VIDEO OF THE GAME

HALO
DEVELOPED BY BUNGIE
AND TO BE THE FLAGSHIP GAME
OF THE MICROSOFT X-BOX

Turn off your #%$^# cell phones, or else !!!
The Companies Of High-End Entertainment

Rahat Ahmed & Joshua Li

An IAG Feature: 2/9/01
Key Points

- Industry
  - Overview
  - Movement
  - Key Players
- Company focus
  - nVidia
Industry Overview

- Market size in 2000: $8 billion
- Market size in 2005: $29 billion
  - Compound annual growth of 129%

Source: Red Herring, Dec 2000
Industry Movements

Consoles

PCs

Hybrid
Console Market Growth

Growth forecast for the console game market (SB).

<table>
<thead>
<tr>
<th>Year</th>
<th>Product placement</th>
<th>Subscriptions</th>
<th>Hardware</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>6.1</td>
<td>9.9</td>
<td>14.2</td>
<td>16.8</td>
</tr>
<tr>
<td>2001</td>
<td>6.1</td>
<td>9.9</td>
<td>14.2</td>
<td>16.8</td>
</tr>
<tr>
<td>2002</td>
<td>6.1</td>
<td>9.9</td>
<td>14.2</td>
<td>16.8</td>
</tr>
<tr>
<td>2003</td>
<td>6.1</td>
<td>9.9</td>
<td>14.2</td>
<td>16.8</td>
</tr>
<tr>
<td>2004</td>
<td>6.1</td>
<td>9.9</td>
<td>14.2</td>
<td>16.8</td>
</tr>
<tr>
<td>2005</td>
<td>6.1</td>
<td>9.9</td>
<td>14.2</td>
<td>16.8</td>
</tr>
</tbody>
</table>

Total console game revenue (in green)
Console: Hardware

- Nintendo
  - Extremely successful, especially GameBoy
- Sega
  - Announced departure from hardware
- Sony (SNE)
  - Arguably the most dominant player at the moment
- Microsoft (MSFT)
  - To enter the market with the XBox
Console: Software

- Nintendo
- SquareSoft
- Acclaim
- Namco
- Konami
- Capcom

Power
PC Market Growth

Growth forecast for the PC game market (SB).

- Retail revenue
- Subscriptions
- Advertising

Total PC game revenue (in green)


Revenue levels: 0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5
PC: Hardware

- nVidia
- ATI
- Intel
- AMD
- Creative Labs
PC: Software Developers

- Microsoft
- EA Sports
- Blizzard
- Bungie
- id
- Ion Storm
- Shiny
- Westwood
- Valve
PC: Software Publishers

- Activision (ATVI)
- Eidos (EIDSY)
- Electronic Arts (ERTS)
- Infogrames (IFGM)
- Interplay (IPLY)
- Microsoft (MSFT)
- Sierra (Private)
Clear Winner: nVidia

- Design, develop, market 3D graphics processors, GPUs and related software
- Applications include games, Internet, industrial design
- Do not manufacture themselves
  - Outsourced to TSMC and WaferTech
Competitors? Where?

- 3DFX
  - Former market leader
  - Acquired by nVidia
- Matrox
  - Quit the gaming business
- S3 (now SonicBlue)
  - Sold graphics assets to VIA
Competitors... Here

- ATI
  - Radeon chip is competitive with GeForce2

- Intel
  - Self-made core chip sets
  - Recent alliance with ATI

- SGI & 3DLabs
  - High-end CAD/Workstation market
Total Penetration

- PCs
  - Workstations
    - Quadro, Quadro2
  - Entertainment
    - GeForce, GeForce2
  - Home
    - GeForce2MX, TNT2
  - Value
    - TNT2 Aladdin

- Mac’s
  - GeForce2MX-Mac

- Laptops
  - GeForce2MX-Go

- Consoles
  - X-Box
# Ratio Analysis

## Profitability

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>24.14%</td>
</tr>
<tr>
<td>ROE</td>
<td>40.36%</td>
</tr>
<tr>
<td>Pretax Operating Margin</td>
<td>15.00%</td>
</tr>
<tr>
<td>Net Margin</td>
<td>10.17%</td>
</tr>
</tbody>
</table>

## Liquidity

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Ratio</td>
<td>2.27</td>
</tr>
<tr>
<td>Quick Ratio</td>
<td>0.81</td>
</tr>
<tr>
<td>Asset TO</td>
<td>2.37</td>
</tr>
<tr>
<td>Fixed Asset TO</td>
<td>19.95</td>
</tr>
<tr>
<td>Accounts Receivable TO</td>
<td>8.53</td>
</tr>
<tr>
<td>Days A/R Outstanding</td>
<td>42.81</td>
</tr>
<tr>
<td>Inventory TO</td>
<td>7.11</td>
</tr>
<tr>
<td>Days Inventory Outstanding</td>
<td>51.33</td>
</tr>
<tr>
<td>Accounts Payable TO</td>
<td>4.86</td>
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<tr>
<td>Days A/P Outstanding</td>
<td>75.09</td>
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</tbody>
</table>

## Solvency

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating CF/CapEx</td>
<td>1.37</td>
</tr>
<tr>
<td>Debt/Equity Ratio</td>
<td>0.62</td>
</tr>
<tr>
<td>LT Debt/Equity Ratio</td>
<td>0.01</td>
</tr>
</tbody>
</table>
## Relative Analysis

<table>
<thead>
<tr>
<th></th>
<th>nVidia</th>
<th>ATI Tech</th>
<th>Intel</th>
<th>STM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price ($)</td>
<td>44.88</td>
<td>6.13</td>
<td>34.94</td>
<td>41.80</td>
</tr>
<tr>
<td>Estimated 5-yr Growth</td>
<td>32.5%</td>
<td>15.0%</td>
<td>19.9%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Sales (000s)</td>
<td>374,505</td>
<td>1,310,000</td>
<td>33,700,000</td>
<td>7,810,000</td>
</tr>
<tr>
<td>Net Income (000s)</td>
<td>38,098</td>
<td>-139,000</td>
<td>10,500,000</td>
<td>1,450,000</td>
</tr>
<tr>
<td>EPS ($)</td>
<td>1.23</td>
<td>(0.69)</td>
<td>1.51</td>
<td>1.58</td>
</tr>
<tr>
<td>PE</td>
<td>36.63</td>
<td>NA</td>
<td>23.17</td>
<td>26.47</td>
</tr>
<tr>
<td>PS</td>
<td>3.73</td>
<td>1.04</td>
<td>7.24</td>
<td>5.01</td>
</tr>
<tr>
<td>ROA</td>
<td>24.14%</td>
<td>-15.41%</td>
<td>22.21%</td>
<td>15.74%</td>
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<tr>
<td>ROE</td>
<td>40.36%</td>
<td>NA</td>
<td>29.22%</td>
<td>27.42%</td>
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<tr>
<td>Profit Margin</td>
<td>10%</td>
<td>NA</td>
<td>31.20%</td>
<td>18.60%</td>
</tr>
</tbody>
</table>

Source: Yahoo! Finance
Recommendation

- Not just fun and games
- Rapid growth and development
  - 126.8mil 3D cards sold in 1999
  - 275.8mil 3D cards to be sold in 2004
- nVidia: big player worth buying
  - Reports earnings Feb. 14th