...But Inventory Concerns Allayed** —While significant uncertainties about the depth & duration of the earthquake impact exist, we fully expect chip inventories to be reduced in the immediate term as semi inputs are supply constrained. This eases concerns of inventory build that may have contributed to SOX weakness since mid-Feb and sets up potential for a stronger 2H11.
- **ALTR Set Up to Surprise** — Our pre-earthquake checks showed that Altera was increasing its outlook to the supply chain for 2Q11 (after cuts in 1Q11). Subsequent to this, China Mobile raised cap-ex (as did China Telecom), adding confidence to our view. **In a separate note, we have raised our estimates for Altera above consensus and upgrade to Buy.**
- **AMD Share Gains Forthcoming** — Despite concerns from our peers, we do NOT expect a 1Q11 shortfall from either Intel or AMD. Meanwhile, we continue to find evidence of share gain by AMD with Brazos, and look forward to the Llano launch in 2Q11. On the margin, we are increasingly optimistic re: servers, given AMD's increased marketing effort ahead of the Bulldozer launch.
- **QCOM to Recover** — We believe concerns over Qualcomm order patterns are overdone. Checks prior to the earthquake suggested MSM sales were tracking flat q/q, with an upward bias in 2Q11. While they are not excused from Japan risk, we view the recent under-performance as a buying opportunity.

Glen Yeung

+1-415-951-1885

glen.yeung@citi.com

Ticker	Rating		Target Price		Current Year Earnings Estimates		Next Year Earnings Estimates	
	Old	New	Old	New	Old	New	Old	New
ALTR	1H	1H	US\$51.00	US\$51.00	US\$2.64	US\$2.64	US\$2.94	US\$2.94
AMD	1S	1S	US\$12.50	US\$12.50	US\$0.86	US\$0.87	US\$1.28	US\$1.28
BRCM	1H	1H	US\$54.00	US\$54.00	US\$2.09	US\$2.08	US\$2.59	US\$2.59
CODE	2S	2S	US\$23.50	US\$23.50	US\$0.90	US\$0.91	US\$1.92	US\$1.92
CY	2S	2S	US\$25.00	US\$25.00	US\$0.60	US\$0.60	US\$0.87	US\$0.88
IDTI	1S	1S	US\$9.00	US\$9.00	US\$0.33	US\$0.33	US\$0.49	US\$0.49
INTC	1M	1M	US\$25.00	US\$25.00	US\$2.06	US\$2.06	US\$2.13	US\$2.12
MRVL	1H	1H	US\$24.00	US\$24.00	US\$1.32	US\$1.32	US\$1.53	US\$1.53
MU	2S	2S	US\$13.00	US\$13.00	US\$0.80	US\$0.80	US\$1.14	US\$1.14
NVDA	2S	2S	US\$27.00	US\$27.00	US\$0.91	US\$0.92	US\$1.50	US\$1.50
QCOM	1M	1M	US\$60.00	US\$60.00	US\$3.01	US\$2.98	US\$2.99	US\$3.02
TXN	1M	1M	US\$39.00	US\$39.00	US\$2.73	US\$2.73	US\$2.75	US\$2.75
XLNX	2H	2H	US\$35.00	US\$35.00	US\$2.32	US\$2.32	US\$2.16	US\$2.16

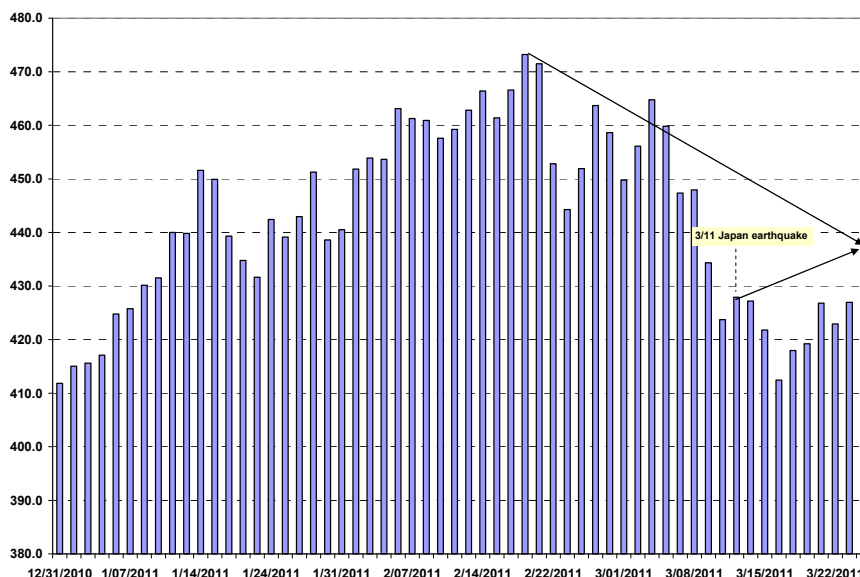
See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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DETAILS

The SOX is above pre-earthquake levels.

Figure 1. SOX - YTD



Source: Factset, Citi Investment Research and Analysis

It is difficult to accurately predict the range of impact to the sector, but chip company risk ranges between 2.6% and 12.1% to 2Q11 sales. Given our belief that supply constraints are not likely to materially exceed 1-month, we expect risk to estimates will be 5%-7%.

Japan to Impact 2Q11 Guidance. Prior to March 11th, CIRA's analysis suggested 1Q11 was broadly tracking inline with guidance, PC's perhaps slightly weaker (albeit recovering) and handsets generally stronger. And while inventories were likely sufficient for chip companies to meet 1Q11 consensus, the impact of Japan's devastating earthquake is likely to hinder 2Q11 outlooks. At the highest level, we note that Japan accounts for 11% of worldwide semiconductor demand and between 15%-85% of certain critical inputs into the semiconductor manufacturing process.

With many uncertainties remaining, it is difficult to accurately predict the range of impact to the sector, but below we provide a broad approach to the potential 2Q11 impact. We conclude that revenue risk ranges between 2.6% and 12.1% to 2Q11 sales. Our reasoning is as follows:

Figure 2. Sensitivity Analysis

		Sales Impact						
Japan as a % of WW Demand		11%	11%	11%	11%	11%	11%	11%
Direct Impact in Japan		4%	4%	4%	4%	4%	4%	4%
Other Japan Impact		20%	25%	30%	35%	40%	45%	50%
Global Impact		2.6%	3.2%	3.7%	4.3%	4.8%	5.4%	5.9%
		Supply Impact						
Japan as a % of WW Supply		20%	20%	20%	20%	20%	20%	20%
Supply Impact (in weeks)		2	3	4	5	6	7	8
Inventories (in weeks)		4	4	4	4	4	4	4
Global Supply Impact % of 2Q11		0	0	0	1.5%	3.1%	4.6%	6.2%
Implied Range of 2Q11 Impact		Low		High				
		2.6%		12.1%				
Resulting Inventory Balance (in weeks)		2	1	0	-1	-2	-3	-4

Source: Citi Investment Research and Analysis

Given our belief that supply constraints are not likely to materially exceed 1-month, we expect risk to estimates will be 5%-7%. To be sure, chip companies will have a difficult time assessing the true impact (as are investors) and may choose to avoid providing guidance including the Japan impact altogether (other supply chain companies have done so). Nonetheless, we feel it prudent for investors to assume a 5%-7% impact in 2Q11.

Figure 3. Revised Estimates Table

	(\$ in M, except per share amounts)		New	Old	\$ Change
ALTR	Revenues	1Q11	\$539	\$539	\$0
		2Q11	\$557	\$540	\$17
		3Q11	\$571	\$539	\$32
		2011	\$2,247	\$2,152	\$94
		2012	\$2,553	\$2,352	\$201
		2013	\$2,828	\$2,574	\$254
	GAAP EPS	1Q11	\$0.64	\$0.65	(\$0.01)
		2Q11	\$0.65	\$0.62	\$0.03
		3Q11	\$0.67	\$0.62	\$0.05
		2011	\$2.64	\$2.48	\$0.15
		2012	\$2.94	\$2.54	\$0.40
		2013	\$3.12	\$2.72	\$0.39
AMD	Revenues	1Q11	\$1,619	\$1,619	\$0
		2Q11	\$1,505	\$1,584	(\$79)
		3Q11	\$1,841	\$1,789	\$52
		2011	\$6,971	\$6,971	\$0
		2012	\$7,638	\$7,637	\$0
		2013	\$7,953	\$7,952	\$0
	GAAP EPS	1Q11	\$0.05	\$0.05	\$0.00
		2Q11	\$0.08	\$0.13	-\$0.05
		3Q11	\$0.35	\$0.31	\$0.03
		2011	\$0.87	\$0.86	\$0.00
		2012	\$1.28	\$1.28	\$0.00
		2013	\$1.44	\$1.44	\$0.00
BRCM	Revenues	1Q11	\$1,813	\$1,813	\$0
		2Q11	\$1,849	\$1,946	(\$97)
		3Q11	\$2,166	\$2,102	\$63
		F2011	\$8,042	\$8,042	\$0
		F2012	\$8,837	\$8,837	\$0
		F2013	\$9,365	\$9,365	\$0
	GAAP EPS	1Q11	\$0.35	\$0.35	\$0.00
		2Q11	\$0.37	\$0.45	-\$0.08
		3Q11	\$0.67	\$0.62	\$0.05
		F2011	\$2.08	\$2.09	-\$0.01
		F2012	\$2.59	\$2.59	\$0.00
		F2013	\$2.69	\$2.68	\$0.00
CODE	Revenues	1Q11	\$293	\$293	\$0
		2Q11	\$301	\$317	(\$16)
		3Q11	\$364	\$354	\$10
		2011	\$1,305	\$1,305	\$0
		2012	\$1,349	\$1,349	(\$0)
		2013	\$1,370	\$1,370	(\$0)
	Non-GAAP EPS	1Q11	\$0.40	\$0.40	\$0.00
		2Q11	\$0.39	\$0.40	-\$0.01
		3Q11	\$0.74	\$0.72	\$0.02
		2011	\$2.09	\$2.09	\$0.00
		2012	\$2.23	\$2.23	\$0.00
		2013	\$2.64	\$2.64	\$0.00
CY	Revenues	1Q11	\$229	\$229	\$0
		2Q11	\$236	\$248	(\$12)
		3Q11	\$274	\$266	\$8
		2011	\$994	\$994	\$0
		2012	\$1,110	\$1,110	(\$0)
		2013	\$1,137	\$1,137	(\$0)
	GAAP EPS	1Q11	\$0.11	\$0.11	\$0.00
		2Q11	\$0.12	\$0.15	-\$0.03
		3Q11	\$0.21	\$0.19	\$0.02

		2011	\$0.60	\$0.60	\$0.00
		2012	\$0.88	\$0.87	\$0.01
		2013	\$0.95	\$0.94	\$0.01
IDTI	Revenues	F4Q11 (Mar) E	\$145	\$145	\$0
		F1Q12 (Jun) E	\$150	\$158	(\$8)
		F2Q12 (Sep) E	\$174	\$169	\$5
		CY 2011 E	\$645	\$645	\$0
		CY 2012 E	\$691	\$691	\$0
		CY 2013 E	\$700	\$700	\$0
	Non-GAAP EPS	F4Q11 (Mar) E	\$0.11	\$0.11	\$0.00
		F1Q12 (Jun) E	\$0.15	\$0.16	(\$0.02)
		F2Q12 (Sep) E	\$0.18	\$0.17	\$0.01
		CY 2011 E	\$0.60	\$0.60	\$0.00
		CY 2012 E	\$1.10	\$1.10	\$0.00
		CY 2013 E	\$1.11	\$1.11	\$0.00
INTC	Revenues	1Q 2011	\$11,709	\$11,709	\$0
		2Q 2011	\$11,679	\$12,291	(\$612)
		3Q 2011	\$13,195	\$12,798	\$398
		2011	\$50,036	\$50,036	\$0
		2012	\$51,603	\$51,603	\$0
		2013	\$53,181	\$53,181	\$0
	GAAP EPS	1Q 2011	\$0.47	\$0.47	\$0.00
		2Q 2011	\$0.42	\$0.47	-\$0.05
		3Q 2011	\$0.57	\$0.54	\$0.03
		2011	\$2.06	\$2.06	\$0.00
		2012	\$2.12	\$2.13	-\$0.01
		2013	\$2.23	\$2.25	-\$0.01
MRVL	Revenues	1Q 2012 (Apr)	\$823	\$823	\$0
		2Q 2012 (Jul)	\$866	\$908	(\$41)
		3Q 2012 (Oct)	\$1,102	\$1,075	\$27
		F2012	\$3,884	\$3,884	(\$0)
		F2013	\$4,297	\$4,296	\$1
		F2014	\$4,576	\$4,576	\$0
	GAAP EPS	1Q 2012 (Apr)	\$0.24	\$0.24	\$0.00
		2Q 2012 (Jul)	\$0.27	\$0.29	-\$0.03
		3Q 2012 (Oct)	\$0.41	\$0.39	\$0.02
		F2012	\$1.32	\$1.32	\$0.00
		F2013	\$1.53	\$1.53	\$0.00
		F2014	\$1.67	\$1.67	\$0.00
NVDA	Revenues	F1Q 12	\$948	\$948	\$0
		F2Q 12	\$902	\$950	(\$47)
		F3Q 12	\$1,008	\$978	\$31
		F 2012	\$3,871	\$3,871	(\$0)
		F 2013	\$4,513	\$4,513	\$0
		F 2014	\$4,887	\$4,887	\$0
	GAAP EPS	F1Q 12	\$0.19	\$0.19	\$0.00
		F2Q 12	\$0.16	\$0.19	-\$0.03
		F3Q 12	\$0.28	\$0.25	\$0.02
		F 2012	\$0.92	\$0.91	\$0.00
		F 2013	\$1.50	\$1.50	\$0.00
		F 2014	\$1.77	\$1.78	\$0.00
QCOM	Revenues	F2Q 11 (Mar)	\$3,668	\$3,668	\$0
		F3Q11 (Jun)	\$3,311	\$3,494	(\$184)
		F4Q11 (Sep)	\$3,677	\$3,558	\$119
		F 2011	\$14,003	\$14,068	(\$64)
		F 2012	\$14,988	\$14,925	\$63
		F 2013	\$16,034	\$16,035	(\$1)
	Non-GAAP EPS	F2Q 11 (Mar)	\$0.78	\$0.78	\$0.00
		F3Q11 (Jun)	\$0.60	\$0.69	-\$0.09

		F4Q11 (Sep)	\$0.78	\$0.73	\$0.06
		F 2011	\$2.98	\$3.01	-\$0.03
		F 2012	\$3.02	\$2.99	\$0.03
		F 2013	\$3.06	\$3.06	\$0.00
TXN	Revenues	1Q 11	\$3,410	\$3,410	\$0
		2Q 11	\$3,489	\$3,672	(\$184)
		3Q 11	\$4,065	\$3,946	\$119
		2011	\$14,819	\$14,819	\$0
		2012	\$15,040	\$15,040	\$0
		2013	\$15,511	\$15,511	\$0
	GAAP EPS	1Q 11	\$0.58	\$0.58	\$0.00
		2Q 11	\$0.60	\$0.67	-\$0.06
		3Q 11	\$0.80	\$0.76	\$0.04
		2011	\$2.73	\$2.73	\$0.00
		2012	\$2.75	\$2.75	\$0.00
		2013	\$2.83	\$2.83	\$0.00
XLNX	Revenues	F4Q 11 (Mar)	\$581	\$581	\$0
		F1Q 12 (Jun)	\$571	\$601	(\$30)
		F2Q 12 (Sept)	\$630	\$611	\$20
		Fiscal 2012	\$2,486	\$2,486	\$0
		Fiscal 2013	\$2,604	\$2,604	\$0
		Fiscal 2014	\$2,705	\$2,705	\$0
	GAAP EPS	F4Q 11 (Mar)	\$0.52	\$0.52	\$0.00
		F1Q 12 (Jun)	\$0.48	\$0.51	-\$0.03
		F2Q 12 (Sept)	\$0.53	\$0.51	\$0.02
		Fiscal 2012	\$2.16	\$2.16	\$0.00
		Fiscal 2013	\$2.62	\$2.62	\$0.00
		Fiscal 2014	\$2.69	\$2.69	\$0.00

