

Semiconductor Capital Equipment

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Bottom-Up Capex Summary

(\$B)	2000	2001	2002	2003	2004	2005	2006	2007E	2008E	2009E
Top-Down Estimates	\$60.5	\$39.3	\$27.7	\$29.4	\$48.1	\$47.4	\$56.3	\$59.0	\$53.1	\$47.8
% Chg	90%	-35%	-29%	6%	64%	-1%	19%	5%	-10%	-10%
Bottom-Up Capex Estimates	\$63.7	\$39.3	\$27.7	\$29.4	\$48.1	\$47.4	\$56.3	\$59.0	\$51.6	\$49.8
% Chg	100.3%	-38.3%	-29.4%	5.9%	63.8%	-1.5%	18.7%	4.9%	-12.6%	-3.5%
WFE Spending	\$32.2	\$21.0	\$14.2	\$14.7	\$25.4	\$22.9	\$27.3	\$30.0	\$26.2	\$24.5
% Chg, WFE y/y	91.6%	-34.8%	-32.6%	4.2%	72.5%	-10.1%	19.2%	9.9%	-12.6%	-6.3%
WFE / Capex	50.6%	53.4%	51.0%	50.2%	52.9%	48.2%	48.4%	50.7%	49.2%	51.3%
WW Semi Sales	\$204.4	\$139.0	\$140.7	\$166.4	\$213.0	\$227.5	\$247.7	\$254.3	\$274.6	\$296.6
% Chg, semi y/y	36.8%	-32.0%	1.3%	18.3%	28.0%	6.8%	8.9%	2.6%	8.0%	8.0%
Capex / Revenue	29.6%	28.3%	19.7%	17.6%	22.6%	20.8%	22.7%	23.2%	18.8%	16.1%
WFE/Revenue	15.8%	15.1%	10.1%	8.9%	11.9%	10.0%	11.0%	11.8%	9.5%	8.3%

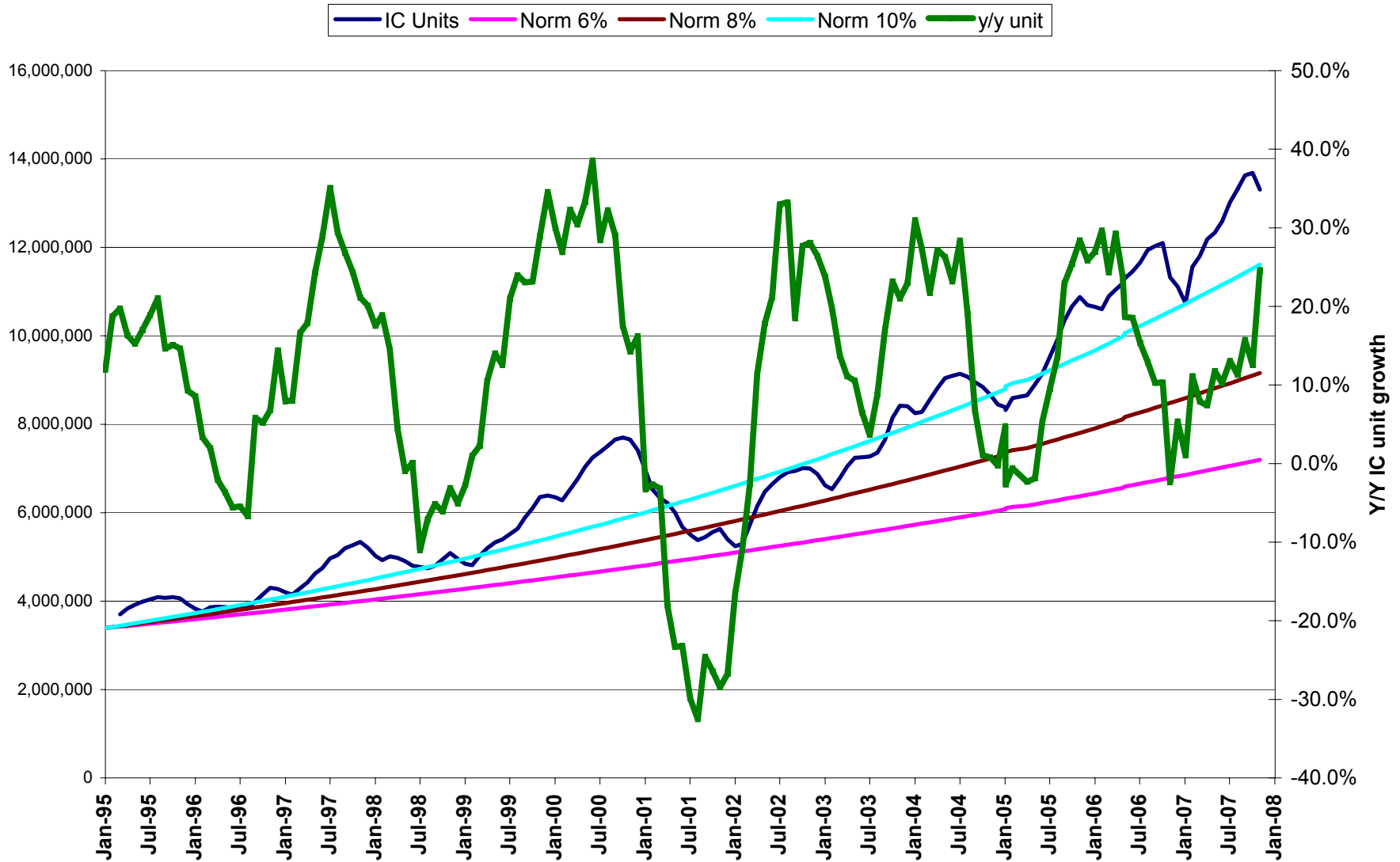
(\$bb)	2000	2001	2002	2003	2004	2005	2006	2007E	2008E	2009E
Memory Revenues (\$, bb)	\$49.2	\$24.9	\$27.0	\$32.5	\$47.1	\$48.9	\$59.4	\$65.4	\$71.9	\$79.1
Memory Capex	\$13.6	\$9.3	\$6.5	\$9.0	\$15.4	\$19.8	\$26.4	\$34.1	\$26.9	\$24.4
% Chg y/y	79.0%	-31.5%	-30.1%	37.6%	72.1%	28.4%	33.4%	29.1%	-21.0%	-9.5%
Memory Capex/Rev	27.6%	37.5%	24.1%	27.6%	32.7%	40.5%	44.4%	52.1%	37.4%	30.8%
Logic Revenues (\$,bb)	\$155.2	\$114.1	\$113.7	\$133.9	\$165.9	\$178.6	\$188.3	\$188.9	\$202.7	\$217.4
Logic Capex (inc Fdry)	\$46.7	\$28.5	\$19.8	\$18.6	\$29.9	\$25.8	\$29.9	\$25.0	\$24.7	\$25.4
Logic Capex/Rev	30.1%	25.0%	17.4%	13.9%	18.0%	14.4%	15.9%	13.2%	12.2%	11.7%
% Chg y/y	94.4%	-38.9%	-30.5%	-6.3%	60.9%	-13.6%	15.9%	-16.5%	-1.2%	3.1%
% of capex Memory	22.6%	24.6%	24.7%	32.5%	34.0%	43.4%	46.9%	57.7%	52.2%	48.9%

