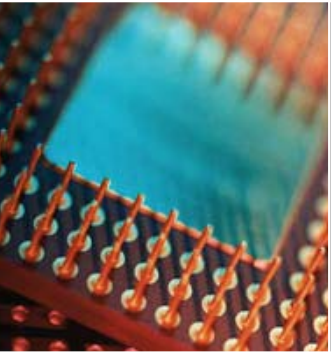


Semiconductor Manufacturing Market Outlook: Fundamentals Point to Growth



DNS Lithography Breakfast Forum 2003

San Francisco, California • 15 July 2003

Klaus-Dieter Rinnen
Managing Vice President
Manufacturing and Design
Emerging Technologies and Semiconductors
Gartner Dataquest

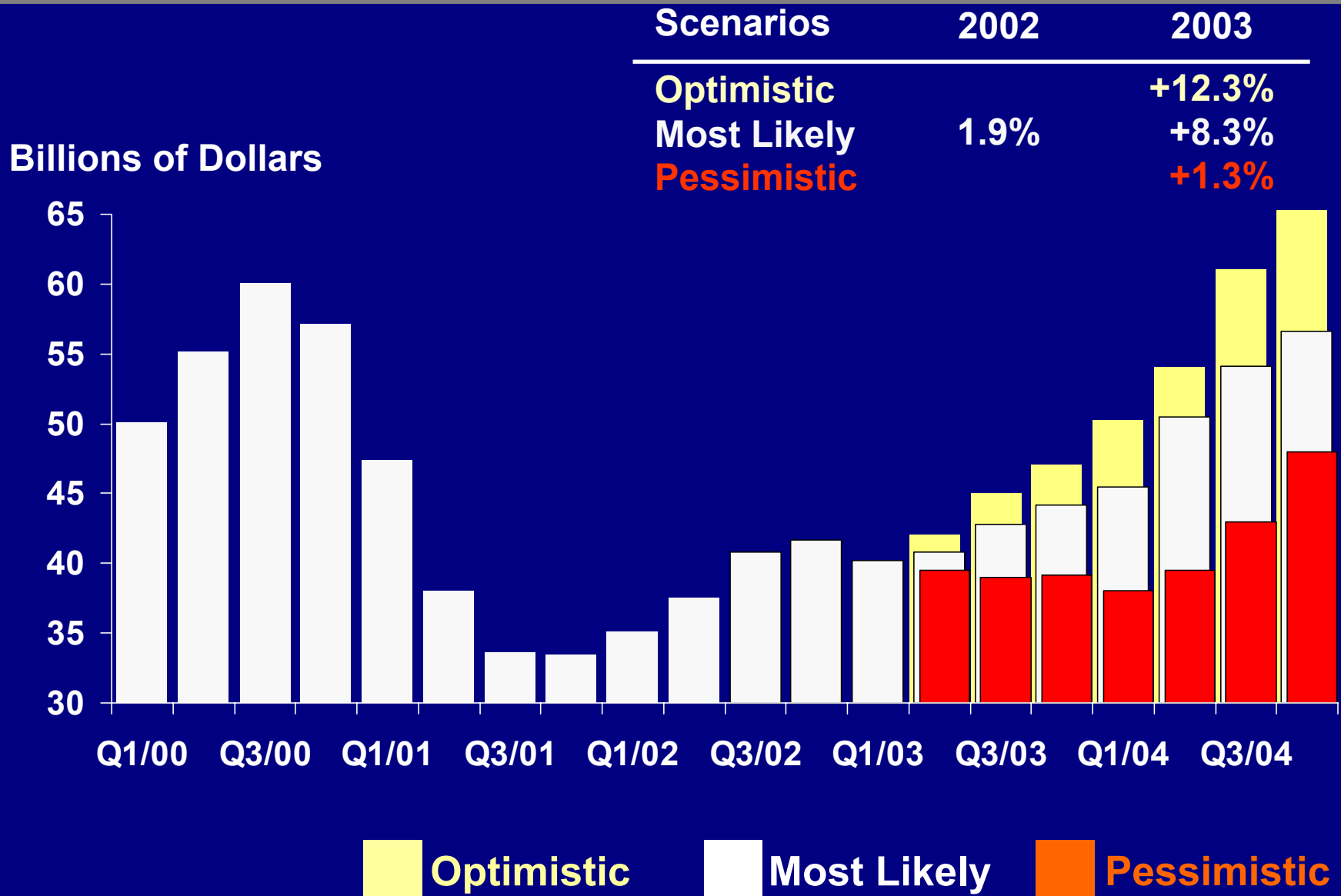
Gartner

Forecast Growth Scorecard

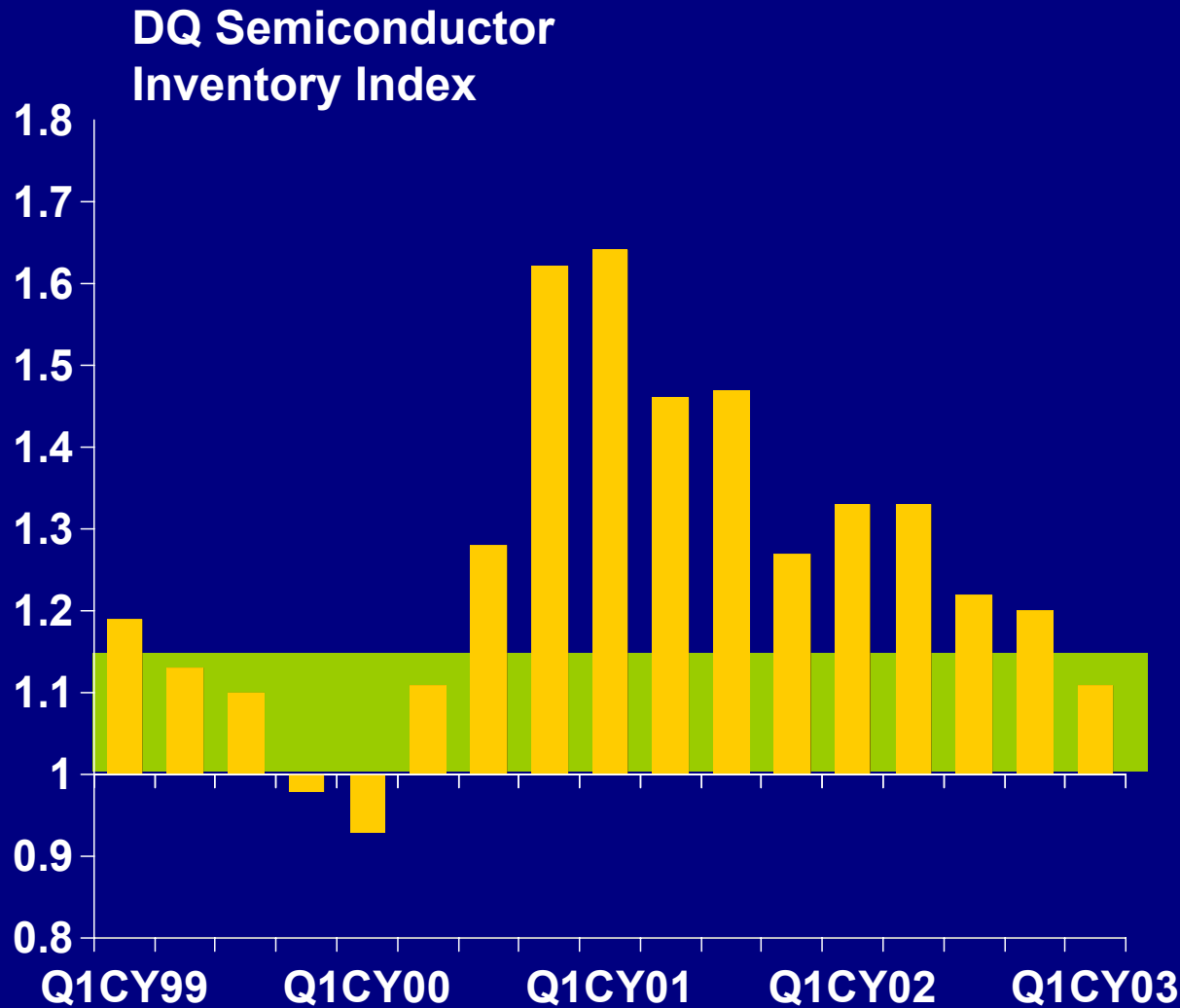
Revenue Growth (%)	2002		2003	
	<u>Base</u>	Up	<u>Base</u>	Down
World GDP	<u>+2.0</u>		<u>+2.2</u>	
U.S. GDP	<u>+2.5</u>		<u>+2.4</u>	
E Equipment*	<u>-1.4</u>		<u>+4</u>	
Semiconductor	<u>+1.9</u>	+12	<u>+8</u>	+1
Capital Spending	<u>-38</u>	+15	<u>+8</u>	+1
Equip. Spending	<u>-30</u>	+18	<u>+11</u>	+3
WFE Equipment	<u>-32</u>	+15	<u>+9</u>	+1
P&A Equipment	<u>-22</u>	+35	<u>+26</u>	+17
Silicon Ship [MSI]	<u>+19</u>		<u>+10</u>	