Source: Citi Investment Research and Analysis

Figure 4. 2Q11 Consensus Revenue vs. Seasonality

Company	1Q11 E	2Q11 E	2Q11 Q/Q%	2Q Seasonality		vs. '03-'07 2Q11 vs. Avg	vs. '04-'08 2Q11 vs. Avg
				'03-'07 Avg	'04-'08 Avg		
ADI	745.4	759.4	1.9%	2.6%	2.2%	-0.7%	-0.3%
ALTR	536.8	535.2	-0.3%	8.5%	8.9%	-8.8%	-9.2%
AMCC	57.9	61.6	6.3%	4.1%	4.6%	2.2%	1.7%
AMD	1,615.9	1,587.5	-1.8%	0.4%	0.7%	-2.2%	-2.5%
ANAD	43.1	50.5	17.0%	10.2%	9.5%	6.8%	7.5%
ATHR	225.6	236.3	4.8%	19.9%	9.0%	-15.1%	-4.2%
ATML	452.2	472.2	4.4%	3.7%	2.7%	0.7%	1.7%
AVGO	554.2	582.4	5.1%	4.8%	5.5%	0.3%	-0.4%
BRCM	1,811.3	1,906.9	5.3%	8.2%	8.4%	-3.0%	-3.2%
CAVM	62.8	70.8	12.8%	14.3%	15.4%	-1.5%	-2.6%
CNXT	44.0	46.0	4.5%	36.5%	63.3%	-31.9%	-58.7%
CRUS	91.3	100.2	9.7%	5.6%	9.6%	4.1%	0.1%
CY	228.7	242.9	6.2%	4.9%	7.4%	1.3%	-1.2%
FCS	413.5	423.3	2.4%	-0.3%	0.6%	2.6%	1.8%
HITT	66.8	68.4	2.4%	8.7%	7.8%	-6.2%	-5.3%
IDTI	144.9	152.9	5.5%	2.8%	3.5%	2.8%	2.1%
IFX	1,278.7	1,295.1	1.3%	4.0%	2.6%	-2.7%	-1.3%
IKAN	36.0	38.0	5.6%	25.2%	19.0%	-19.7%	-13.5%
INTC	11,629.8	11,898.0	2.3%	-2.8%	-3.4%	5.1%	5.7%
IRF	291.1	298.6	2.6%	3.4%	-1.8%	-0.8%	4.4%
ISIL	197.4	209.2	5.9%	6.7%	6.2%	-0.7%	-0.2%
ISSI	60.7	67.4	11.0%	14.4%	12.8%	-3.4%	-1.8%
LLTC	354.3	362.6	2.3%	4.0%	3.0%	-1.6%	-0.7%
LSI	622.7	635.6	2.1%	12.4%	11.5%	-10.3%	-9.4%
LSCC	76.5	79.3	3.8%	3.0%	3.8%	0.7%	-0.1%
MCHP	373.7	386.3	3.4%	5.1%	5.5%	-1.8%	-2.2%
MCRL	72.6	76.3	5.0%	3.5%	5.6%	1.5%	-0.6%
MLNX	54.8	61.9	12.9%	22.2%	18.9%	-9.3%	-5.9%
MPWR	42.3	46.8	10.8%	38.9%	33.7%	-28.1%	-22.8%
MRVL	826.4	879.9	6.5%	9.1%	7.1%	-2.6%	-0.6%
MSCC	205.6	211.5	2.9%	8.6%	8.0%	-5.7%	-5.1%
MSPD	38.0	40.5	6.7%	8.2%	7.1%	-1.5%	-0.5%
MU	2,069.5	2,202.2	6.4%	-3.1%	0.3%	9.5%	6.1%
MXIM	604.6	617.6	2.1%	6.8%	6.8%	-4.7%	-4.6%
NETL	100.4	103.3	2.9%	12.6%	11.5%	-9.8%	-8.6%
NSM	352.0	365.2	3.7%	6.1%	5.5%	-2.4%	-1.8%
NVDA	948.5	997.6	5.2%	4.0%	-3.2%	1.1%	8.4%
OIIM	29.7	33.4	12.4%	6.4%	6.5%	6.1%	6.0%
OVTI	252.4	274.0	8.5%	11.7%	8.9%	-3.2%	-0.4%
PMCS	155.9	166.5	6.8%	12.5%	13.1%	-5.7%	-6.2%
POWI	74.2	78.7	6.1%	4.0%	4.2%	2.1%	1.9%
QCOM	3,630.9	3,404.5	-6.2%	1.7%	5.4%	-7.9%	-11.6%
RFMD	218.0	233.8	7.2%	-2.0%	0.8%	9.2%	6.4%
SIMG	48.0	52.6	9.6%	13.8%	14.9%	-4.2%	-5.3%
SIGM	63.0	63.4	0.6%	16.7%	17.1%	-16.1%	-16.4%
SLAB	119.3	129.0	8.1%	7.0%	6.6%	1.1%	1.5%
SMSC	97.5	102.6	5.3%	2.9%	2.6%	2.4%	2.7%
SMTC	119.1	124.7	4.8%	4.8%	5.5%	0.0%	-0.7%
SNDK	1,258.5	1,348.0	7.1%	16.2%	8.6%	-9.1%	-1.4%
SPRD	132.9	138.7	4.3%	-19.2%	12.4%	23.5%	-8.1%
CODE	294.3	311.9	6.0%	6.8%	7.0%	-0.8%	-1.0%
STM	2,563.6	2,672.9	4.3%	5.6%	3.8%	-1.3%	0.4%
SWKS	316.6	335.6	6.0%	2.5%	4.8%	3.5%	1.2%
TQNT	220.3	244.0	10.8%	4.3%	6.9%	6.4%	3.9%
TRID	80.0	85.0	6.3%	16.3%	5.4%	-10.0%	0.9%
TXN	3,403.0	3,548.8	4.3%	9.0%	8.2%	-4.8%	-3.9%
VLTR	34.7	37.7	8.7%	6.1%	10.5%	2.6%	-1.8%
XLNX	580.0	587.7	1.3%	2.7%	2.8%	-1.4%	-1.4%
ZRAN	83.2	97.4	17.0%	18.7%	18.6%	-1.6%	-1.6%
Total	\$ 41,104.6	\$ 42,239.9	2.8%	2.6%	2.2%	0.1%	0.6%

Source: Factset, Company Reports, Citi Investment Research and Analysis

A Temporary Impact. While negative estimate revisions are never positive for shares, owing to the exogenous nature of the revisions, combined with its temporary nature, we suspect investors are willing to look through potential cuts. Indeed the SOX is now above its pre-Japan earthquake levels.

Fundamentally, we suspect the 2Q11 weakness is “penting up” demand, creating potential for incremental strength in 2H11 as supply returns to normal, Japan demand stabilizes, and inventories are rebuilt. Moreover, any concerns of inventory build (we did not subscribe to this view) are necessarily reduced in light of production supply constraints.

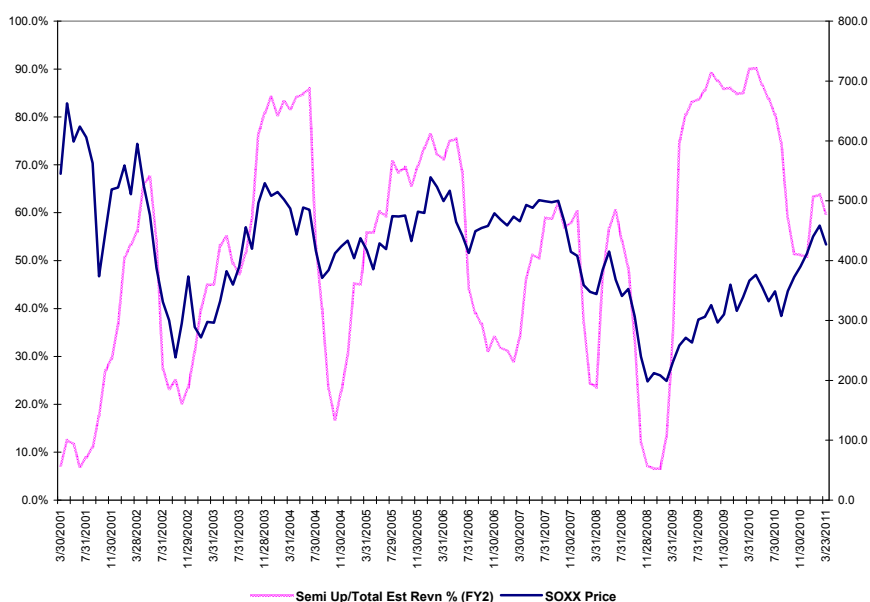
Figure 5. Revenue Comparison

Company	2H11	1H11	% 2H / 1H
ALTR	\$1,151	\$1,096	5.0%
AMD	\$3,848	\$3,123	23.2%
BRCM	\$4,381	\$3,662	19.6%
CODE	\$711	\$593	19.9%
CY	\$530	\$464	14.1%
IDTI	\$350	\$295	18.6%
INTC	\$26,647	\$23,389	13.9%
MRVL	\$2,194	\$1,690	29.9%
NVDA	\$2,021	\$1,850	9.2%
QCOM	\$7,025	\$6,978	0.7%
TXN	\$7,920	\$6,899	14.8%
XLNX	\$1,334	\$1,152	15.7%

Source: Citi Investment Research and Analysis

As we typically do, we will monitor the upward/total estimate revision ratio for the sector for a more definitive buy signal. We provide the current status of this ratio below.

Figure 6. Semi Up / Total Estimate Revision % (FY2) vs. SOXX



Source: Factset, Citi Investment Research and Analysis

In the advent of the potential semiconductor input shortages, we see limited potential for excessive build, and view inventory reduction as more likely. Any bearish view of excessive inventory build in semiconductors is suspect at this point.

Inventory the Ancillary Beneficiary. Although opinions vary, CIRA has not generally been concerned with supply chain inventories, as noted above. Analysis of 4Q10 inventory balances across the food chain suggest that inventories were generally lower, albeit up specifically in the hands of semiconductor companies. Given the demand risk that developed in May 2010, the supply chain was working inventories down (hence forcing it onto chipmakers), throughout 2H10. This is evident in inventory data q/q and y/y in 4Q10.

Figure 7. Inventories, Q/Q %

	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q 08	1.7%	0.1%	3.6%	-2.5%	9.7%	5.2%
2Q 08	2.8%	8.4%	-3.1%	4.3%	0.3%	0.2%
3Q 08	-1.7%	-11.2%	-1.9%	0.1%	-0.9%	-1.0%
4Q 08	-6.3%	-33.9%	-8.1%	-12.5%	-11.4%	-11.2%
1Q 09	-15.7%	-6.8%	-10.9%	-12.1%	-4.1%	-7.6%
2Q 09	-5.2%	30.3%	-7.1%	-9.1%	-5.8%	-6.4%
3Q 09	-3.1%	2.4%	6.7%	1.7%	-1.9%	0.4%
4Q 09	6.1%	8.0%	8.6%	5.8%	-8.8%	-1.3%
1Q 10	3.0%	9.2%	3.3%	6.8%	6.1%	5.7%
2Q 10	11.3%	7.6%	5.6%	10.6%	7.1%	7.2%
3Q 10	5.5%	9.6%	10.6%	9.6%	12.7%	11.1%
4Q 10	7.6%	10.6%	2.6%	0.4%	-4.9%	-1.8%

Source: Factset, Company Reports, Citi Investment Research and Analysis

Figure 8. Inventories, Y/Y %

	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q 08	-6.5%	11.4%	13.8%	-9.4%	19.6%	11.4%
2Q 08	-1.6%	10.2%	13.4%	-1.2%	10.9%	8.2%
3Q 08	4.8%	-3.8%	1.8%	-1.8%	3.1%	1.4%
4Q 08	-3.7%	-36.3%	-9.5%	-10.9%	-3.3%	-7.3%
1Q 09	-20.2%	-40.7%	-22.1%	-19.6%	-15.5%	-18.6%
2Q 09	-26.4%	-28.7%	-25.3%	-30.0%	-20.6%	-24.0%
3Q 09	-27.4%	-17.8%	-18.8%	-28.8%	-21.4%	-22.8%
4Q 09	-17.9%	34.3%	-4.0%	-14.0%	-19.1%	-14.3%
1Q 10	0.4%	57.4%	11.2%	4.5%	-10.6%	-2.0%
2Q 10	17.8%	30.0%	26.4%	27.1%	1.6%	12.2%
3Q 10	28.3%	39.0%	31.0%	37.1%	16.6%	24.1%
4Q 10	30.1%	42.4%	23.7%	30.0%	21.7%	23.5%

Source: Factset, Company Reports, Citi Investment Research and Analysis

Figure 9. Inventory Seasonality

2004 - 2008 Average						
	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q	3.3%	-1.8%	-0.5%	2.3%	8.0%	4.2%
2Q	4.6%	8.7%	-0.6%	3.7%	3.4%	2.7%
3Q	-0.2%	0.4%	4.7%	2.6%	5.7%	4.7%
4Q	0.1%	-2.1%	4.2%	-3.0%	-7.1%	-3.7%
2004 - 2008 Median						
	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q	2.2%	0.1%	-1.7%	0.4%	9.7%	5.2%
2Q	3.1%	8.4%	-2.7%	2.0%	4.6%	3.1%
3Q	0.7%	1.7%	3.8%	0.7%	7.0%	5.6%
4Q	0.3%	3.0%	7.6%	-2.7%	-6.6%	-2.6%
2005 - 2009 Average						
	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q	-0.9%	-2.7%	-2.4%	-1.8%	5.0%	1.3%
2Q	1.6%	14.2%	-2.5%	1.5%	1.3%	0.7%
3Q	-2.1%	-0.2%	5.3%	3.5%	3.6%	3.8%
4Q	1.5%	-2.9%	4.0%	-1.3%	-7.4%	-3.4%
2005 - 2009 Median						
	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q	1.7%	0.1%	-2.1%	-1.7%	6.1%	1.0%
2Q	2.8%	9.5%	-2.7%	0.1%	0.3%	0.2%
3Q	-1.7%	1.7%	6.7%	1.7%	6.6%	5.6%
4Q	2.0%	3.0%	7.6%	-1.2%	-6.6%	-1.3%
2003 - 2007 Average						
	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q	2.3%	-3.2%	-1.5%	2.5%	6.5%	3.2%
2Q	5.0%	7.7%	0.0%	2.4%	3.2%	2.5%
3Q	2.4%	3.4%	5.5%	2.1%	5.8%	4.9%
4Q	2.3%	5.9%	8.1%	1.5%	-6.5%	-1.6%
2003 - 2007 Median						
	Semis	Foundries	Distributors	EMS	OEM	Aggregate
1Q	2.2%	-2.4%	-1.7%	0.4%	6.1%	1.0%
2Q	4.7%	7.9%	-0.1%	0.1%	4.6%	3.1%
3Q	1.3%	4.0%	3.8%	0.7%	7.0%	5.6%
4Q	2.0%	6.5%	8.5%	-1.2%	-6.6%	-1.0%

Source: Factset, Company Reports, Citi Investment Research and Analysis

In fairness, chipmakers did see a notable build of inventories in 4Q10, and in the seasonally slow 1H, risk existed that an abnormal build would happen. But now in the advent of the recent supply shortages, we see limited potential for excessive build, and view inventory reduction as more likely. Any bearish view of excessive inventory build is suspect at this point.

China to Benefit Communications. We see the biggest change relative to consensus in the communications infrastructure market. True that 1Q11 suffered as Phase IV of China Mobile's wireless infrastructure build wound down. Our checks confirm that PLD companies reduced production levels in 1Q11.