We expect capex to decline ~12.6% in 2008, and ~3.5% in 2009

Source: Credit Suisse

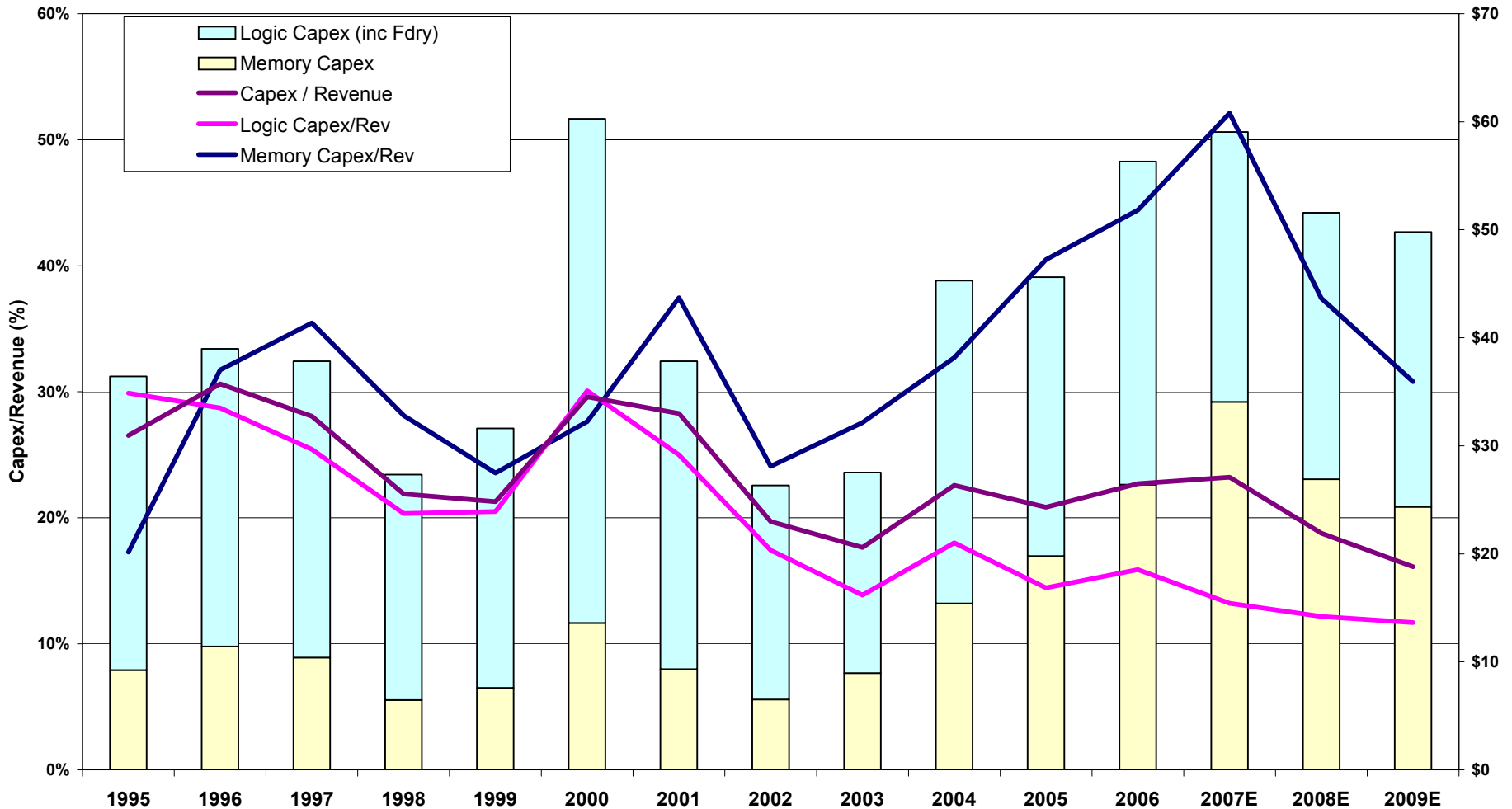
IC unit growth is accelerating

IC Units vs Trend Growth



Source: Credit Suisse, SIA

Logic & Memory capital intensity