*Production revenue

Quarterly Semiconductor Revenue: 2003 Market Expands on H2 Improvement



Supply Outlook: Semiconductor Inventory

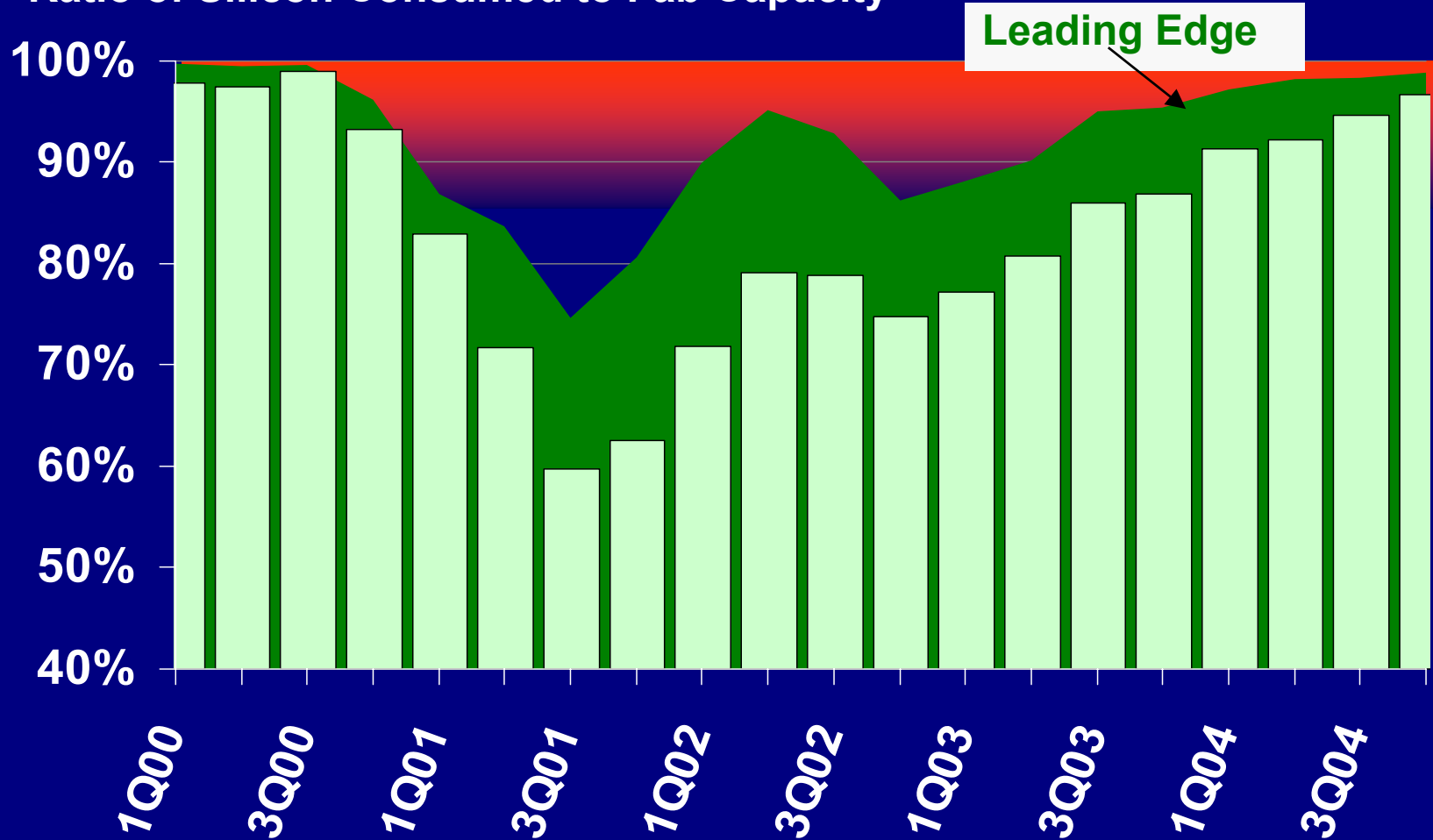


Conclusions

- Inventory days peaked in 1Q01
- Healthy drop in 1Q03
- Good bill of health for inventories