But, pre-earthquake, our checks suggested PLD companies are forecasting as much as a double digit increase to their suppliers for 2Q11. We suspect a combination of factors is accounting for this:

Altera cannot escape the impact of Japan. But with approximately 7 weeks of finished goods inventory (between themselves and distributors), we suspect any impact will be relatively muted. We highlight Altera as prone to the biggest upside surprise in 2Q11. At this point, we expect an upward bias to guidance versus consensus of flat.

We do NOT expect a 1Q11 earnings shortfall from Intel, as do many of our peers. Meanwhile, we remain optimistic about prospects for AMD. Our checks suggest share momentum with Brazos helped insulate AMD from market weakness in January and February. Meanwhile, we look forward to the Llano launch in 2Q11, anticipating incremental share gain given Llano's impressive graphics and power consumption characteristics.

- Cap-ex increases from China Telecom for broadband infrastructure;
- The surprise cap-ex increases from China Mobile with an increasing concentration "infrastructure networks;"
- China Mobile's Phase V (expected to be 35% smaller than Phase IV before the cap-ex increase).

To be sure, Altera cannot escape the impact of Japan (16% of sales), particularly given their use of BT-resin. But with approximately 7 weeks of finished goods inventory (between themselves and distributors), we suspect any impact will be relatively muted. We highlight Altera as prone to the biggest surprise in 2Q11. At this point, we expect an upward bias to guidance versus consensus of flat.

PC's Showing Recovery. After a weak start to 1Q11 (January and February were both disappointments), March finished strongly for the PC supply chain (ODM volumes are expected to increase over 40% m/m). Given the incursion by tablets, investors are rightfully leery of any such recovery, fearful of excess inventories. But particularly in light of the weak performance of PC-related chip stocks to date, we view such recovery as a catalyst for the shares. We note:

- The March-June recovery is being fueled to some extent by system inventory rebuild for Intel's Sandy Bridge chip. Recall this chip was delayed in February, but was a week early back to market with a revised chipset. Our checks suggest that initial sales of SB have been good.
- China's annual Labor day holiday is May 1-3 and is considered a shopping season. Checks suggest Lenovo, Acer and HPQ are ordering SB-based systems in preparation.
- Europe has been highlighted as a source of incremental strength. We suspect the rising Euro/USD exchange rate is contributing to marginally better demand from Europe.

As a result of this March improvement, we do NOT expect a 1Q11 earnings shortfall from Intel, as do many of our peers. Recall that Intel revised its outlook lower on 1/31 likely taking into account a weak February. We view the 2Q11 risk as more demand than supply related but do see risk of below consensus guidance—we suspect this is being factored into shares presently.

We remain optimistic about prospects for AMD. Our checks suggest share momentum with Brazos helped insulate AMD from market weakness in January and February. We anticipate inline 1Q11 revenues as a result. Meanwhile, we look forward to the Llano launch in 2Q11, anticipating incremental share gain given Llano's impressive graphics and power consumption characteristics. We have heretofore remained neutral on AMD's server prospects, although early checks suggest the forthcoming Bulldozer platform may hold some promise of share gain. AMD remains our top idea.

Handsets & Tablets Hold Some Risk. While smartphones in general remain strong, the handset supply chain carries the greatest amount of risk in our estimation; this is true, pre- or post- the BT resin issues. We point to the following:

We note that communications IC's are primary users of BT resin, making them principally exposed to the risk of shortages. While companies have provided little concrete information at this stage (understandably so), we nonetheless expect a shortfall as evidenced by our estimate revisions.

Our checks suggest production of chips for Qualcomm has been tracking flat in 1Q11 (vs. our estimate of down 2.5%) and the outlook for 2Q11 is for sequential growth. We assert that pre-earthquake, trends were favorable, leaving us positively inclined as business returns to normal.

- Our checks show that Nokia has slowed orders to component vendors pending internal review, ostensibly of their new relationship with Microsoft. Back-end suppliers to baseband chip vendors have seen some order cancellations as a result.
- China's "white-phone" market was a source of relative weakness in 1Q11. To some extent, this is an on-going trend, but this weakness was highlighted in our recent supply chain discussions.
- Tablets remain a source of skepticism across the supply chain. The fear of excessive build and/or a price war is widely held in the supply chain, this is particularly so in light of the functional prowess of iPad 2. We sense that tablet manufacturers may be re-assessing their build plans in light of this same concern, potentially creating near-term shortfalls. Citi is not constructive on tablets in 2011 and we remain neutral on NVDA despite its substantial pullback.

We note that communications IC's are primary users of BT resin, making them principally exposed to the risk of shortages. While companies have provided little concrete information at this stage (understandably so), we nonetheless expect a shortfall as evidenced by our estimate revisions. Handset-related chip companies most exposed to the BT-resin shortage in our coverage are: QCOM, BRCM, TXN. Of these, we are recommending QCOM in particular.

QCOM shares are down 13.2% from its YTD peak, versus the S&P down 4.8%, largely reflecting concerns that Japan's earthquake will negatively impact Qualcomm's supply of a critical input (BT resin). As we wrote in our post-Asia field check note, our checks suggest production of chips for Qualcomm has been tracking flat in 1Q11 (vs. our estimate of down 2.5%) and the outlook for 2Q11 is for sequential growth (we model +12%, inline with seasonality). We recognize that shortages of BT resin, and perhaps more importantly, shortages of other components (small size glass, NAND flash, bare semiconductor wafers), could negatively impact the demand outlook in 2Q11. But we assert that pre-earthquake, trends were favorable, leaving us positively inclined as business returns to normal.

Update on Japan. As we wrote in last week's Semi Beat, Citi's Japanese technology/materials team notes that, while many facilities have sustained damage, most companies in Japan reported that damage to buildings and equipment was not serious and that normal earthquake response measures were effective. While encouraging, we recognize that a return to normal production at major facilities in northern Japan will now depend on the restoration of power and other utilities (e.g. water), and requires no worsening of the on-going nuclear issue. In general, CIRA estimates that facilities closest to the earthquake epicenter (Iwate, Miyagi, and some parts of Fukushima prefectures) will require approximately 1 month to return back to normal production. The next closest prefectures (Akita, Yamagata, Ibaraki, Chiba and some parts of Fukushima) are expected to take a few days to a month. At this stage, plants in Niigata, Gunma, Tochigi, and Nagano are operating at close to normal.

1. BT Resin. The world's supply of BT-resin used in semiconductor manufacturing is highly concentrated in Japan; Mitsubishi Gas Chemical (MGC) and Hitachi Chemical combine to hold 85% global market share. BT-resin is widely used in ball grid array and chip-scale packaging for mobile phone and consumer electronics chips. MGC has already suspended operations at its

Shirakawa plant and remains uncertain about its re-opening. CIRA's discussions with MGC confirm that clean rooms and related equipment were damaged in the earthquake, inventories are on-hand, although transportation logistics are interrupted, and power and gas transmission are back-to-normal. Beyond this, we note that partial resumption of production is slated to begin at MGC's subsidiary Electrotechno in early April. We add that Hitachi Chemical (30% global market share) sustained far less damage and is expected to return to normal production in short order.

2. Bare Wafer. Currently, 25%-30% of global 300mm wafer production is offline (global production is 4.2M wafers/month). Shin-Etsu Chemical has halted production in its Shirakawa plant and details about its restoration remain unclear. MEMC has idled equipment at its 300mm facility in Utsunomiya and SUMCO has halted production in both 300mm and 200mm plants in Yonezawa. To be sure, some of this production can be picked up by other facilities (MEMC and SUMCO), and ~1-month of inventory exists in the supply chain. Nonetheless, should issues extend beyond CIRA's expectation of a 1-month outage, supply/demand balance should worsen.

3. Other Chip Outages. From our Japanese analysts, we note:

a. Toshiba has had to suspend production at its Yokkaichi plant, its NAND production base in Mie Prefecture (global market share of more than 40%), three times thus far in March. The plant is far from the epicenter of the earthquakes and has not suffered any direct damage, but production was nonetheless partially suspended. While minor compared with the one that followed a temporary power outage last December, we still believe output in April-June is likely to stall.

b. Production has been halted at Sony Shiroishi Semiconductor in inland Miyagi Prefecture, which makes around 40% of the world's blue-violet laser diodes; there are no immediate prospects of a resumption of production.

c. There is no time frame for the resumption of production at the following facilities: 1) five of Renesas Electronics' 22 front-end processing facilities; 2) the majority of Fujitsu's plants for 200mm and smaller-diameter wafers; and 3) Iwate Toshiba Electronics. While we do not believe any of the products made by these facilities have a commanding market share, they are used in a wide range of applications (auto electronics, digital consumer electronics, PCs, game consoles, etc.) Production can be switched to other facilities for some, but we believe it will take time to assess the damage and the delays could potentially have a large impact on the production plans of end-product makers.

Figure 10. Situation at electronic component makers

Code	Name	Date	Source	Comments
4062	Ibiden	3/15	Company	No major physical damage likely to impair production or sales at the plants or offices of Ibiden and group companies.
5334	NGK Spark Plug	3/14	Company	No production bases in Tohoku; no impact at present on production structure from factors such as damage to facilities.
6592	Mabuchi Motor	3/14	Company	All production is overseas, and continues uninterrupted. Headquarters facilities functioning normally except for the effects of planned power outages. Minor damage at peripheral facilities; details under investigation.
6594	Nidec	3/17	Company	Nidec Copal: Ichinoseki plant (precision small motors, etc.) operating 3/17, Koriyama R&D center (optical devices, industrial printers) open 3/17 Nidec Copal Precision Parts: Fukushima plant (dies, etc.), Koriyama plant (dies, etc.) open 3/17 Copal Electronics: Tajiri office (circuit components) closed 3/17 Nidec Nissin Tohoku (plastic forming, etc.) operating 3/17
16	TDK	3/15	Company	Narita plant (metal magnets), Akita plant (various electronic materials), Chokai plant (ferrite cores), Inakura plant (ferrite cores), Akita, Kitakami, Honjo plants (capacitors), Ouchi plant (coils, high-frequency components): Preparations being made for production, but possible impact from planned power outages Kofu plant (thin film devices, silicon devices), Media Technology (Yamanashi: data storage tapes, commercial broadcasting tape), Kisakata plant (capacitors); Konoura plant, Yuzawa plant, Iwaki plant (coils, high-frequency components); Honjo plant (power supplies); Yashima plant (sensors); TDK Ujo (capacitors); Sakata plant, Yuza plant (coils, transformers, power supplies, sensors), Nagaoka Technical Center (power supply components): Production resuming, but subject to planned power outages Technical Center (Ichikawa, Chiba; development of various products), Kisakata plant (development of various products), Hirasawa plant (R&D), Tsuruoka plant (coils, transformers, power supplies, sensors): Operating, but subject to power outages TDK Micro Device (Ibaraki; organic EL): Damage inspections underway; production suspended. Subject to planned power outages
6767	Mitsumi Electric	3/16 15:30	Company	Minor damage to buildings and facilities, but no impact on business activities Headquarters (Tama, Tokyo): Continuing to operate on reduced schedule due to planned power outages Atsugi: Scheduling chip production line operations to fit planned power outages. Continuing with scaled-back activities due to rolling blackouts Kyushu, Chiba: Operating as usual Yamagata, Akita: Continuing to operate as usual, but potential scaling back of activity if planned power outages are implemented Some disrupted logistics in the six Tohoku prefectures, Tochigi Prefecture, Ibaraki Prefecture, and Hokkaido likely to result in delayed shipments of certain products
6770	Alps Electric	3/15 17:00	Company	Bases in affected areas closed, working toward resuming activities. Damage assessment underway, but no serious damage from building collapses, fires, or tsunami waves
6804	Hosiden	3/14	Company	Very minor direct damage to domestic group bases; production not seriously affected. As for indirect damage, the company has few suppliers in the Tohoku region on the whole, and at present it sees no major impact. Certain suppliers and partners are based in Tohoku, and their situations are being checked
6806	Hirose Electric	3/17 8:00	Company	Miyauchi plant: No major damage to buildings or facilities. Expects to resume production as infrastructure is restored. Koriyama plant: Damage to buildings and facilities, but mostly repaired. Resuming production gradually as electricity and communications are restored Ichinoseki plant: Minor damage to buildings and facilities is being repaired. Expects to gradually resume production as electricity and communications are restored Group partners: Production facilities at only two of 70 Tohoku-based partners were destroyed, and one has suspended operations due to the effects of the nuclear power plant situation. Company looking into alternative production options overseas
6963	Rohm	3/17 11:00	Company	Oki Semiconductor Miyagi (LSI): Water and power have yet to be restored, and the company is making preparations to ensure a swift resumption of operations once infrastructure is back in place. The company is building an alternative production system at its Kyoto plant and the Rohm Hamamatsu plant, and is striving to ensure its ability to meet orders Rohm Tsukuba (transistors, diodes): Industrial-use water supplies are cut off, but the company aims to resume partial operations as early as the end of this week. The company is building an alternative production structure at Rohm Wako Device and Rohm Apollo Device, and is striving to ensure its ability to meet orders
6967	Shinko Electric	3/15	Company	No earthquake-related damage to buildings and facilities
6971	Kyocera	3/16 12:00	Company	Fukushima Tanagura plant (communications equipment): Some damage to buildings and facilities. Partial resumption of production from 3/15 Kyocera Chemical Koriyama plant (organic materials): Some damage to buildings and facilities. Due to impact on utility infrastructure, production currently suspended Kyocera Kinseki Yamagata Corporation (quartz crystal components): Some damage to buildings and facilities. Due to impact on utility infrastructure, production currently suspended Kyocera Chemical Kawaguchi plant (organic materials): Some damage to buildings and facilities. Production resumed from 3/15 Kyocera Chemical Kawasaki plant (organic materials): Some damage to buildings and facilities. Production resumed from 3/15 Kyocera Chemical Moka plant (organic materials): Some damage to buildings and facilities. Resumed production from 3/17
6976	Taiyo Yuden	3/14 8:00	Company	That's Fukushima Co.: Some damage to buildings and facilities. Production suspended due to interruption of power and gas supplies. There is some concern there will be delays in shipments of manufactured products At other production bases, planned power outages are likely, and we expect scheduling and planning of resumed operations to be set accordingly
6981	Murata	3/16 17:00	Company	Tome plant (EMI filters, coils): Damage assessment underway. We understand there was some damage to building interiors and facilities. The company expects power to return on the afternoon of 3/17 and is preparing to repair buildings and equipment. Outlook for restoration, including other infrastructure lifelines, TBA Sendai plant (piezoelectric products and high-frequency devices): No major damage to buildings or facilities. Electricity (for industrial use), water, and gas lifelines are currently cut off. Outlook for restoration TBA. If the restoration is delayed, the company plans alternative supplies with products from Kanazawa Murata Manufacturing (Shirayama, Ishikawa Prefecture) Oyama plant (polymer capacitors): Preparing to resume operations. If there is no power due to planned outages, restoration may take time; plans TBA

Source: Citi Investment Research and Analysis, based on information from companies.

