

Display Works Business Conference

The Power of Virtual Integration

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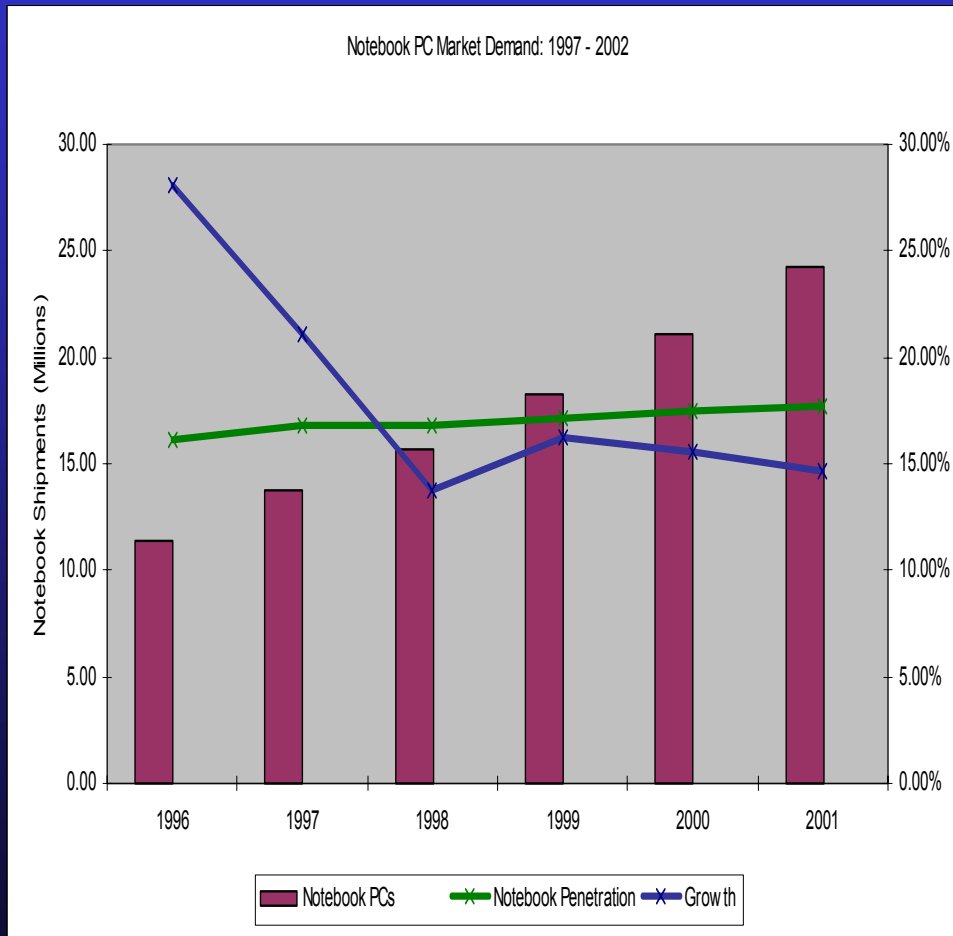


1998 Year in Review

LCD Industry

- 37% Y/Y US\$ price* decline created unprofitable market for LCD manufacturers
 - * = 4Q97 to 4Q98, average notebook panel price times quarterly product mix (12/13" panel equivalents)
- TFT has emerged as the clear price/performance winner (~90% of TFT/STN mix)
- Annualized excess-capacity of 14%. Equilibrium expected in 1H99
- Lack of standardization from LCD manufacturing community, (including components manufacturers)