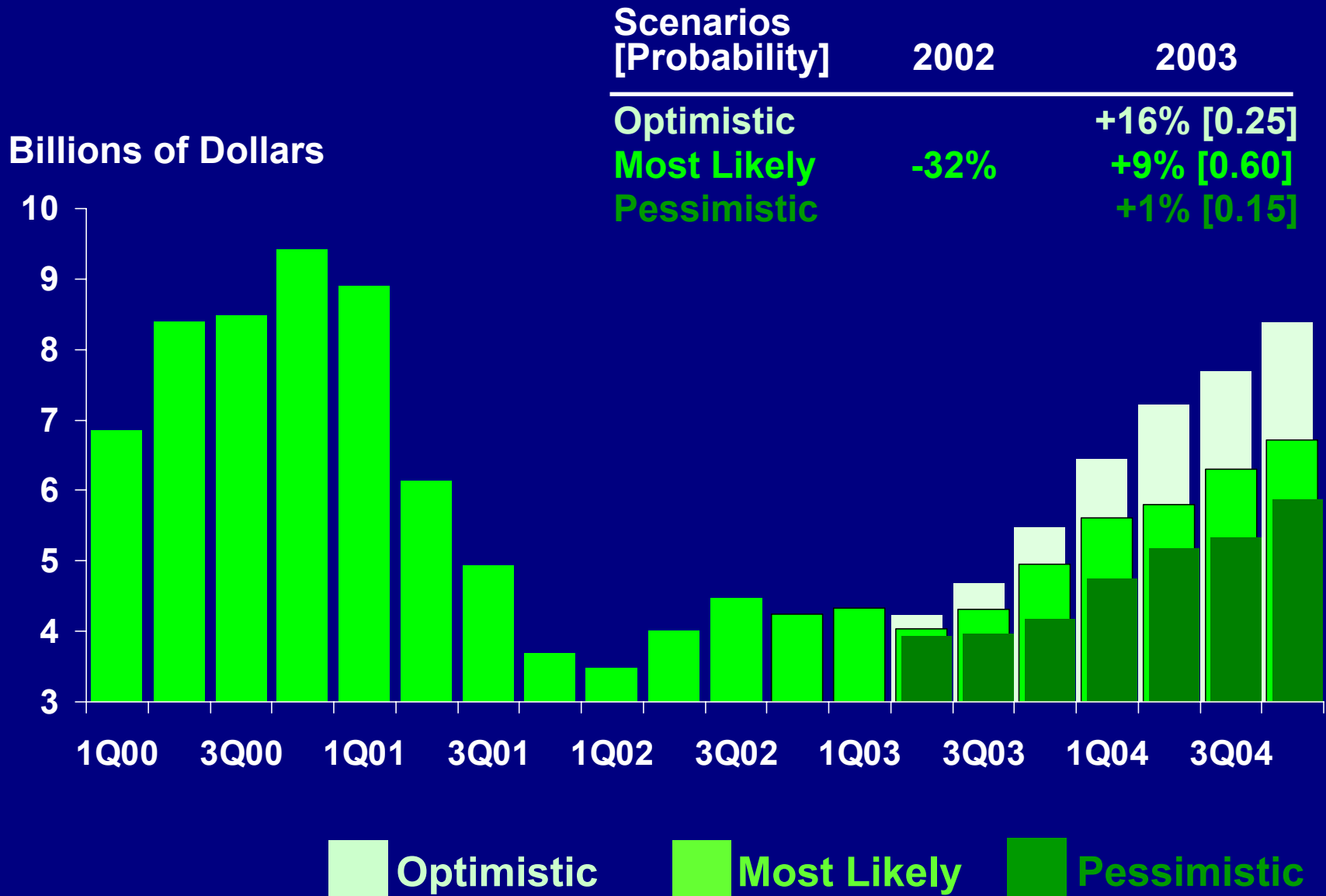
Wafer Fab: Overall Industry Utilization

Ratio of Silicon Consumed to