Figure 11. Situation at semiconductor and consumer electronics companies

Code	Name	Date	Source	Comments
6665	Elpida Memory	3/16 19:00	Company	Operations at Akita Elpida, a domestic base for package assembly and testing, were suspended due to a loss of power accompanying the earthquake on 3/11, but with the incremental return of power from 3/16, production is resuming in stages. There was no damage from the quake or the power outage. Furthermore, more than 90% of the package assembly and testing in Elpida's DRAM production is handled overseas, so we think the potential business risk of further stoppages is limited
6723	Renesas Electronics	3/16 12:00	Company	Renesas Northern Japan Semiconductor, Tsugaru plant: No damage to building. Production equipment being checked. Currently assessing operational status (power still down). Facilities inspections start when power is back up Renesas Yamagata Semiconductor, Tsuruoka plant: Some damage to building. No damage to production equipment. Preparing to resume operations. Start-up interrupted in response to planned power outage Renesas Electronics, Naka plant: Damage to building. Damage to production equipment. Operations suspended (power down). Cleanroom inspection to proceed after power is restored Renesas Electronics, Takasaki plant: Some damage to building. No damage to production equipment. Preparing to resume operations (subject to planned power outages). Plans to restart after blackout Renesas Electronics, Kofu plant: Some damage to building. Some damage to production equipment. Preparing to resume operations (subject to planned power outages). Plans to restart after blackout Renesas High Components (semiconductor back-end processes; Tsuruta, Aomori): No damage to buildings. No damage to production equipment. Preparing to resume operations (subject to planned power outages). Plans to restart after blackout Renesas Northern Japan Semiconductor, Yonezawa plant (semiconductor back-end processes): Some damage to buildings. Some damage to production equipment. Resumption of operations underway (subject to planned power outages). Preparing to resume production during hours that power is on Renesas Eastern Japan Semiconductor, Tokyo Device Division (semiconductor back-end processes): No damage to buildings. No damage to production equipment. Partial resumption of production activities. Operating during hours that power is on; however, only for products that had been in progress, as supply of pure water is interrupted
6752	Panasonic	3/14 15:40	Company	Production has been halted at the Sendai plant (electronic components), Fukushima plant (digital camera), Koriyama plant (Panasonic Electric Works, electronic materials), and Tokyo Seisakusho (Gunma prefecture, Sanyo, washers and dryers, etc.) The Sendai plant and Fukushima plant are off-limits because of the risk of aftershocks. Panasonic is collecting information about the impact the earthquake has had on electricity, gas, water supply and distribution and procurement for other facilities in these regions and will study appropriate response measures
6753	Sharp	3/15 17:00	Company	No major damage to buildings. Only production base in eastern Japan is Tochigi Plant, but this will be operating on a curtailed schedule from 3/15, depending on power supplies
6758	Sony	3/14 11:00	Company	Operations at the following sites are suspended: Sony Chemical & Information Devices Tagajo plant (magnetic tape, BD, etc.), Tome office (optical components, IC cards, etc.), Sony Shiraishi Semiconductor (semiconductor lasers), Sony Energy Devices Koriyama office, Motomiya office (lithium-ion batteries, etc.), Sony Manufacturing Systems (Kuki, Saitama; mounting equipment, etc.), Sony DADC Japan Ibaraki plant (CDs, DVDs, etc.), Sony Sendai Technology Center The following sites have voluntarily powered down: Sony Chemical & Information Devices Kanuma office, Sony Energy Devices Tochigi office, Sony Atsugi Technology Center There are no reports of damage to other production facilities or buildings. Sites other than those noted above are operating. Conditions at other domestic affiliates are currently being checked
6773	Pioneer	3/15 11:00	Company	Minor damage resulting from the earthquake was confirmed at facilities at the Pioneer head office (Kawasaki, Kanagawa Prefecture), Kawagoe plant (Kawagoe, Saitama Prefecture), Tohoku Pioneer (Tendo, Yamagata Prefecture), and Towada Pioneer (Towada, Aomori Prefecture), but after safety was confirmed, the facilities continue to operate normally
6839	Funai	3/15	Company	No damage to facilities
6954	Casio Computer	3/14	Company	Casio said it is working to ascertain the condition of its facilities while confirming safety as well as the status of materials and infrastructure in efforts to resume operations. While prioritizing safety, the company plans to resume operations when inspections and checks are complete. While it does not expect major damage to buildings, it expects activities to be affected by interruptions in essential utilities

Source: Company data, Citi Investment Research and Analysis.

Company Focus

- Company Update
- Estimate Change

Buy/Speculative	1S
Price (24 Mar 11)	US\$8.83
Target price	US\$12.50
Expected share price return	41.6%
Expected dividend yield	0.0%
Expected total return	41.6%
Market Cap	US\$6,062M

Price Performance (RIC: AMD.N, BB: AMD US)



Advanced Micro Devices (AMD) 1Q11 Earnings Preview

- AMD remains our top pick as we continue to find evidence of share gain with its Brazos platform and see further potential with the launch of Llano in 2Q11. We are also optimistic regarding AMD's prospects in servers with their Bulldozer platform.
- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011: 2Q11 down \$79M, 3Q11 up \$52M, 4Q11 up \$27M. We make no other changes to our estimates for AMD.

EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.35A	-0.06A	-0.17A	0.50A	0.64A	0.49A
2011E	0.05E	0.08E	0.35E	0.44E	0.87E	0.53E
Previous	0.05E	0.13E	0.31E	0.43E	0.86E	na
2012E	0.32E	0.27E	0.37E	0.42E	1.28E	0.74E
Previous	0.32E	0.26E	0.37E	0.42E	1.28E	na
2013E	na	na	na	na	1.44E	1.15E
Previous	na	na	na	na	1.44E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

■ Company Update

Buy/High Risk	1H
Price (24 Mar 11)	US\$42.42
Target price	US\$51.00
Expected share price return	20.2%
Expected dividend yield	0.6%
Expected total return	20.8%
Market Cap	US\$13,660M

Price Performance (RIC: ALTR.O, BB: ALTR US)



Altera Corp (ALTR)

Raised Estimates Above Consensus As China Comes Back: Upgraded to Buy Earlier Today

- Earlier today we raised our rating on Altera to Buy from Hold, increased our 2011 revenue/EPS estimates above consensus, and revised our price target upward to \$51 from \$43. We view China Mobile's resumption of infrastructure build as a catalyst and see increased potential for revenue/EPS acceleration.
- We had previously downgraded shares on concerns of slowing orders, rising inventories, and reduced lead times. While those concerns were substantiated, our checks also revealed that volumes for Altera are expected to increase as much as 10% in 2Q11. We raised our 2Q11 revenue forecast to +3.4% q/q, above consensus of -0.3% q/q.
- We acknowledge the risk that critical material (BT resin) will be in limited supply due to the earthquake in Japan, possibly delaying the timing of the sequential increase we envision for Altera.
- We increased our 2Q11 revenue growth estimate from approximately flat to +3.4%, above consensus expectations of -0.3%, and our 2011 revenue growth estimate from +10.1% to +15% (vs. consensus 9.7%). Our 2Q11 GAAP EPS estimate increased from \$0.62 to \$0.65 (consensus \$0.62), and our 2011 estimates went from \$2.48 to \$2.64 (consensus \$2.45). Our 2012 revenue estimate increased from \$2.35 B to \$2.55 B (consensus \$2.32 B), representing 13.6% growth y/y (vs. consensus +8.4% y/y). On higher 2012 revenue growth, EPS, ROE, and BV/share estimates, our price target rises to \$51 from \$43.

EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.50A	0.58A	0.69A	0.72A	2.49A	2.49A
2011E	0.64E	0.65E	0.67E	0.68E	2.64E	2.48E
Previous	0.64E	0.65E	0.67E	0.68E	2.64E	na
2012E	na	na	na	na	2.94E	2.61E
Previous	na	na	na	na	2.94E	na
2013E	na	na	na	na	3.12E	2.77E
Previous	na	na	na	na	3.12E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Broadcom Corporation (BRCM) 1Q11 Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce 2Q11 revenues by \$97M to arrive at \$1.849B, and raise 3Q11 to \$2.166B and 4Q11 to \$2.215B, leaving annual estimates unchanged. We make no other changes to our estimates for BRCM.

Buy/High Risk	1H
Price (24 Mar 11)	US\$41.10
Target price	US\$54.00
Expected share price return	31.4%
Expected dividend yield	0.9%
Expected total return	32.3%
Market Cap	US\$19,962M

Price Performance (RIC: BRCM.O, BB: BRCM US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.40A	0.52A	0.60A	0.47A	1.99A	2.72A
2011E	0.35E	0.37E	0.67E	0.69E	2.08E	2.77E
Previous	0.35E	0.45E	0.62E	0.67E	2.09E	na
2012E	0.58E	0.63E	0.68E	0.70E	2.59E	3.04E
Previous	0.58E	0.63E	0.68E	0.70E	2.59E	na
2013E	na	na	na	na	2.69E	3.32E
Previous	na	na	na	na	2.68E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Cypress Semiconductor Corp (CY) 1Q11 Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce 2Q11 revenues by \$12.4M to arrive at \$235.6M, and raise 3Q11 to \$274.3M and 4Q11 to \$255.2M, leaving annual estimates unchanged. We make no other changes to our estimates for CY.

Hold/Speculative	2S
Price (24 Mar 11)	US\$20.09
Target price	US\$25.00
Expected share price return	24.4%
Expected dividend yield	0.0%
Expected total return	24.4%
Market Cap	US\$3,489M

Price Performance (RIC: CY.O, BB: CY US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.07A	0.09A	0.23A	0.04A	0.43A	0.94A
2011E	0.11E	0.12E	0.21E	0.16E	0.60E	1.13E
Previous	0.11E	0.15E	0.19E	0.15E	0.60E	na
2012E	na	na	na	na	0.88E	1.39E
Previous	na	na	na	na	0.87E	na
2013E	na	na	na	na	0.95E	0.94E
Previous	na	na	na	na	0.94E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Integrated Device Technology Inc (IDTI) F4Q11(Mar) Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce F1Q12 revenues by \$7.9M to arrive at \$149.9M, and raise F2Q12 to \$173.9M and F3Q12 to \$175.8M, leaving annual estimates unchanged. We make no other changes to our estimates for IDTI.

Buy/Speculative	1S
Price (24 Mar 11)	US\$7.37
Target price	US\$9.00
Expected share price return	22.2%
Expected dividend yield	0.0%
Expected total return	22.2%
Market Cap	US\$1,112M

Price Performance (RIC: IDTI.O, BB: IDTI US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.02A	0.07A	0.10A	0.09A	0.24A	0.29A
2011E	0.14A	0.19A	0.14A	0.11E	0.33E	0.59E
Previous	0.14A	0.19A	0.14A	0.11E	0.33E	na
2012E	0.15E	0.18E	0.16E	0.26E	0.49E	0.55E
Previous	0.16E	0.17E	0.16E	0.26E	0.49E	na
2013E	na	na	na	na	0.84E	0.73E
Previous	na	na	na	na	0.84E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Intel Corp (INTC) 1Q11 Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce 2Q11 revenues by \$612M to arrive at \$11.679b, and raise 3Q11 to \$13.195B and 4Q11 to \$13.452B, leaving annual estimates unchanged. We make no other changes to our estimates for INTC.

Buy/Medium Risk	1M
Price (24 Mar 11)	US\$20.38
Target price	US\$25.00
Expected share price return	22.7%
Expected dividend yield	3.5%
Expected total return	26.2%
Market Cap	US\$111,845M

Price Performance (RIC: INTC.O, BB: INTC US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.43A	0.51A	0.52A	0.51A	1.97A	2.05A
2011E	0.47E	0.42E	0.57E	0.59E	2.06E	2.04E
Previous	0.47E	0.47E	0.54E	0.58E	2.06E	na
2012E	0.50E	0.48E	0.55E	0.59E	2.12E	2.20E
Previous	0.50E	0.49E	0.55E	0.59E	2.13E	na
2013E	na	na	na	na	2.23E	2.25E
Previous	na	na	na	na	2.25E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Marvell Technology Group Ltd. (MRVL) F1Q12(Apr) Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce F2Q12(Jul) revenues by \$41.2M to arrive at \$866.4M, and raise F3Q12 to \$1.1B and F4Q12 to \$1.09B, leaving annual estimates unchanged. We make no other changes to our estimates for MRVL.

Buy/High Risk	1H
Price (24 Mar 11)	US\$16.31
Target price	US\$24.00
Expected share price return	47.1%
Expected dividend yield	0.0%
Expected total return	47.1%
Market Cap	US\$10,610M

Price Performance (RIC: MRVL.O, BB: MRVL US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2011A	0.30A	0.33A	0.38A	0.33A	1.34A	1.64A
2012E	0.24E	0.27E	0.41E	0.40E	1.32E	1.48E
Previous	0.24E	0.29E	0.39E	0.40E	1.32E	na
2013E	0.35E	0.37E	0.41E	0.39E	1.53E	1.70E
Previous	0.35E	0.37E	0.41E	0.39E	1.53E	na
2014E	na	na	na	na	1.67E	1.80E
Previous	na	na	na	na	1.67E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

NVIDIA Corp (NVDA) F1Q12(Apr) Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce F2Q12(Jul) revenues by \$47.4M to arrive at \$902.2M, and raise F3Q12 to \$1.0B and F4Q12 to \$1.01B, leaving annual estimates unchanged. We make no other changes to our estimates for NVDA.

Hold/Speculative	2S
Price (24 Mar 11)	US\$19.23
Target price	US\$27.00
Expected share price return	40.4%
Expected dividend yield	0.0%
Expected total return	40.4%
Market Cap	US\$11,373M

Price Performance (RIC: NVDA.O, BB: NVDA US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2011A	0.23A	-0.25A	0.15A	0.29A	0.42A	0.65A
2012E	0.19E	0.16E	0.28E	0.29E	0.92E	1.04E
Previous	0.19E	0.19E	0.25E	0.28E	0.91E	na
2013E	0.26E	0.29E	0.42E	0.53E	1.50E	1.29E
Previous	0.26E	0.29E	0.42E	0.53E	1.50E	na
2014E	na	na	na	na	1.77E	1.40E
Previous	na	na	na	na	1.78E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Buy/Medium Risk	1M
Price (24 Mar 11)	US\$53.72
Target price	US\$60.00
Expected share price return	11.7%
Expected dividend yield	1.5%
Expected total return	13.1%
Market Cap	US\$88,302M

Price Performance (RIC: QCOM.O, BB: QCOM US)



Qualcomm Inc (QCOM) F2Q11(Mar) Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce F3Q11(Jun) revenues by \$184M to arrive at \$3.31B, and raise F4Q11 to \$3.67B and F1Q12 to \$3.68B, leaving annual estimates unchanged. We make no other changes to our estimates for QCOM.

EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.62A	0.59A	0.57A	0.68A	2.46A	2.46A
2011E	0.82A	0.78E	0.60E	0.78E	2.98E	3.06E
Previous	0.82A	0.78E	0.69E	0.73E	3.01E	na
2012E	0.77E	0.75E	0.73E	0.77E	3.02E	3.30E
Previous	0.74E	0.75E	0.73E	0.77E	2.99E	na
2013E	na	na	na	na	3.06E	3.55E
Previous	na	na	na	na	3.06E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Spancion Inc. (CODE) 1Q11 Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce 2Q11 revenues by \$16M to arrive at \$301M, and raise 3Q11 to \$364M and 4Q11 to \$347M, leaving annual estimates unchanged. We make no other changes to our estimates for CODE.

Hold/Speculative	2S
Price (24 Mar 11)	US\$19.22
Target price	US\$23.50
Expected share price return	22.3%
Expected dividend yield	0.0%
Expected total return	22.3%
Market Cap	US\$1,199M

Price Performance (RIC: CODE.N, BB: CODE US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.02A	1.90A	-1.09A	-0.22A	3.00A	2.00A
2011E	-0.19E	0.04E	0.58E	0.48E	0.91E	2.27E
Previous	-0.19E	0.05E	0.56E	0.49E	0.90E	na
2012E	0.44E	0.44E	0.52E	0.51E	1.92E	2.55E
Previous	0.44E	0.44E	0.52E	0.51E	1.92E	na
2013E	na	na	na	na	2.33E	2.45E
Previous	na	na	na	na	2.33E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Texas Instruments Inc (TXN) 1Q11 Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce 2Q11 revenues by \$184M to arrive at \$3.49B, and raise 3Q11 to \$4.07B and 4Q11 to \$3.86B, leaving annual estimates unchanged. We make no other changes to our estimates for TXN.