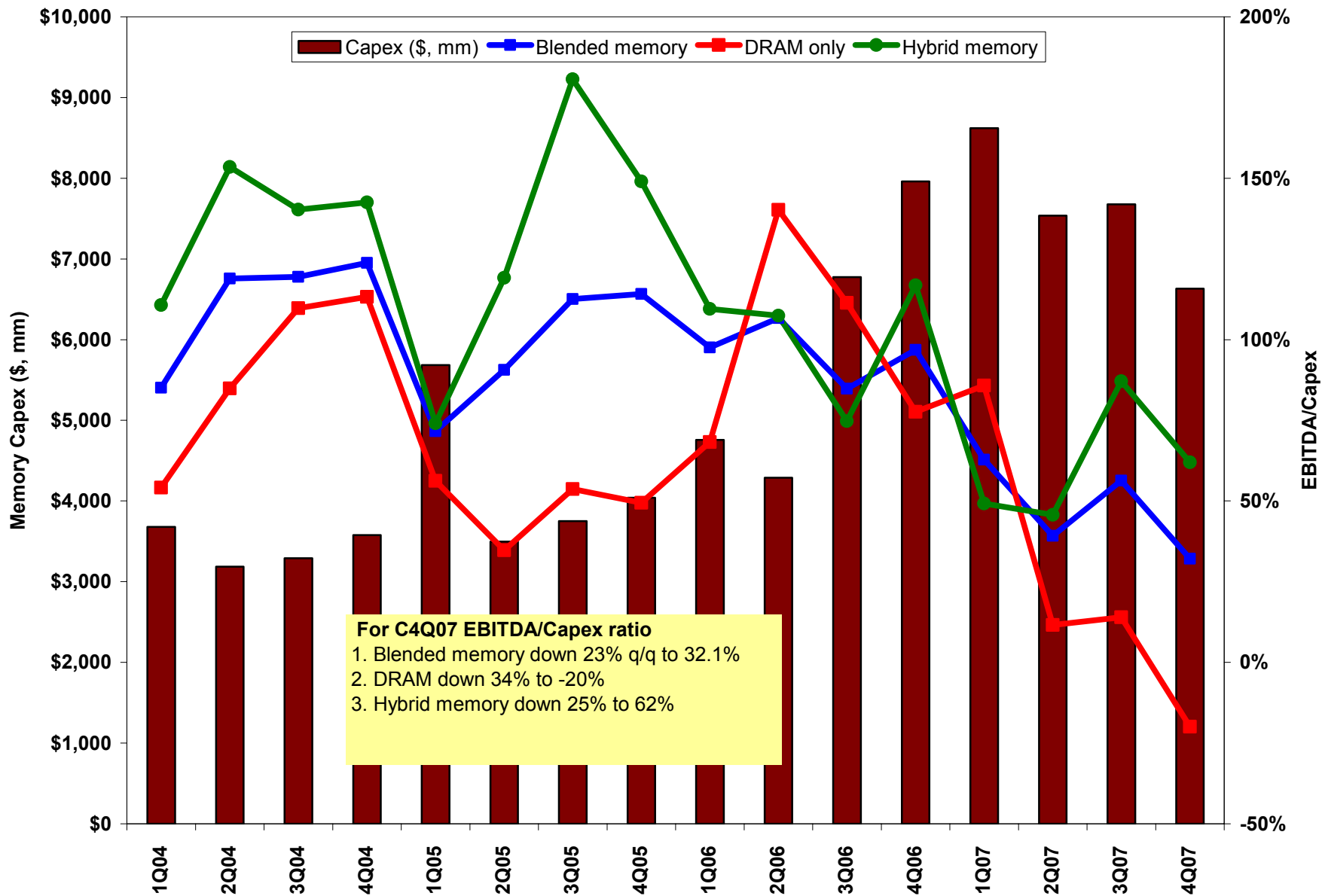
Source: Credit Suisse, SIA

200mm to 300mm conversion: Square Inches & Bits

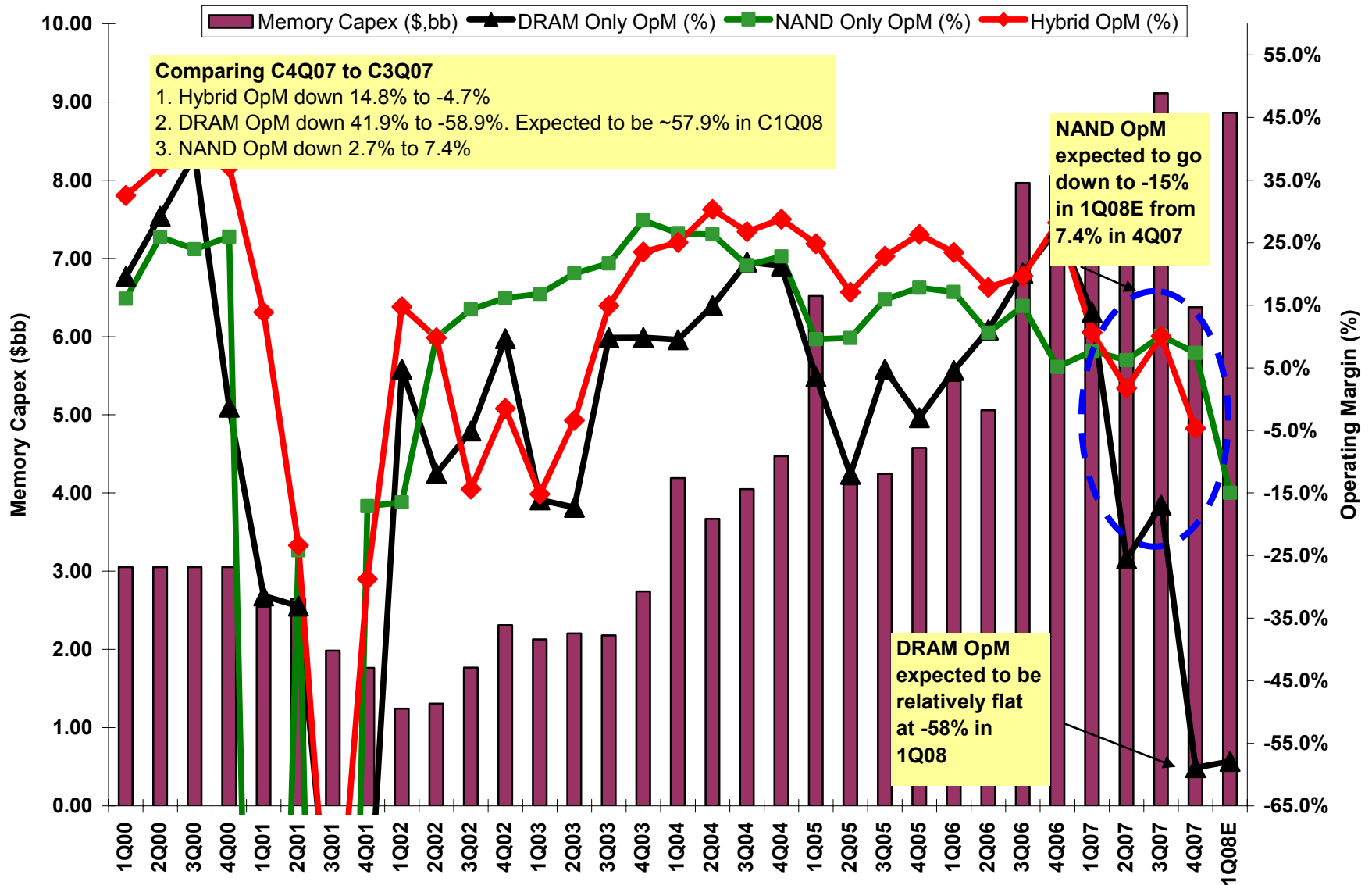
Silicon Area				
Company	2007		2008	
	% 200mm	% 300mm	% 200mm	% 300mm
Samsung	26%	74%	17%	83%
Micron	55%	45%	24%	76%
Hynix	48%	52%	32%	68%
Toshiba	16%	84%	12%	88%
Powerchip	0%	100%	0%	100%
Elpida	0%	100%	0%	100%
Qimonda/Nanya/Inotera	22%	78%	11%	89%
Promos	0%	100%	0%	100%
Total	29%	71%	15%	85%