Fab Capacity



Wafer Fab: Equipment

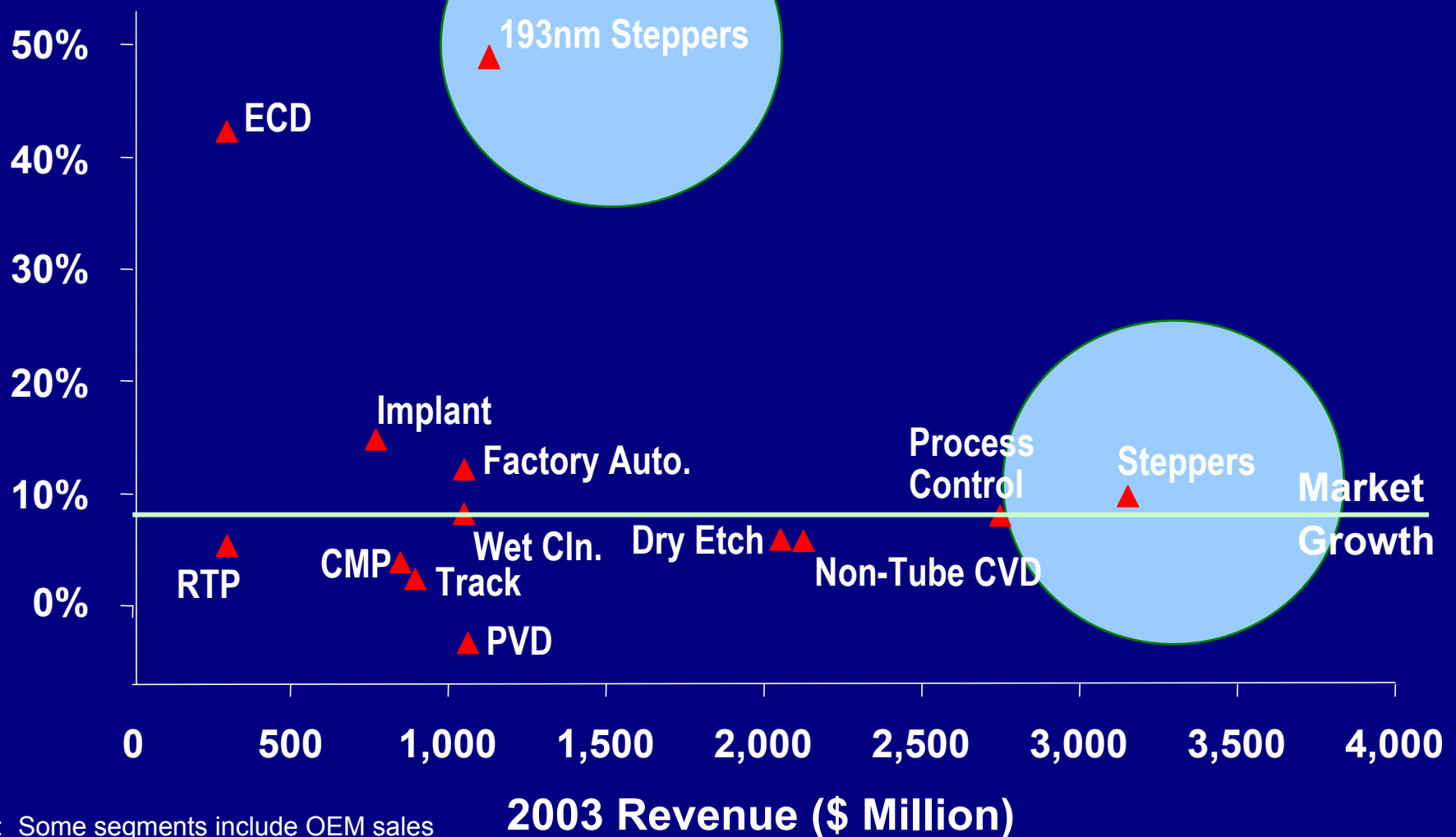
Quarterly Revenue Forecast Scenarios