Buy/Medium Risk	1M
Price (24 Mar 11)	US\$34.86
Target price	US\$39.00
Expected share price return	11.9%
Expected dividend yield	1.5%
Expected total return	13.4%
Market Cap	US\$40,751M

Price Performance (RIC: TXN.N, BB: TXN US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.52A	0.62A	0.71A	0.78A	2.63A	2.49A
2011E	0.58E	0.60E	0.80E	0.74E	2.73E	2.62E
Previous	0.58E	0.67E	0.76E	0.71E	2.73E	na
2012E	0.63E	0.69E	0.74E	0.69E	2.75E	2.81E
Previous	0.63E	0.69E	0.74E	0.69E	2.75E	na
2013E	0.62E	0.71E	0.78E	0.72E	2.83E	3.01E
Previous	0.62E	0.71E	0.78E	0.72E	2.83E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Company Focus

- Company Update
- Estimate Change

Xilinx Inc (XLNX) F4Q11(Mar) Earnings Preview

- To account for the potential delay in demand due to the impact from Japan, we adjust the timing of revenues in C2011. We reduce F1Q12(Jun) revenues by \$30M to arrive at \$571M, and raise F2Q12 to \$630M and F3Q12 to \$643M, leaving annual estimates unchanged. We make no other changes to our estimates for XLNX.

Hold/High Risk	2H
Price (24 Mar 11)	US\$32.98
Target price	US\$35.00
Expected share price return	6.1%
Expected dividend yield	2.3%
Expected total return	8.4%
Market Cap	US\$8,610M

Price Performance (RIC: XLNX.O, BB: XLNX US)



EPS	Q1	Q2	Q3	Q4	FY	FC Cons
2010A	0.14A	0.23A	0.38A	0.54A	1.29A	1.22A
2011E	0.58A	0.65A	0.58A	0.52E	2.32E	2.32E
Previous	0.58A	0.65A	0.58A	0.52E	2.32E	na
2012E	0.48E	0.53E	0.57E	0.58E	2.16E	2.09E
Previous	0.51E	0.51E	0.56E	0.58E	2.16E	na
2013E	0.65E	0.66E	0.66E	0.66E	2.62E	2.37E
Previous	0.65E	0.66E	0.66E	0.66E	2.62E	na

Source: Company Reports and dataCentral, CIR. FC Cons: First Call Consensus.

Advanced Micro Devices

Valuation

Our price target for AMD is \$12.50. Our target price is based on the implied multiple derived from a growth screen of the top 100 market cap stocks in the S&P500, excluding energy and financials. We believe our methodology reflects the P/E multiple investors pay for growth. We have found the market is paying an FY2 earnings multiple of $0.323x \text{ (Sales Growth)} + 11.827$ with a 52% correlation.

Our C2011 revenue growth estimate of 7.3% yields an implied P/FY2 earnings multiple of 14.2x. We apply this multiple to our 2011 EPS estimate of \$0.86 for an implied share price of \$12.25 which we round to our target price of \$12.50.

Risks

Our risk rating for Advanced Micro Devices stock is Speculative. AMD generates 90% of its revenue from the PC and server markets. An unexpected upturn or downturn in PC/server sales could impact revenue potential and earnings.

If AMD loses microprocessor market share to Intel due to issues such as product roadmap execution, delay in adoption of new products by OEMs, or yield issues at Global Foundries, it could impact revenue and profitability.

If Intel or Nvidia lower their MPU or GPU pricing materially, AMD may have to respond in kind to maintain market share, thereby pressuring its profitability.

AMD's ownership of Global Foundries on a fully converted to Global Foundries ordinary shares basis is ~14%. While AMD will account for Global Foundries under the cost method starting in 1Q11 and no longer recognize share of Global Foundries net income (loss) in its statement of operations, Global Foundries remains a major foundry partner to AMD. Issues with technology migration, yield and manufacturing could impact AMD's revenues and profitability.

If the impact on the company from any of these risk factors proves to be different than we anticipate, it may prevent the stock from achieving our target price or could drive the shares above our target price.

Altera Corp

Valuation

Our target price for Altera is \$51. Our target price is based on the implied multiple derived from a growth and value screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. We believe our methodology reflects the P/E multiple investors pay for growth and the P/BV multiple investors pay for return on equity. We have found the market is paying an FY2 earnings multiple of $0.455x \text{ (Sales Growth)} + 10.155$ with a 60% correlation and a price-to-book multiple of $0.156x \text{ (ROE)} + 0.327$ with a correlation of 89%.

For Altera, our 2012 sales growth estimate of 13.65% yields an implied P/FY2 earnings multiple of 16.37x. We multiply our 2012 GAAP EPS estimate of \$2.94 by 16.37x for an implied share price of \$48.16. Our 2011-2012 average ROE estimate of 26.13% yields an implied P/BV 4.41x. We multiply our 2012 BV/share estimate of \$12.07 by 4.14x for an implied share price of \$53.25.

We equally weigh our \$48.16 and \$53.25 implied targets to derive a target of \$50.71, which we round to \$51.

Risks

We rate Altera Corp High Risk, primarily due to the stock's volatility and the volatility in the semiconductor industry.

Risks to the stock achieving our target price include the following:

Macro Risk. Altera is exposed to end-markets such as communications infrastructure and industrial, which are capital intensive. A slowdown in capital spending as a result of macroeconomic uncertainty could negatively impact Altera's revenues and margins. We recognize the risk that Altera shares do not appreciate in a broader economic slowdown.

Reliance on Distributors. Altera's sales through distributors accounted for 82% of total sales in C09, with its largest distributor accounting for 45% of total sales. Altera recognizes revenue on sell-through from distribution, lessening the risk of distributor inventory build. An impact to its distributors' operations could impact sales.

Share Loss. Altera estimates it had ~34% market share in the FPGA segment of the PLD market. The majority of the PLD market is comprised of two vendors, Altera and Xilinx. With 94% of Altera's revenues from PLD sales, we recognize the risk of share loss to Xilinx could negatively impact revenues and margins.

Reliance on Foundries. As a fabless semiconductor company, Altera purchases wafers from its primary foundry, TSMC, for its products. An impact to foundry production or capacity could negatively impact Altera's sales and profitability.

Broadcom Corporation

Valuation

Our price target for Broadcom of \$54. Our target price is based on the implied multiple derived from a growth and value screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. We believe our methodology reflects the P/E multiple investors pay for growth and the P/BV multiple investors pay for return on equity. We have found the market is paying an FY2 earnings multiple of 0.382x (Sales Growth) + 10.699 with a 55% correlation and a price-to-book multiple of 0.169x (ROE) + 0.562 with a correlation of 61%.

We apply our C2011 revenue growth estimate of 17.9% for BRCM for an implied P/E of 17.6x. We multiply our implied P/E by our C2011 free cash flow per share estimate of \$2.79 to arrive at a growth-based target of \$48.94. We are using our

FCF instead of GAAP EPS for our analysis as we believe free cash flow is a better measure for Broadcom given BRCM's industry-high stock based comp expense. We apply our C2011 ROE estimate of 20% for an implied P/BV of 3.9x. We multiply our implied P/BV by our C2011 BV/share estimate of \$14.87 to arrive at a value-based target of \$59.29. We average our growth and value targets to arrive at a price target of \$54.12, which we round to \$54.

Risks

We rate Broadcom with a High Risk rating primarily due to the stock's volatility (2-year weekly Beta of 0.86 versus the S&P 500 and 1.06 versus the Philadelphia Semiconductor Index (SOX)) and the volatility in the semiconductor industry. The company enjoys solid liquidity with cash per share of \$3.8 and is expected to generate positive operating cash flow and free cash flow for the next two years.

Risks to our price target and recommendation include:

Macro Risk – Broadcom is exposed to end-markets such as computing and consumer which are impacted by enterprise and consumer electronics discretionary spending, as well as communications infrastructure which is capital intensive. A slowdown in consumer or capital spending as a result of macroeconomic uncertainty could negatively impact Broadcom's revenues and margins.

Industry and customer concentration – In 2009, Broadband accounted for 34% of sales, with Mobile/Wireless and Enterprise Networking accounting for 38% and 24% of sales respectively. A loss in market share in a particular segment could impact revenues and margins. While the revenue derived from BRCM's top 5 customers has declined as a percentage of total revenue to 34.6% in 2009 from 35.8% in 2008, Broadcom expects its largest customers to continue to account for a substantial portion of total sales for the foreseeable future.

Outsourcing – Broadcom is the 2nd largest fabless semiconductor company worldwide, and outsources its manufacturing to third party foundries. Currently, Broadcom outsources the majority of its manufacturing to Taiwan Semiconductor Manufacturing Company (TSMC), with the remaining manufacturing outsourced to other foundries primarily in Asia (Chartered Semi, SMIC, Silterra and UMC). Broadcom requires leading-edge process technologies, and could be negatively impacted by problems at its foundry partners. Broadcom also outsources its packaging, assembly and testing functions.

Acquisitions – Historically, Broadcom has made several successful acquisitions. From 2006-2010 YTD, Broadcom has completed 9 acquisitions, and has recently announced the acquisition of Beceem Communications & Percello Ltd, and attempted to acquire Emulex in 2Q09. The integration of newly acquired businesses or future acquisition offers could be costly and time consuming. In addition, goodwill and other intangible assets associated with the acquisitions may result in impairment losses if they are deemed unrecoverable.

Litigation – While Broadcom settled and dismissed all outstanding litigation with Qualcomm on 4/26/09, Broadcom is currently involved in litigation with Emulex, SiRF, Wi-LAN, and litigation relating to the company's historic stock option granting

practices. The pending proceedings are expected to require expenditure of significant funds and diversion of resources, which may impact Broadcom's profitability.

If the impact on the company from any of these factors proves to be greater/less than we anticipate, it may prevent the stock from achieving our target price or could cause our target price to be materially outperformed.

Cypress Semiconductor Corp

Valuation

Our target price for Cypress Semi is \$25.00. Our target price is based on the implied multiple derived from a growth and value screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. We believe our methodology reflects the P/E multiple investors pay for growth and the P/BV multiple investors pay for return on equity. We have found the market is paying an FY2 earnings multiple of 0.552x (Sales Growth) + 10.3 with a 56% correlation and a price-to-book multiple of 0.115x (ROE) + 1.844 with a correlation of 50%.

For Cypress, our 2012 sales growth estimate of 11.74% yields an implied P/FY2 earnings multiple of 16.82x. We multiply our 2012 non-GAAP EPS estimate of \$1.35 by 16.82x for an implied share price of \$22.76. Our 2012 ROE estimate of 22.93% yields an implied P/BV 4.48x. We multiply our 2011 BV/share estimate of \$5.90 by 4.48x for an implied share price of \$26.42.

We equally weigh our \$22.76 and \$26.42 implied targets to derive a target of \$24.59, which we round to \$25.00.

Risks

We rate Cypress shares Speculative Risk primarily due to the stock's volatility (beta of 2.3x the S&P500), the competitive landscape, and the volatility in the cyclical semiconductor industry. Risks we see to the stock achieving our target price include:

Cypress is dependent upon the networking and wireless segments; changing conditions in those end-markets will significantly impact the company.

Cypress has benefited recently from an improving SRAM price environment. However, SRAM pricing volatility in this business could impact the company's results. Better than expected SRAM pricing could cause the shares to exceed our target price.

Cypress is focusing on its programmable product portfolio including PSoC, True Touch and Westbridge as drivers of revenue growth. Should Cypress lose a design in, or be unable to gain traction with additional customers for its product, this could impact the company's results.

Cypress is dependent on the distribution channel as ~50% of Cypress' revenues is booked through distribution. While revenue from distribution is recognized on a sell through basis, Cypress revenues may be negatively impacted by lower sales from distributors.

If the impact on the company from any of these factors proves to be greater than we anticipate, the stock will likely have difficulty achieving our target price. Conversely, if the impact on the company from any of these factors proves to be less than we anticipate, the stock could move above our target price.

Integrated Device Technology Inc

Valuation

Our price target for IDTI is \$9.00. Our price target is based on the implied multiple derived from a growth and value screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. We believe our methodology reflects the P/E multiple investors pay for growth and the P/BV multiple investors pay for return on equity. We have screened the top 100 market cap stocks in the S&P 500, excluding financials and energy. We have found the market is paying an FY2 earnings multiple of $0.552 * (\text{Sales Growth}) + 10.34$ with a 56% correlation and a price-to-book multiple of $0.115 * (\text{ROE}) + 1.844$ with a correlation of 50%.

For IDTI, we apply our C2011 revenue growth estimate of 4.58%, which yields an implied P/FY2 earnings multiple of 12.87x. We multiply our C2011 pro forma EPS estimate of \$0.60 by our implied P/FY2 of 12.87x for an implied share price of \$7.76. Our C2011 ROE estimate of 14.77% yields an implied P/BV 3.54x. We multiply our C2011 BV/Share estimate of \$3.08 by our implied P/BV of 3.54x for an implied share price of \$10.91. We equally weigh our \$7.76 and \$10.91 implied targets to derive an initial target of \$9.33, which we round to \$9.00.

Risks

We rate IDTI shares Speculative risk. Our risk rating is primarily due to the stock's volatility (2-yr weekly beta of 2.2 to the S&P 500) and the volatility of the semiconductor industry, and the uncertain macro environment. We see significant revenue headwinds ahead for IDT and have lowered our estimates accordingly, and see little in terms of catalysts at this stage. We note that risks we see to the stock achieving our target price include the following:

If the communication end market (enterprise, wireline, wireless) is weaker than expected due to macro-related uncertainty and slowdowns in carrier capex spend, it could negatively impact our revenue estimates, as communications accounts for ~46% of total revenues.

If the computing end market (Display Port controllers, audio codec, PC clocks, server related PCIe & memory interface) is weaker than expected due to lower than expected sales in PCs and servers, it could negatively impact our revenue estimates, and the PC end market accounts for ~35% of total revenues. The overall market TAM for PC clocks has declined as Intel is integrating PC clocks, impacting IDT. IDT has anticipated this decline and diversified its R&D investment and capacity from PC clocks.

If the consumer end-market is weaker than expected due to macroeconomic weakness, it could negatively impact our revenue estimates, as consumer accounts for ~19% of total revenues.

IDT is in the process of transitioning to a fabless model, as it began shipping production wafers from TSMC in F2Q11. If the transition to foundry production

does not transfer as expected, or if IDT does not obtain favorable wafer pricing, the company's revenue and profitability could be impacted.

If the impact on the company from any of these factors proves to be greater than we anticipate, the stock will likely have difficulty achieving our target price.

Intel Corp

Valuation

Our target price for INTC is \$25. Our target price is derived from a growth screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. We have found the market is paying an FY2 earnings multiple of $0.552 * (\text{Sales Growth}) + 10.340$ with a 56% correlation.

For Intel, our CY12 revenue growth estimate is 3.1% yielding an implied an implied P/FY2 earnings of 12.1x. We multiply our 2011 GAAP EPS estimate of \$2.06 to our implied P/FY2 of 12.1x for an implied share price of \$24.81, which we round to \$25.

Risks

We rate Intel shares Medium Risk primarily due to the company's long-standing position in the semiconductor industry as a technology leader and innovator, its large market capitalization, and strong balance sheet. We have also included other factors such as earnings stability, credit rating, interest coverage, and free cash flow. Additional risks that could preclude the stock from reaching our target valuation are detailed below:

As the world's largest PC microprocessor manufacturer, Intel is highly dependent upon the prospects of this increasingly mature end-market. If PC unit growth in the consumer and/or corporate segments are negatively impacted, it could impact our revenue and profitability estimates. If ARM core-based tablet unit growth cannibalizes PC growth, it could impact our revenue and profitability estimates.

If AMD or Nvidia's sell through is stronger than we have anticipated, Intel market share in MPU and graphics could be impacted.

Intel recently announced acquisitions of McAfee, and Infineon's Wireless business. These businesses may lose customers as a result of the acquisition by Intel, which could impact our revenue and profitability estimates. A delay in the expected closure of the acquisitions could impact product roadmaps, and timing of expected revenue and non-GAAP earnings contribution.

Marvell Technology Group Ltd.

Valuation

Our price target for MRVL of \$24.00 is based on our methodology of using value and growth screens on the S&P 500. Our target price is based on estimated revenue growth and ROE as well as the implied multiple derived from a growth and value screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. We have found the market is paying an FY2 earnings multiple of $0.474 * (\text{Sales Growth}) + 10.318$ with a 61% correlation

and a price-to-book multiple of $0.198 * (ROE) + (0.197)$ with a correlation of 72%. We believe our methodology reflects the P/E multiple investors pay for growth and the P/BV multiple investors pay for return on equity (value). We are rolling our estimates forward to apply CY12/CY11 estimates in our valuation.