Bit Production				
Segment	2007		2008	
	% 200mm	% 300mm	% 200mm	% 300mm
Total DRAM	5%	95%	3%	97%
Total NAND	12%	88%	8%	92%
Total	7%	93%	6%	94%

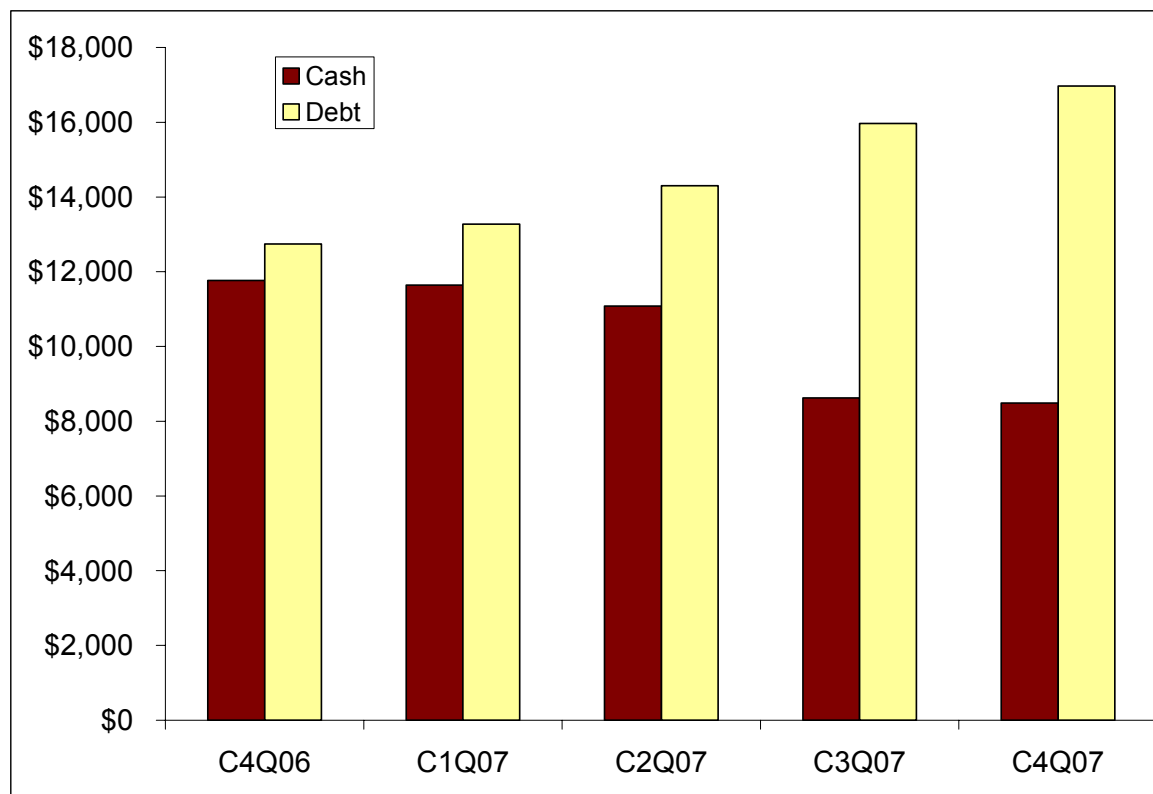
EBITDA/Capex – Blended, DRAM and Hybrid Memory