Wafer Fab: Equipment

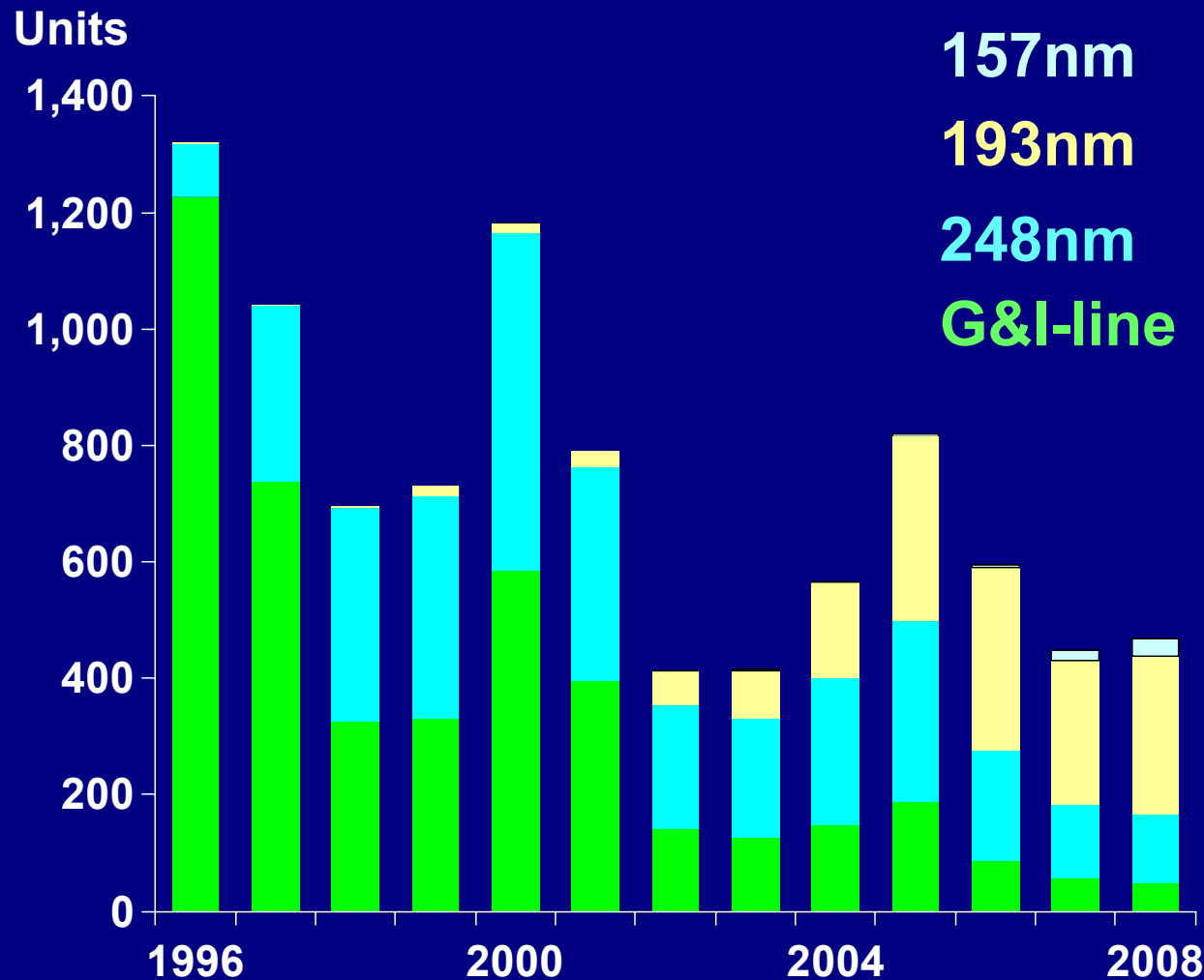
What Is Hot & What Is Not in 2003?