For Marvell, our FY13 (CY12) revenue growth estimate is 10.6% yielding an implied P/FY2 earnings of 15.3x. We multiply our 2012 GAAP EPS estimate of \$1.53 to our implied P/FY2 of 15.3x for an implied share price of \$23.44. Our CY11 ROE estimate of 13.8% yields an implied P/BV 2.5x. We multiply our CY11 BV/Share estimate of \$9.60 by our implied P/BV of 2.5x for an implied share price of \$24.33. We equally weigh our implied targets to derive a target of \$23.89, which we round to \$24.00.

Risks

We assign Marvell a High Risk rating primarily due to the stock's volatility (2-year weekly Beta of 1.12 versus the S&P 500 and 1.16 versus the Philadelphia Semiconductor Index (SOX)) and the volatility in the semiconductor industry. The company enjoys solid liquidity with cash per share of ~\$3.5 and is expected to generate positive operating cash flow and free cash flow for the next two years.

Risks to our price target not being achieved and our recommendation include:

Marvell derives approximately 40% of its revenue from the storage market, with the majority of revenue coming from system-on-a-chip (SoC) products designed for the hard disk drive market. Changes in demand, channel inventories, or ASPs of hard disk drives could impact Marvell's storage revenue and profitability.

Many of Marvell's products are built using one or more ARM-based embedded microprocessor that is licensed from ARM Holdings. The future generation of products from Marvell will rely on the technological advancement of ARM-based processors.

Marvell's Mobile and Wireless segment accounts for 35-38% of the company's revenue. Marvell has been gaining share at certain wireless customers due to industry consolidation. Customer market share shifts, or design changes by mobile handset/consumer electronics manufacturers could impact Marvell's mobile and wireless revenue and profitability.

Marvell's Networking segment accounts for 17-20% of the company's revenue. Design wins at customers, shifts in supply chain inventories, or changes in customer market share could impact Marvell's networking revenue and profitability.

As a fabless semiconductor company, Marvell is dependent on third party foundries to manufacture its products. Changes in Marvell's ability to secure foundry capacity could impact Marvell's revenue and profitability.

NVIDIA Corp

Valuation

Our target price for NVIDIA is \$27. Our target price is based on the implied multiple derived from a growth and value screen of the top 100 market cap

stocks in the S&P 500, excluding energy and financials. We believe our methodology reflects the P/E multiple investors pay for growth. We have found the market is paying an FY2 earnings multiple of $0.492x$ (Sales Growth) + 10.452 with a 60% correlation.

For NVIDIA's Consumer Products (Tegra) business, our C2011-2013 (F12-F14) revenue CAGR of 45% yields an implied P/E multiple of 32.6x. For the residual "core" business, our C2011-2013 revenue CAGR of 4% yields an implied P/E multiple of 12.3x. We weight the implied P/E multiples for the Consumer Products (Tegra) and Core business by the proportion of operating earnings, to derive weight-adjusted multiples for the Tegra and Core business of 9.5x and 8.7x respectively, resulting in a blended P/E multiple of 18.2x. We apply our CY12 (F13) GAAP EPS multiple of \$1.50, to derive a price target of \$27.30. We round this to our final price target of \$27.

Risks

We rate Nvidia Corp Speculative risk primarily due to the stock's volatility and the volatility in the semiconductor industry. In addition, we incorporate other factors into our risk rating such as need for external financing and market capitalization:

With ~85% of revenues derived from the PC and workstation market, high end-market concentration represents a risk to the stock as lower than expected sales or growth rate of PCs and workstations, could impact earnings.

Nvidia relies on external foundry suppliers for its front-end supplies and on independent contractors for backend activities. Any change in the company's ability to procure supply from these partners can impact Nvidia's results.

Nvidia's royalty and license revenues are dependent on pricing of PS3, as well as the long-term success of PS3 which could affect NVDA's license/royalty revenue stream and gross margins.

Nvidia's revenues are impacted by the company's execution on achieving design wins for hardware components designed by PC OEMs, ODMs, motherboard manufacturers, and handset/tablet OEMs. Loss of design wins to competitors could impact market share, revenues, and profitability.

The company's success is dependent on the widespread adoption of its processors for 3D graphics in consumer applications which can impact revenues.

If the impact on the company from any of these factors proves to be greater/less than we anticipate, the stock may have difficulty achieving our target price or could exceed it.

Qualcomm Inc

Valuation

Our target price for QCOM is \$60. We employ a sum-of-the-parts approach to value Qualcomm. For the highly profitable QTL business, we employ a DCF to derive its contribution to overall Qualcomm. We conservatively assume a -2% terminal growth rate after 10 years, and derive a value of \$40.11. For QCT, we employ our growth and value method that we use for the rest of our chip

coverage and arrive at a value of \$12.82. This is based on a PE multiple comparable to what the S&P500 pays for like revenue growth. Adding \$6.88 in net cash, we derive a price target of \$59.82, which we round to \$60.

Risks

We rate QCOM Medium Risk. QCOM shares have a low beta relative to the S&P 500, and the company enjoys a solid liquidity position and defendable market position. Risks to the stock achieving our target price include:

The rates of 3G/4G and smartphone adoption and replacement could be lower than we expect due to weakness in the macroeconomic environment, leading to lower handset and/or chipset volumes than we currently expect.

Handset ASPs could be lower than we anticipate due to a higher mix of low-end handsets, and data dongles.

Qualcomm is heavily reliant on royalties from CDMA-based devices for its profitability, as its QTL business accounts for ~60% of sales. Changes in royalty agreements or revisions in device ASP caps in agreements could impact Qualcomm's revenue and profitability.

A deterioration of the company's major customer's market share within the handset market could present a risk to Qualcomm's chipset revenue. Consolidation within the baseband market could impact Qualcomm's chipset revenue and profitability.

Spansion Inc.

Valuation

For Spansion, our C2012 sales growth estimate of 3.4% yields an implied P/FY2 earnings multiple of 12.2x. We multiply our C2012 GAAP EPS estimate of \$1.92 by 12.2x for an implied share price of \$23.42. We use GAAP EPS in our methodology, as we expect investors to pay for FY2 GAAP earnings, excluding amortization of intangibles. Our C2011 ROE estimate of 19.1% yields an implied P/BV 4.04x. We multiply our C2011 tangible BV/share estimate of \$5.77 by 4.04x for an implied share price of \$23.30. We use our tangible BV/share estimate in our valuation noting the relatively large difference between book value and tangible book value (C11E \$10.9 vs. \$5.8 respectively) due to Spansion's goodwill and acquisition related intangible assets. Similar to using GAAP earnings, we expect investors to use tangible book value in the value screen.

We equally weigh our \$23.42 and \$23.30 implied targets to derive an initial target of \$23.36, which we round to \$23.50.

Risks

We rate Spansion shares Speculative Risk primarily as the company emerged from Chapter 11 in May 2010 and has pending disputed claims, the competitive landscape, and volatility in commodity memory pricing which may impact NOR flash pricing. Risks we see to the stock achieving our target price include the following:

Spansion is a supplier of NOR Flash memory and is subject to the seasonal and cyclical ups and downs of the PC, consumer electronics, communications, industrial/other markets and the semiconductor industry, which may impact revenues and profitability.

Embedded NOR Flash pricing has experienced low pricing volatility vs. wireless NOR, as the industry has consolidated, and as embedded NOR applications (excluding consumer electronics) tend to have longer life-cycles and relatively stable price declines. Steeper-than-expected price declines in embedded NOR, or changes in NOR Flash supply/demand balance could impact Spansion's profitability.

Micron Technology which acquired Numonyx in May 2010 and Samsung Electronics, are NOR Flash competitors to Spansion. As both Samsung and Micron have a broader product portfolio (DRAM, NAND, NOR), revenue and manufacturing scale, Spansion's profitability could be impacted by cost/pricing competition. Spansion could also face increasing competition from smaller players such as Macronix and Winbond, who may price competitively in order to gain market share.

Memory technologies such as NAND Flash, mobile DRAM, Phase Change Memory (PRAM), MRAM, 3D Memory, and other memory technologies under development, could impact NOR Flash market growth and TAM due to improving read/write characteristics, densities, manufacturing cost, and pricing. Spansion's revenue and profitability may be impacted by declining NOR flash market growth.

Spansion has distributed ~31.8M shares to its approved creditor claims pool, and has approximately ~14.6M shares pending settlement of disputed claims. In addition, Spansion has already distributed 13M of rights offerings shares. As creditors are able to sell shares at any time, the sale of a large number of shares by applicable creditors or stockholders could negatively impact Spansion's stock price.

Spansion is in the process of litigation alleging patent infringement by Samsung Electronics in the ITC and U.S District Courts. Spansion may incur increased legal expenses from its litigation with Samsung, Tessera, Fast Memory, LSI/Agere, Chapter 11 cases, and other pending litigation which may impact profitability.

As Spansion has reduced the number of owned front-end manufacturing facilities from 3 in 2008 to one (Fab 25 in Austin, TX), the company is increasingly dependent on foundry partners for manufacturing its NOR flash wafers. An impact to capacity at Spansion's foundry partners (Fujitsu, SMIC, Texas Instruments, Elpida) could impact the company's revenue and profitability.

If the impact on the company from any of these factors proves to be greater than we anticipate, the stock will likely have difficulty achieving our target price. Likewise, if any of these factors proves to have less of an effect than we anticipate, the stock could materially outperform our target.

Texas Instruments Inc

Valuation

Our target price for TXN is \$39. Our price target is based on a sum-of-the-parts (SOP) valuation methodology. We base our valuation on the value of the cash flows from TI's baseband business through 2012 and the value of the TI's businesses ex-baseband, based on our S&P valuation methodology. We believe this methodology best separates the value of TI's baseband businesses which are effectively being monetized from the company's analog, embedded processing, OMAP and connectivity solutions, and other businesses where the company continues to invest for growth.

We value TI's wireless business at \$601M or \$0.51 based on the net present value of cash through 2012. Our net present value is based on baseband revenue of \$1.34B in 2011, and \$550M in 2012, gross margin at ~40%, zero R&D as TI is no longer investing in baseband R&D, SG&A at 5% of sales, (EBIT margin of ~35%), as well as a WACC of 9.2%. We value TI's business ex-baseband using our 2011 EPS and revenue growth estimates. We run the 10% growth rate for TI's 2011 revenues (ex-baseband) through our S&P model and find it yields an implied P/E multiple of 15.9x. We multiply that by our 2011 EPS estimate (ex-baseband contribution of \$0.27) of \$2.45 and get to \$38.91. We add \$0.51 for the net present value of the wireless business for a final target of \$39.41, which we round to \$39.

Risks

We rate TI shares Medium Risk, primarily due to the company's solid execution and greater earnings stability. We rate TI's management as strong given the record of solid execution against established operational and financial goals. Going forward, risks to the stock achieving our target price include the following:

With its focus on revenue growth, TI has experienced market share gains particularly in the high-performance analog and embedded processing (microcontroller and DSPs) markets. Given a relatively large number of analog competitors, market share shifts achieved through technology, execution, or pricing could impact TI's revenue growth.

TI has taken advantage of 2 bankruptcies in semiconductors to add capacity cheaply. TI will be acquiring 2 fabs in Japan, and is currently building 300mm capacity in 2 phases from its acquired tools in its RFAB facility in Texas. If the capacity expansion costs are higher than expected, or if future demand declines impact factory utilization, profitability could be negatively impacted.

Our estimates assume that gross margin will continue to improve as revenue increases and product mix shifts favorably to higher margin Analog and Embedded Processing. Failure to achieve margin leverage will negatively impact our estimates.

If the impact on the company from any of these factors proves to be greater/less than we anticipate, it may prevent the stock from achieving our target price or could cause our target price to be materially outperformed.

Xilinx Inc

Valuation

Our price target for Xilinx is \$35. Our valuation methodology applies the implied multiples derived from a growth and value screen of the top 100 market cap stocks in the S&P 500, excluding energy and financials. In our “value” screen of the top 100 market cap stocks in the S&P 500, excluding financials and energy, and our regression of P/BV versus ROE, we have found the market is paying a P/BV of $0.198 \times (\text{ROE}) - 0.197$, with a correlation of 0.72. In our “growth” screen and our regression of P/FY2 E versus revenue growth, we have found the market is paying a P/FY2 E of $0.474 \times (\text{Revenue Growth}) + 10.318$, with a correlation of 0.61.

For Xilinx, we have applied our C2012 ROE of 15.33% to our “value” equation, yielding an implied P/BV multiple of 2.84x. We multiply our C2011 book value per share (BVPS) of \$12.26 by our implied P/BV of 2.84 for an implied share price of \$34.79. We have also applied our C2012 revenue growth estimate of 6.96% to our “growth” equation, yielding an implied P/FY2 earnings of 13.61x. We multiply our C12 GAAP EPS estimate of \$2.55 by our implied P/FY2 of 13.61x for an implied share price of \$34.69.

We equally weigh our value and growth implied price targets to derive a \$34.74 target price, which we round to \$35.

Risks

We rate Xilinx High Risk primarily due to the stock’s volatility (beta of 1.7x the S&P 500). Risks we see to the stock achieving our target price include the following:

The company has high turns business dependency (sales booked and shipped in the same quarter), and therefore every quarter is at risk of an earnings miss if orders do not fill in as expected.

Due to macroeconomic environment remains uncertainty, Xilinx has limited visibility in end demand similar to other semiconductor manufacturers. If end market growth is lower than expectations, Xilinx's revenue and profitability could be impacted.

Xilinx has enjoyed a leading market share position in the high-end PLD space with its Virtex products, including its Virtex 5 product. If Altera gains meaningful market share with its 40nm products, Xilinx's revenues and earnings could be impacted.

If the impact on the company from any of these factors proves to be greater than we anticipate, the stock will likely have difficulty achieving our target price. Conversely, the stock could exceed our target price if Xilinx is able to gain PLD market share or if end market growth is stronger than anticipated.