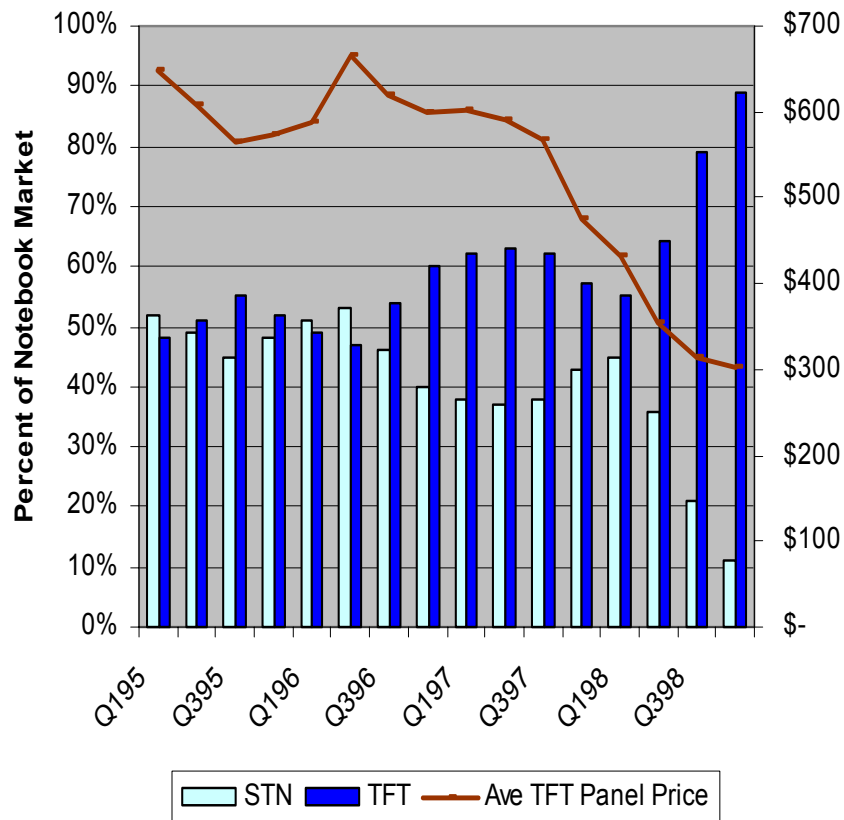
Market Place Realities



- PC Industry growth rates $> 13\%$ Y/Y
- Notebook penetration standing at 15% - 20%