2003 Growth



Note: Some segments include OEM sales

Wafer Fab: Equipment Stepper Forecast - Units

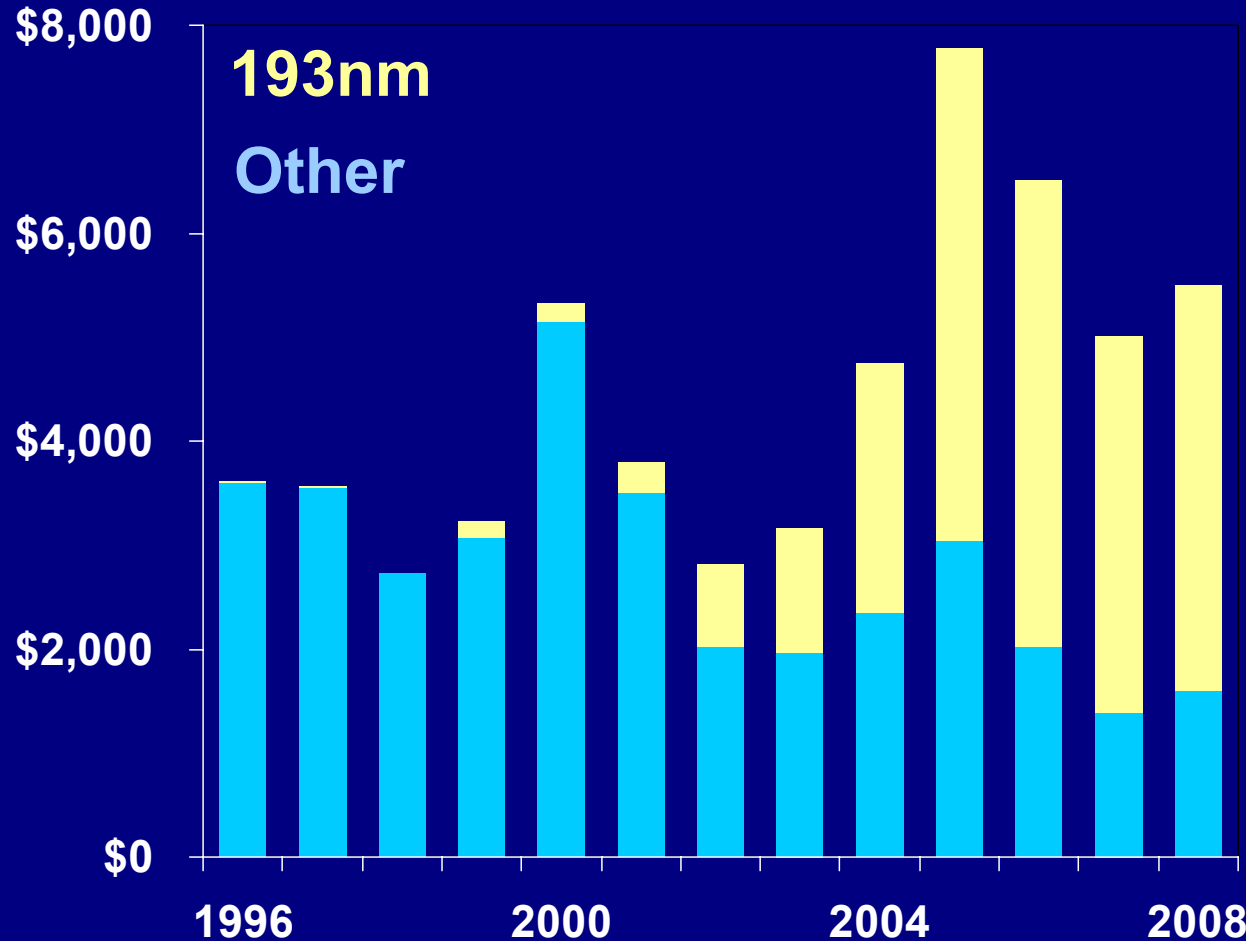


Conclusions

- 2003: largely flat to prior year; 193nm unit sales expands only slowly
- 300mm introduction and increasing concentration of capital impact unit sales
- 193nm to extend to 45nm
- 2005: Peak volume 30% below 2000

Wafer Fab: Equipment Stepper Forecast - Revenue

Revenue [\$ Million]



Conclusions

- 2003: First expansion due to mix; 193nm demand expands slowly
- 2004: 193nm sales accelerate
- 2005: Peak revenue 45% over 2000; 193nm accounts for 60% of revenue

Wafer Fab: Equipment Stepper Market Trends/Issues

- Near-Term: Consolidation of Manufacturing
 - 300mm transition
 - Foundry
 - Industry consolidation
- Long-Term: What does the future hold?
 - 193nm Immersion: Will the industry dip in?
 - 157nm: To Live or not to Live?
 - EUV: Eternal bridesmaid? or Happily ever after 32?
 - Maskless, Nano-Imprint & Other Technologies :
Is there a chance to break into the market? When?

Bottom-Line:

Choices for customer = (high cost + high risk) for vendors

Possibility for demand bifurcation is real