DRAM / NAND / Hybrid Margins

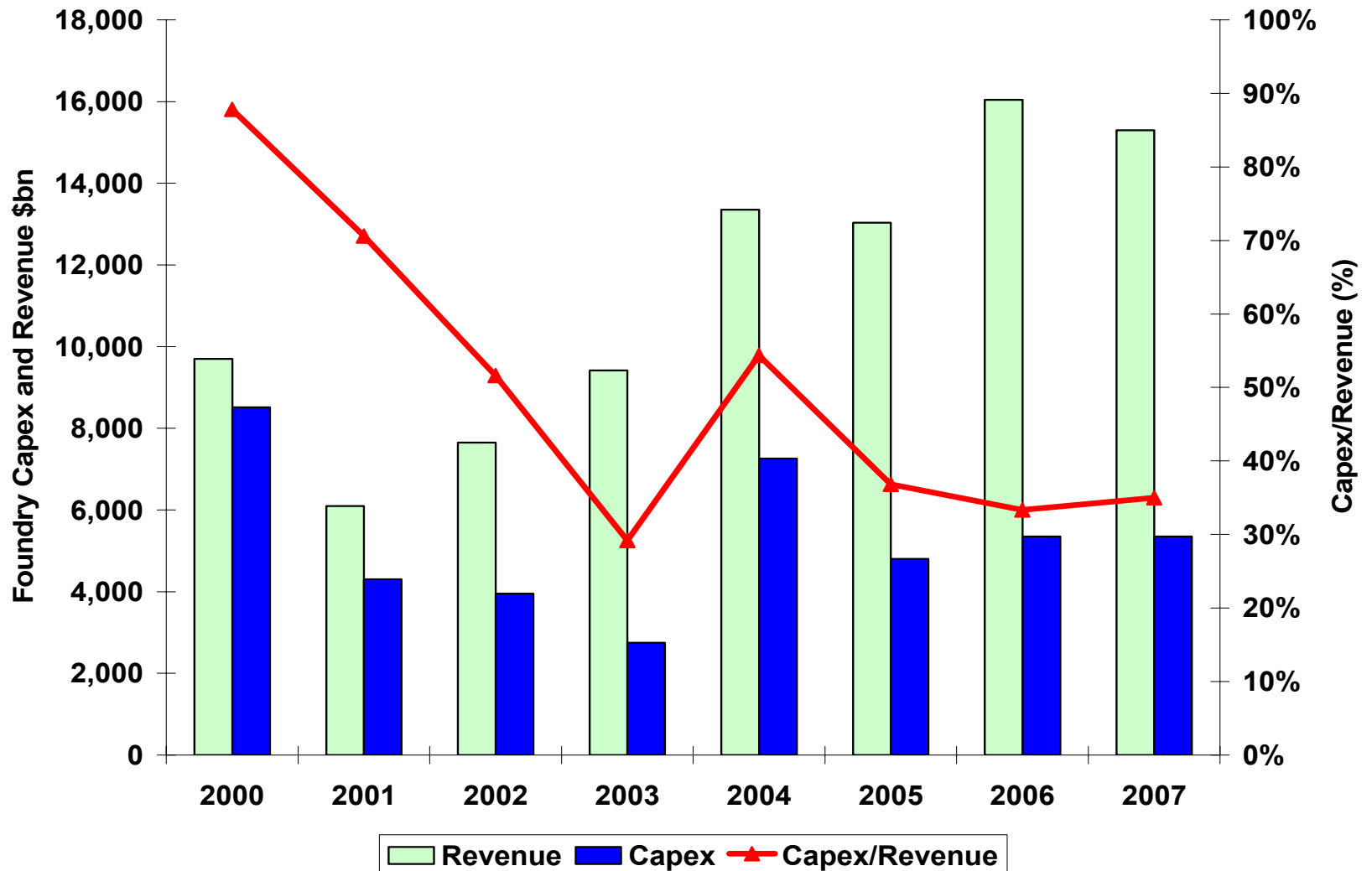


Select Memory Company Balance Sheets

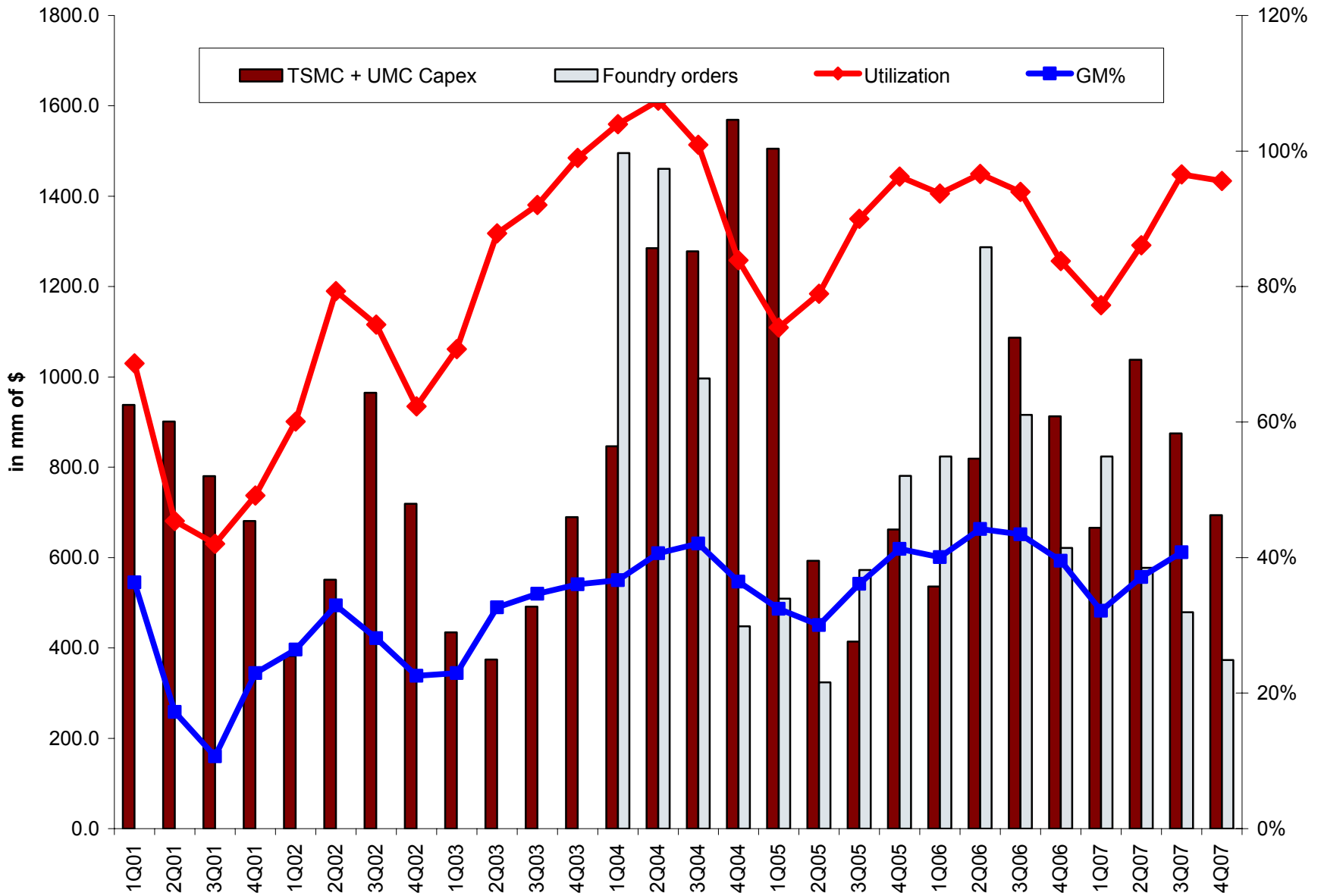


Year	Financing value	Number of Deals	Equity	Debt
2008	\$3,190	5	12%	88%
2007	\$9,236	14	12%	88%
2006	\$2,750	8	54%	46%
2000-2005	\$1,259	7	61%	39%