Market Place Realities

LCD Market Dynamics



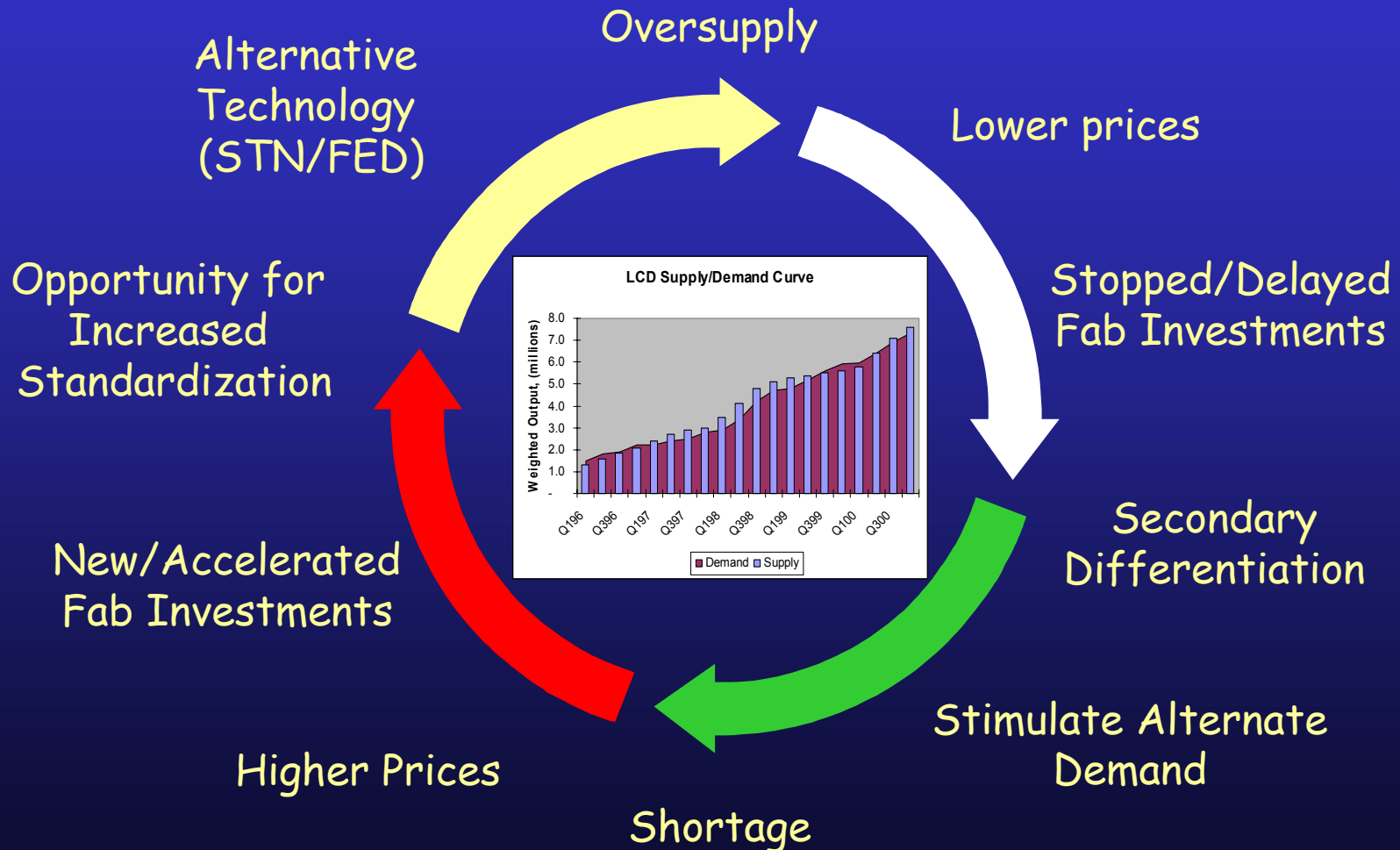
TFT Capacity Ranking

1998			
1	Samsung	3120	16%
2	Sharp	2784	14%
3	NEC	2219	11%
4	LG	2099	11%
5	ADI	1520	8%
All Others		8227	40%
TOTAL		19969	