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

Advanced Micro Devices (AMD)

Ratings and Target Price History

Fundamental Research

Analyst: Glen Yeung

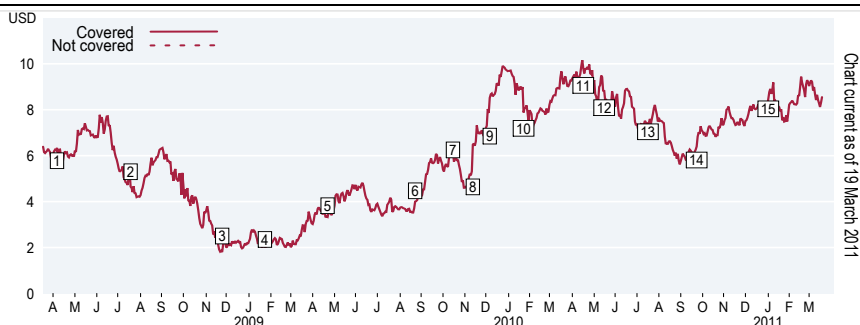


Chart current as of 19 March 2011

	Date	Rating	Target Price	Closing Price
1	7-Apr-08	2S	*7.50	6.34
2	18-Jul-08	2S	*6.00	4.65
3	25-Nov-08	2S	*2.25	1.80
4	23-Jan-09	2S	*2.15	2.07
5	22-Apr-09	2S	*4.25	3.33

* Indicates change

	Date	Rating	Target Price	Closing Price
6	23-Aug-09	*1S	*5.50	3.70
7	15-Oct-09	1S	*8.50	6.19
8	12-Nov-09	1S	*10.00	6.48
9	6-Dec-09	1S	*11.00	7.86
10	22-Jan-10	1S	*12.00	7.88

	Date	Rating	Target Price	Closing Price
11	16-Apr-10	1S	*14.00	9.81
12	17-May-10	1S	*12.00	8.85
13	16-Jul-10	1S	*11.00	7.37
14	23-Sep-10	1S	*9.00	6.40
15	2-Jan-11	1S	*12.50	8.18

Rating/target price changes above reflect Eastern Standard Time

Advanced Micro Devices (AMD)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung

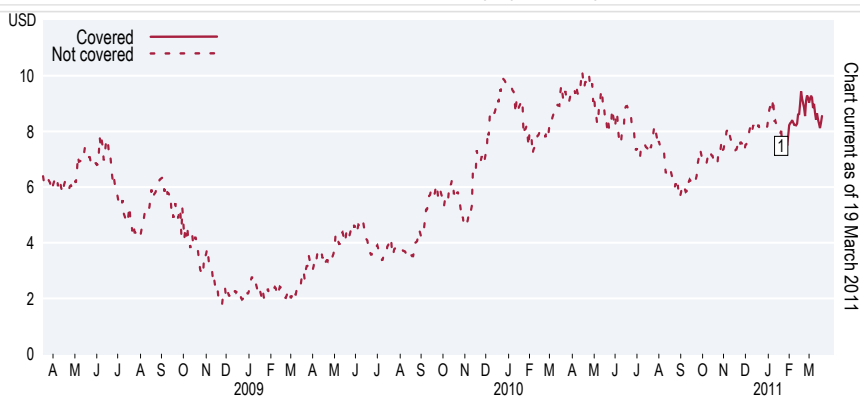


Chart current as of 19 March 2011

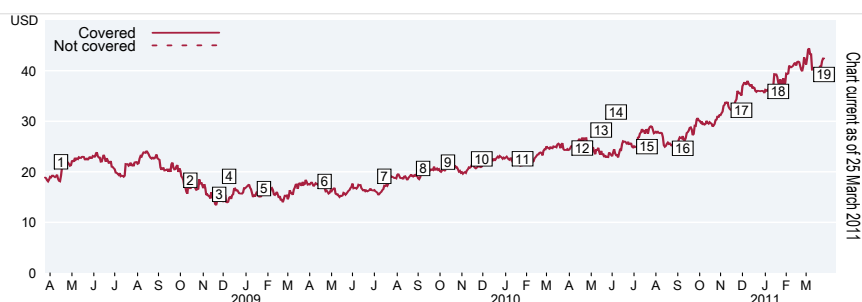
	Date	Rating	Target Price	Closing Price
1	20-Jan-11	*ADD MP	-	8.02

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Altera Corp (ALTR) Ratings and Target Price History Fundamental Research

Analyst: Glen Yeung



	Date	Rating	Target Price	Closing Price
1	16-Apr-08	1H	*25.00	19.20
2	15-Oct-08	1H	*23.00	16.63
3	25-Nov-08	1H	*19.00	14.21
4	9-Dec-08	1H	*18.00	14.83
5	27-Jan-09	1H	*20.00	16.65
6	22-Apr-09	1H	*21.00	16.74
7	15-Jul-09	1H	*22.00	17.26

* Indicates change

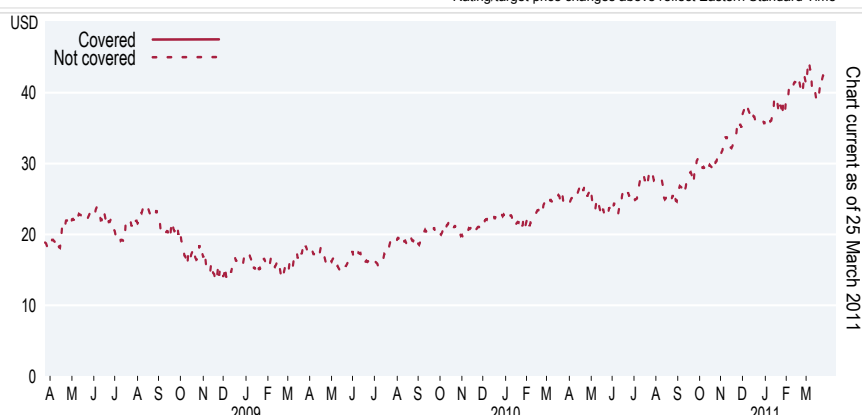
	Date	Rating	Target Price	Closing Price
8	8-Sep-09	1H	*25.00	20.34
9	13-Oct-09	1H	*26.00	21.43
10	30-Nov-09	1H	*27.00	21.03
11	26-Jan-10	1H	*30.00	21.19
12	20-Apr-10	1H	*34.00	26.75
13	17-May-10	1H	*31.00	24.13
14	7-Jun-10	1H	*30.00	23.27

	Date	Rating	Target Price	Closing Price
15	20-Jul-10	1H	*34.00	28.31
16	8-Sep-10	1H	*36.00	27.06
17	30-Nov-10	1H	*43.00	35.09
18	20-Jan-11	*2H	43.00	37.66
19	25-Mar-11	*1H	*51.00	42.42

Rating/target price changes above reflect Eastern Standard Time

Altera Corp (ALTR) Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: Glen Yeung



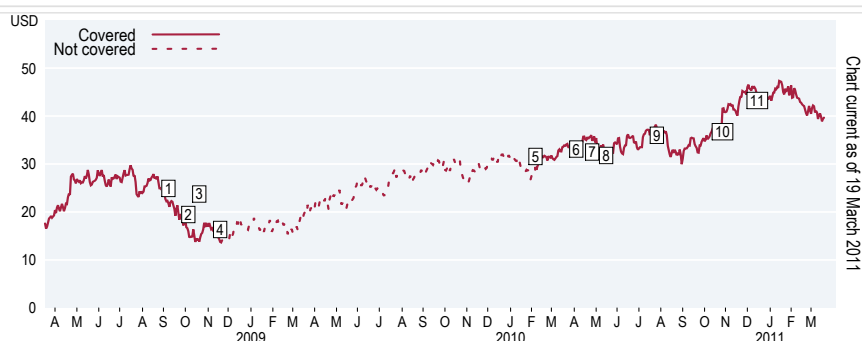
* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Broadcom Corporation (BRCM) Ratings and Target Price History Fundamental Research

Analyst: Glen Yeung

Covered since February 6 2010



	Date	Rating	Target Price	Closing Price
1	8-Sep-08	1H	*30.00	21.80
2	6-Oct-08	1H	*27.00	15.99
3	21-Oct-08	1H	*25.00	13.80
4	19-Nov-08	Coverage terminated		

* Indicates change

	Date	Rating	Target Price	Closing Price
5	5-Feb-10	1H	*35.00	29.39
6	5-Apr-10	1H	*40.00	34.63
7	27-Apr-10	1H	*42.00	34.82
8	17-May-10	1H	*40.00	32.64

	Date	Rating	Target Price	Closing Price
9	27-Jul-10	1H	*45.00	37.53
10	27-Oct-10	1H	*48.00	41.56
11	15-Dec-10	1H	*54.00	44.29

Rating/target price changes above reflect Eastern Standard Time

Broadcom Corporation (BRCM)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung

Covered since February 6 2010

* Indicates change



Spancion Inc. (CODE)

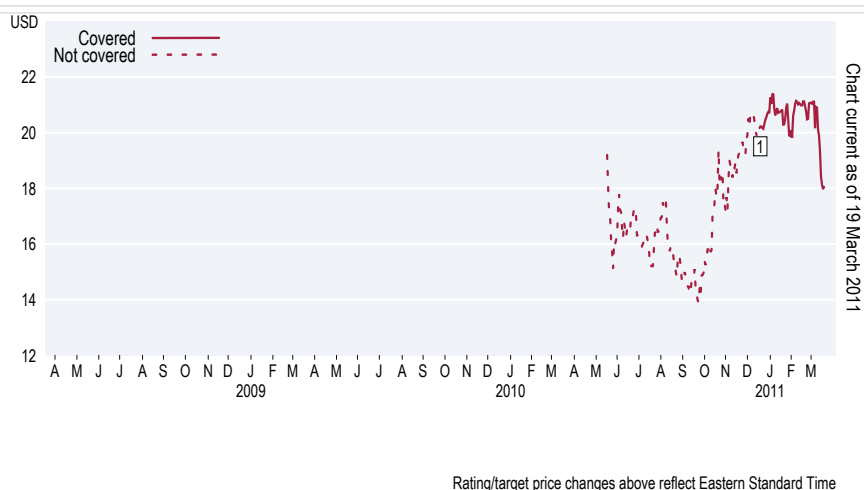
Ratings and Target Price History

Fundamental Research

Analyst: Glen Yeung

Covered since December 20 2010

* Indicates change



	Date	Rating	Target Price	Closing Price
1	20-Dec-10	*2S	*23.50	20.22

Spancion Inc. (CODE)

Ratings and Target Price History

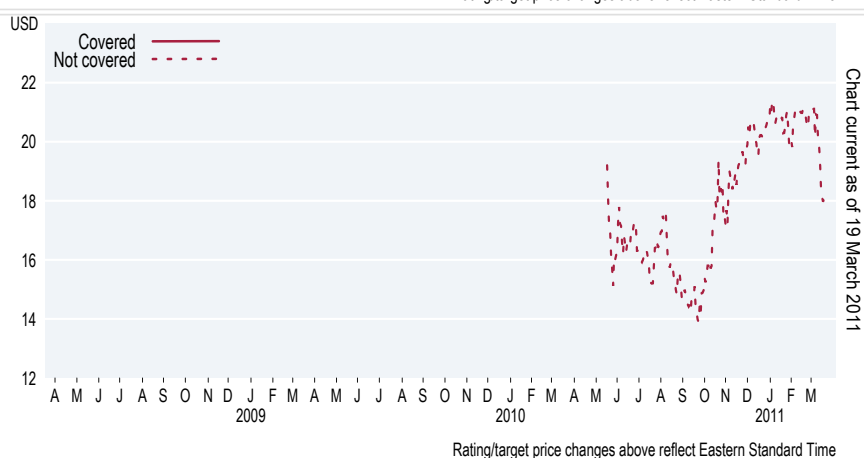
Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung

Covered since December 20 2010

* Indicates change



Cypress Semiconductor Corp (CY)

Ratings and Target Price History Fundamental Research

Analyst: Glen Yeung



	Date	Rating	Target Price	Closing Price
1	17-Apr-08	2S	*5.09	4.36
2	18-Jul-08	2S	*5.41	4.21
3	26-Sep-08	2S	*4.93	4.04
4	17-Oct-08	2S	*5.50	4.29
5	16-Nov-08	2S	*4.50	3.56

* Indicates change

	Date	Rating	Target Price	Closing Price
6	22-Jan-09	2S	*5.50	4.80
7	25-Mar-09	2S	*7.00	6.45
8	16-Apr-09	2S	*8.50	7.40
9	16-Jul-09	2S	*12.00	10.31
10	28-Jan-10	2S	*13.50	10.75

	Date	Rating	Target Price	Closing Price
11	22-Apr-10	2S	*16.00	13.19
12	17-May-10	2S	*15.00	11.71
13	22-Jul-10	2S	*14.50	10.95
14	28-Jan-11	2S	*25.00	21.15

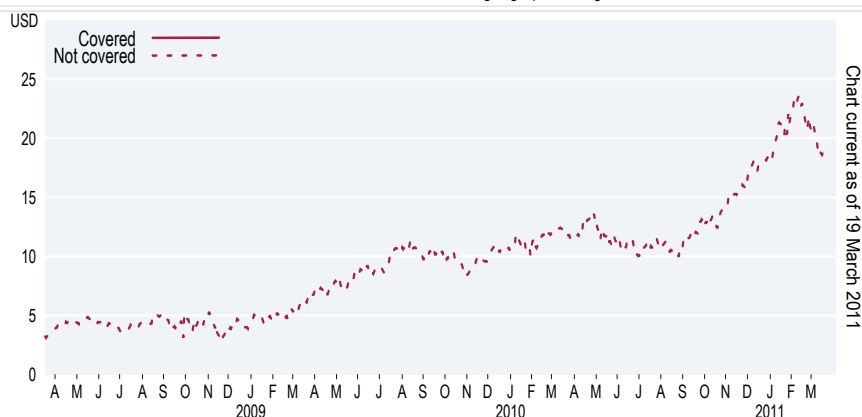
Rating/target price changes above reflect Eastern Standard Time

Cypress Semiconductor Corp (CY)

Ratings and Target Price History

Best Ideas Research Relative Call (3 Month)

Analyst: Glen Yeung



* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Integrated Device Technology Inc (IDTI)

Ratings and Target Price History Fundamental Research

Analyst: Glen Yeung



	Date	Rating	Target Price	Closing Price
1	1-May-08	2H	*13.00	10.88
2	6-Oct-08	2H	*9.50	7.15
3	23-Oct-08	*2S	*7.00	5.29
4	3-Nov-08	*1S	*9.00	6.50

* Indicates change

	Date	Rating	Target Price	Closing Price
5	25-Nov-08	1S	*7.00	4.81
6	9-Dec-08	1S	*6.75	5.15
7	1-Apr-09	1S	*6.50	4.63
8	30-Apr-09	1S	*7.50	5.43

	Date	Rating	Target Price	Closing Price
9	28-Jul-09	1S	*9.00	6.55
10	17-May-10	1S	*8.00	5.90
11	26-Oct-10	1S	*8.50	5.79
12	31-Jan-11	1S	*9.00	6.38

Rating/target price changes above reflect Eastern Standard Time

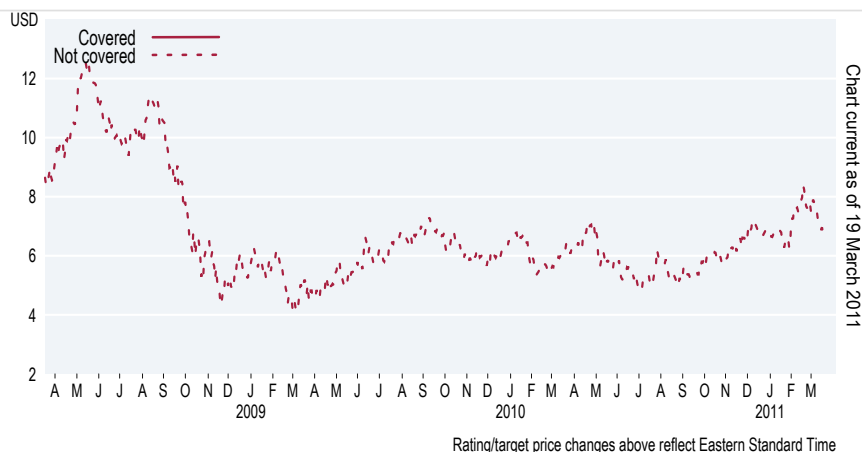
Integrated Device Technology Inc (IDTI)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung



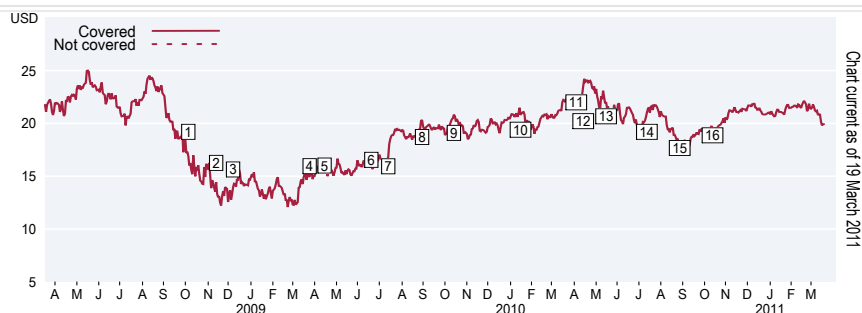
* Indicates change

Intel Corp (INTC)

Ratings and Target Price History

Fundamental Research

Analyst: Glen Yeung



	Date	Rating	Target Price	Closing Price
1	6-Oct-08	1M	*20.00	16.93
2	13-Nov-08	1M	*17.00	14.43
3	7-Dec-08	1M	*16.00	13.29
4	25-Mar-09	1M	*18.00	14.94
5	15-Apr-09	1M	*20.00	15.62
6	19-Jun-09	1M	*21.00	16.01