Foundry Capex and Revenues

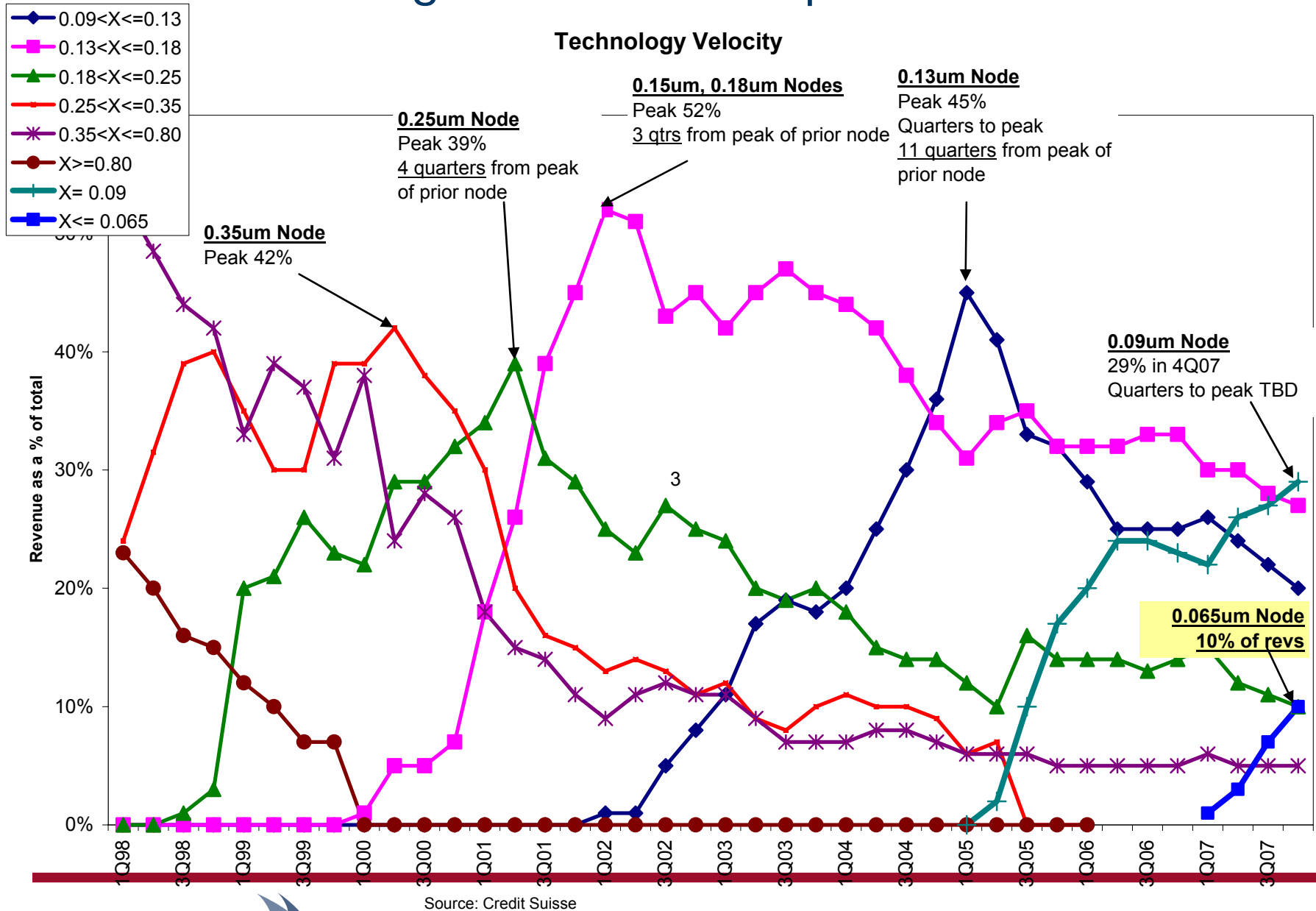


Foundry Utilization rates and GMs



Source: Credit Suisse

Moore's law slowing – Time to reach peak revenues



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Companies Mentioned (Price as of 21 Mar 08)

Amkor Technology Inc. (AMKR, \$11.01, NEUTRAL [V], TP \$12.50)
Applied Materials Inc. (AMAT, \$21.10, OUTPERFORM, TP \$20.50)
ASM Lithography Holding (ASML, \$23.00)
Axcelis Technologies (ACLS, \$5.58, NEUTRAL, TP \$4.25)
Brooks Automation Inc. (BRKS, \$9.68, NEUTRAL [V], TP \$9.50)
Credence Systems (CMOS, \$1.41, UNDERPERFORM [V], TP \$1.10)
Cymer Inc. (CYMI, \$25.66, NEUTRAL, TP \$30.00)
Elpida Memory (6665, ¥3,300, OUTPERFORM, TP ¥5,000, MARKET WEIGHT)
FEI Co. (FEIC, \$20.97, NEUTRAL, TP \$21.00)
Hynix Semiconductor (000660.KS, ₩26.250, OUTPERFORM, TP ₩33,000)
Inotera Memories Inc. (3474.TW, NT\$26.55, NEUTRAL, TP NT\$20.50)
KLA-Tencor Corp. (KLAC, \$35.84, NEUTRAL [V], TP \$36.00)
Lam Research Corp. (LRCX, \$36.90, NEUTRAL, TP \$41.00)
MEMC Electronic Materials Inc. (WFR, \$81.79, NEUTRAL [V], TP \$85.00)
Nanya Technology (2408.TW, NT\$17.50, UNDERPERFORM, TP NT\$13.10)
Novellus Systems (NVLS, \$21.43, NEUTRAL, TP \$25.00)
Powerchip Semiconductor (5346.TWO, NT\$11.05, OUTPERFORM, TP NT\$18.00)
Promos Technologies Inc. (5387.TWO, NT\$7.19, OUTPERFORM, TP NT\$10.70)
Samsung Electronics (005930.KS, ₩607,000, OUTPERFORM, TP ₩730,000)
Teradyne Inc. (TER, \$12.32, NEUTRAL, TP \$14.00)
Toshiba (6502, ¥677, OUTPERFORM, TP ¥880, OVERWEIGHT)
Varian Semiconductor Equipment Associates Inc. (VSEA, \$28.03, OUTPERFORM [V], TP \$36.00)
Verigy Ltd. (VRGY, \$17.42, OUTPERFORM, TP \$25.00)

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