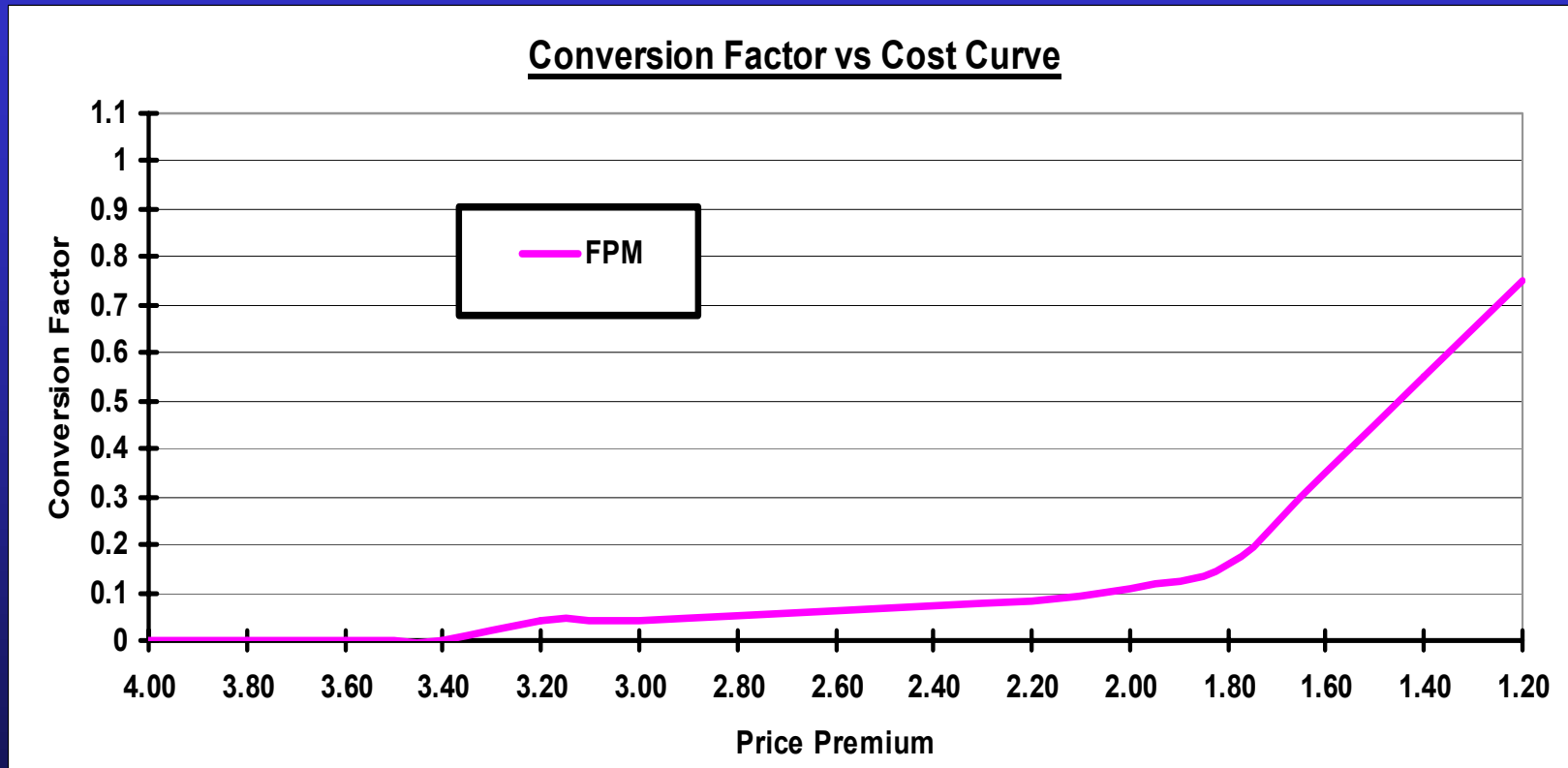
2000			
1	Samsung	4290	11%
2	Sharp	4069	10%
3	LG	3739	10%
4	Toshiba	2459	6%
5	Hitachi	2393	6%
All Others		21913	57%
TOTAL		38863	



LCD Supply/Demand Cycle



CRT/Flat Panel Price Differential



- ARS comparison for 17" CRT (\$350.00) v. 15" Flat Panel (\$1100.00)*

* Data calculated from average of multiple monitor sources (Nov '98 pricing)

A Better Way

- **Supply/Demand Optimization**

- Mechanical Standardization (HDD)
- Technology Differentiation (HDD)

- **Standards**

- Size (X&Y)
- Mountain holes (size & location)
- Screen centerline
- Connector (type, location, pin-out)
- Integrated inverter

- **Differentiators**

- Mechanical integration
- Quality
- Price
- Service
- Performance
 - Power consumption
 - Brightness
 - Viewing angle
 - Resolution

Win/Win/Win

- **Industry consolidation provides better planning**
- **Standardization minimizes aggregate supply/demand variability**
- **Benefits component, LCD , and Notebook manufacturers**
 - Common components
 - Faster time to market
 - Simplified qualification
 - Focused development on technology - not mechanics
 - Higher quality/reliability
 - Simplified service logistics
 - Lower inventories
 - Complexity reduction