CMP INDUSTRY EVOLUTION

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PREPARED FOR CMPUG
JULY 2010

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SEE BEYOND THE HORIZON
Outline

1. Impact of Downturn and Recovery
2. Likely Industry Evolution
3. Changing Industry Structure
4. Conclusions
Impact of Downturn & Recovery
Perspectives on the Future of CMP

# of CMP Operations

2009  2010  2011  2012  2013  2014

- Green line: Early 2010 Visibility
- Blue line: Prior to the Downturn

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As a result of the downturn, the number of CMP operations was initially thought to be 25 to 30% lower than anticipated in 2008.

-25%
-25%
-26%
-26%
-27%
-27%
-28%
-28%
-29%
-29%
-30%
-30%

2009  2010  2011  2012

% Change from Initial expectations
But, reality is always somewhere in between

# CMP Operations

<table>
<thead>
<tr>
<th>Year</th>
<th>Early 2010 Visibility</th>
<th>Current visibility</th>
<th>Prior to the Downturn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
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<td>2014</td>
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</table>
% Improvement off the bottom

% Change from beginning of upturn expectations

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But a business cannot be managed in this way
And what we saw was

- Rapid head count reduction
- Limited amounts of hiring during the upturn
- A lack of belief that we are in an upturn and certainly a lack of belief the general economy is recovering strongly
- Many deer in the headlights

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Likely Industry Evolution
(or what we expect to see)
CMP operations will grow by 11% CAGR from 2009 - 2014
New nodes bringing in new product opportunities

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Strong growth from Advanced Logic and DRAM for CMP
Continued migration to Asia

POLISHES BY REGION, 2009

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Continued migration to Asia

POLISHES BY REGION, 2014

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Changing Industry Structure
Consumable suppliers are not expected to catch their breadth for at least a few more years.
But based on existing base and strength of new products, we expect to see the industry leaders maintain relative share.
Based on new products, we expect to see continued jostling among the next seven largest consumable suppliers.
But relative stability among the top tier and the next seven
We also expect stability amongst tool suppliers
We will see fewer buying centers

- Leading semiconductor producers with 300mm capacity, by region include the following companies:

<table>
<thead>
<tr>
<th>Taiwan</th>
<th>China</th>
<th>Korea</th>
<th>Japan</th>
<th>USA</th>
<th>Europe</th>
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<tbody>
<tr>
<td>2. UMC</td>
<td>2. Hynix</td>
<td>2. Elpida</td>
<td>2. IBM</td>
<td>2. Infineon</td>
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<td>5. Inotera</td>
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<td>6. Rexchip</td>
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<td>7. ProMos</td>
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<td>8. Winbond</td>
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Conclusions
Conclusions

- Evolutionary change not revolutionary change
- No rest for the weary until 2013/2014 time period
- All top tier materials suppliers already well positioned for growth in Asia and copper
- AMAT Reflexion will remain dominant platform
- Strong get stronger