* Indicates change

	Date	Rating	Target Price	Closing Price
7	14-Jul-09	1M	*23.00	16.83
8	31-Aug-09	1M	*25.00	20.32
9	14-Oct-09	1M	*26.00	20.83
10	15-Jan-10	1M	*29.00	20.80
11	5-Apr-10	1M	*30.00	22.59
12	14-Apr-10	1M	*31.00	23.52

	Date	Rating	Target Price	Closing Price
13	17-May-10	1M	*30.00	22.02
14	13-Jul-10	1M	*32.00	21.01
15	27-Aug-10	1M	*29.00	18.37
16	13-Oct-10	1M	*25.00	19.24

Rating/target price changes above reflect Eastern Standard Time

Intel Corp (INTC)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung



* Indicates change

Marvell Technology Group Ltd. (MRVL)

Ratings and Target Price History Fundamental Research

Analyst: Glen Yeung
Covered since October 18 2009

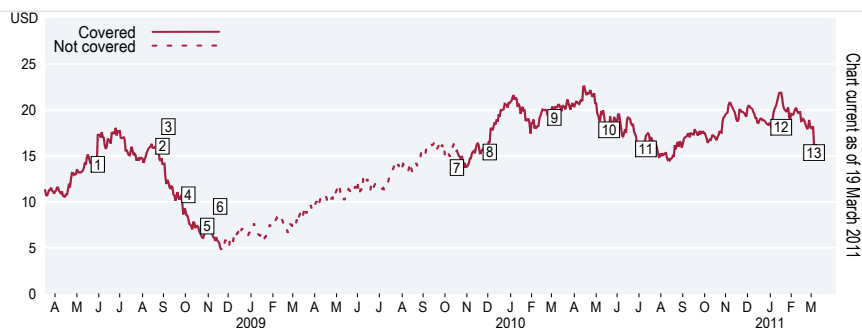


Chart current as of 19 March 2011

	Date	Rating	Target Price	Closing Price
1	30-May-08	*1H	*22.00	17.36
2	29-Aug-08	1H	*20.00	14.11
3	8-Sep-08	1H	*17.00	12.11
4	6-Oct-08	1H	*15.00	8.11
5	31-Oct-08	1H	*13.00	6.96

* Indicates change

	Date	Rating	Target Price	Closing Price
6	19-Nov-08	Coverage terminated		
7	18-Oct-09	1H	*21.00	15.50
8	3-Dec-09	1H	*24.00	16.53
9	4-Mar-10	1H	*25.00	20.13
10	20-May-10	1H	*24.00	17.84

	Date	Rating	Target Price	Closing Price
11	12-Jul-10	1H	*23.00	17.20
12	18-Jan-11	1H	*29.00	21.89
13	4-Mar-11	1H	*24.00	16.13

Rating/target price changes above reflect Eastern Standard Time

Marvell Technology Group Ltd. (MRVL)

Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: Glen Yeung
Covered since October 18 2009



Chart current as of 19 March 2011

	Date	Rating	Target Price	Closing Price
1	20-Jan-11	*ADD MP	-	20.43

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

NVIDIA Corp (NVDA)

Ratings and Target Price History Fundamental Research

Analyst: Glen Yeung



Chart current as of 19 March 2011

	Date	Rating	Target Price	Closing Price
1	20-Mar-08	2S	*23.00	18.52
2	7-May-08	2S	*25.00	22.01
3	3-Jul-08	2S	*19.00	12.49
4	12-Aug-08	2S	*15.00	11.07
5	10-Sep-08	2S	*12.00	10.82
6	3-Nov-08	*1S	*13.00	8.44
7	25-Nov-08	1S	*11.00	6.99

* Indicates change

	Date	Rating	Target Price	Closing Price
8	7-Dec-08	1S	*10.50	7.36
9	8-May-09	1S	*14.50	9.25
10	6-Aug-09	1S	*19.00	13.12
11	7-Dec-09	1S	*21.00	16.09
12	17-Feb-10	1S	*23.00	17.84
13	29-Mar-10	1S	*24.00	17.56
14	13-May-10	1S	*20.00	14.65

	Date	Rating	Target Price	Closing Price
15	28-Jul-10	1S	*14.00	10.13
16	13-Aug-10	1S	*12.50	9.39
17	12-Nov-10	1S	*17.00	13.26
18	13-Dec-10	1S	*20.00	14.57
19	17-Feb-11	*2S	*27.00	25.68

Rating/target price changes above reflect Eastern Standard Time

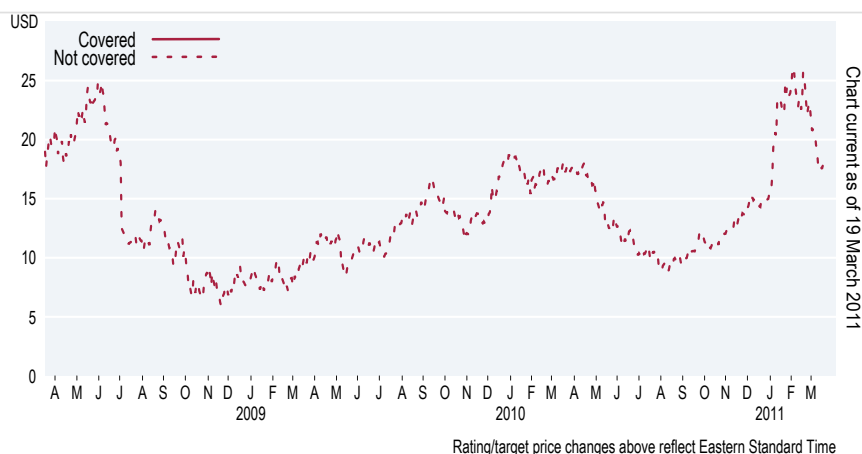
NVIDIA Corp (NVDA)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung



* Indicates change

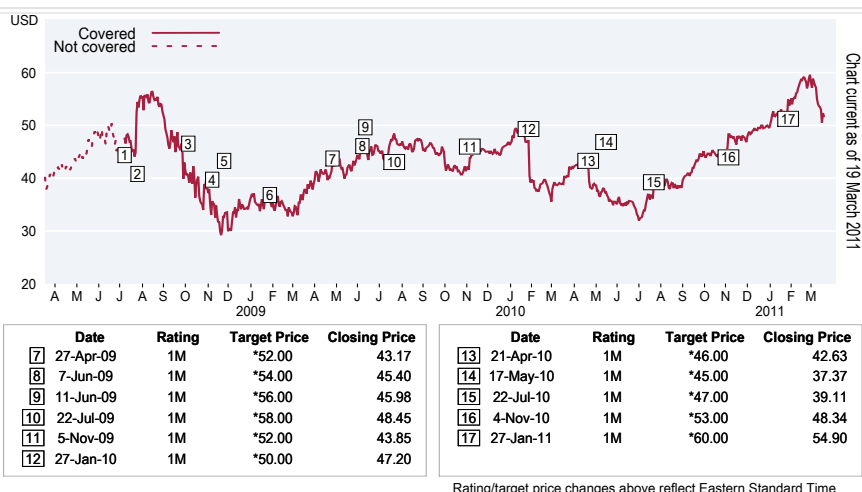
Qualcomm Inc (QCOM)

Ratings and Target Price History

Fundamental Research

Analyst: Glen Yeung

Covered since July 10 2008



* Indicates change

	Date	Rating	Target Price	Closing Price
1	8-Jul-08	1H	*61.00	47.55
2	25-Jul-08	*1M	*70.00	54.45
3	6-Oct-08	1M	*60.00	40.23
4	7-Nov-08	1M	*52.00	35.66
5	25-Nov-08	1M	*48.00	32.69
6	28-Jan-09	1M	*44.00	36.82

	Date	Rating	Target Price	Closing Price
7	27-Apr-09	1M	*52.00	43.17
8	7-Jun-09	1M	*54.00	45.40
9	11-Jun-09	1M	*56.00	45.98
10	22-Jul-09	1M	*58.00	48.45
11	5-Nov-09	1M	*52.00	43.85
12	27-Jan-10	1M	*50.00	47.20

	Date	Rating	Target Price	Closing Price
13	21-Apr-10	1M	*46.00	42.63
14	17-May-10	1M	*45.00	37.37
15	22-Jul-10	1M	*47.00	39.11
16	4-Nov-10	1M	*53.00	48.34
17	27-Jan-11	1M	*60.00	54.90

Rating/target price changes above reflect Eastern Standard Time

Qualcomm Inc (QCOM)

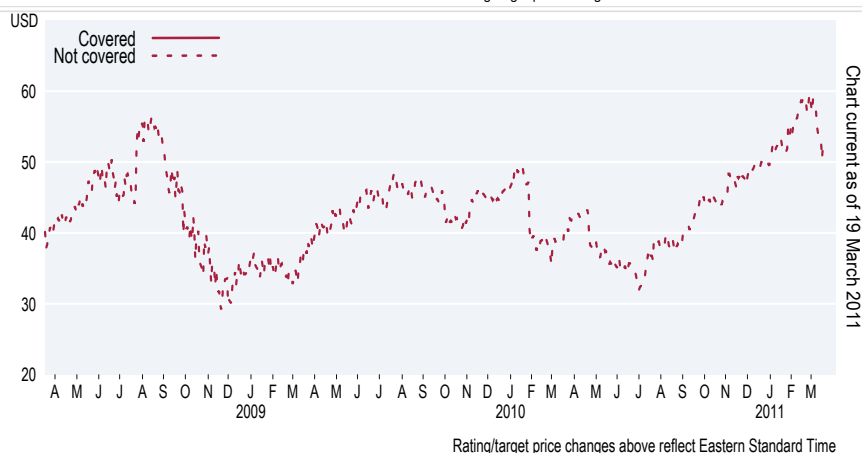
Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung

Covered since July 10 2008



* Indicates change

Texas Instruments Inc (TXN) **Ratings and Target Price History** **Fundamental Research**

Analyst: Glen Yeung

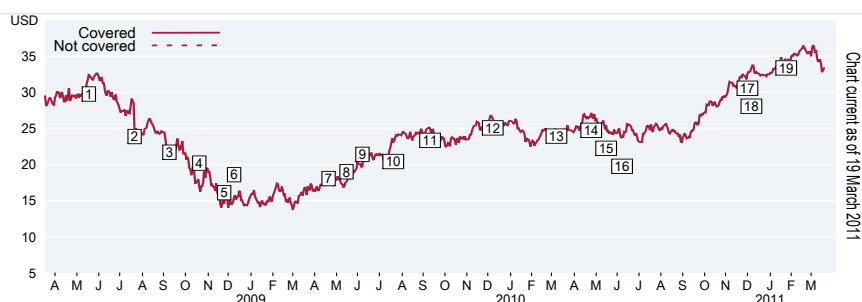


Chart current as of 19 March 2011

	Date	Rating	Target Price	Closing Price
1	18-May-08	*1M	*\$39.00	31.79
2	22-Jul-08	1M	*\$36.00	24.35
3	9-Sep-08	1M	*\$28.00	21.71
4	21-Oct-08	1M	*\$20.00	16.85
5	25-Nov-08	1M	*\$18.00	14.58
6	9-Dec-08	1M	*\$16.00	15.55
7	21-Apr-09	1M	*\$20.00	17.11

* Indicates change

	Date	Rating	Target Price	Closing Price
8	15-May-09	1M	*\$21.00	17.63
9	8-Jun-09	1M	*\$24.00	19.77
10	21-Jul-09	1M	*\$28.00	23.07
11	10-Sep-09	1M	*\$31.00	25.00
12	8-Dec-09	1M	*\$32.00	26.33
13	8-Mar-10	1M	*\$33.00	24.69
14	26-Apr-10	1M	*\$34.00	27.16

	Date	Rating	Target Price	Closing Price
15	17-May-10	1M	*\$32.00	25.42
16	8-Jun-10	1M	*\$31.00	23.88
17	1-Dec-10	1M	*\$35.00	32.58
18	7-Dec-10	1M	*\$38.00	33.41
19	25-Jan-11	1M	*\$39.00	33.98

Rating/target price changes above reflect Eastern Standard Time

Texas Instruments Inc (TXN) **Ratings and Target Price History** **Best Ideas Research** **Relative Call (3 Month)**

Analyst: Glen Yeung

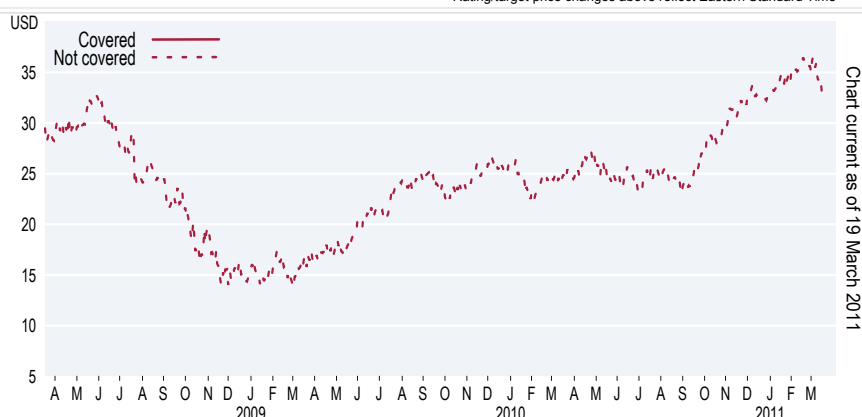


Chart current as of 19 March 2011

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Xilinx Inc (XLNX) **Ratings and Target Price History** **Fundamental Research**

Analyst: Glen Yeung

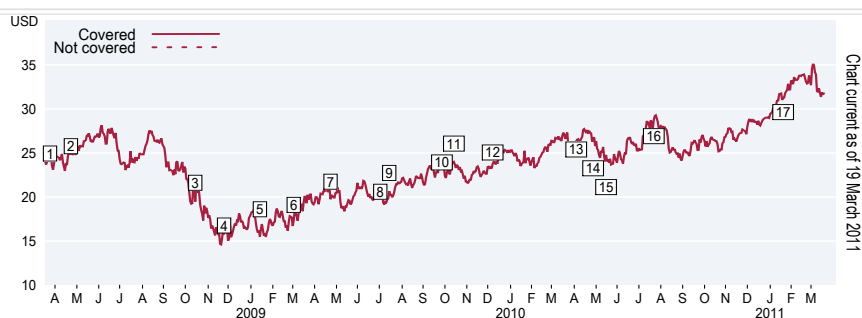


Chart current as of 19 March 2011

	Date	Rating	Target Price	Closing Price
1	20-Mar-08	2H	*\$28.00	23.98
2	23-Apr-08	2H	*\$27.00	25.77
3	15-Oct-08	2H	*\$23.00	19.49
4	25-Nov-08	2H	*\$19.00	15.77
5	14-Jan-09	2H	*\$17.00	15.50
6	3-Mar-09	2H	*\$20.00	17.37

* Indicates change

	Date	Rating	Target Price	Closing Price
7	23-Apr-09	2H	*\$23.00	19.75
8	2-Jul-09	2H	*\$22.00	20.60
9	15-Jul-09	2H	*\$23.00	20.66
10	28-Sep-09	2H	*\$25.00	23.56
11	14-Oct-09	2H	*\$26.00	24.00
12	8-Dec-09	2H	*\$28.00	23.77

	Date	Rating	Target Price	Closing Price
13	5-Apr-10	2H	*\$30.00	26.34
14	28-Apr-10	2H	*\$31.00	26.63
15	17-May-10	2H	*\$28.00	24.78
16	22-Jul-10	2H	*\$30.00	28.78
17	20-Jan-11	2H	*\$35.00	31.26

Rating/target price changes above reflect Eastern Standard Time

Xilinx Inc (XLNX)

Ratings and Target Price History

Best Ideas Research

Relative Call (3 Month)

Analyst: Glen Yeung



Date	Rating	Target Price	Closing Price
1 20-Jan-11	*ADD LP	-	31.26

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

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