Healthcare

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Ran Zhang
Todd White
Simon Wu
Agenda

- Sector Overview
- Business and Economic Analysis
- Financial Analysis
- Valuation Analysis
- Recommendation
**Sector Size:**

**Weighting Market:**
- 14.43% (10/09/2015)
- 3rd largest weight
Healthcare Sector Performance

- **Year-to-Date**: 14.46%
  - Data through 10/13/2015, by Morningstar

- **Quarter-to-Date**: 7.8%
  - Data through 10/13/2015, by Morningstar

- **Best performing sector**: No. 1
  - over the past few years
### Industries (in Billion)

- **Pharmaceuticals**, $2,150, 48%
- **Biotechnology**, $885.30, 20%
- **Health Care Providers & Services**, $657.80, 15%
- **Health Care Equipment & Supplies**, $521.40, 12%
- **Health Care Technology**, $58.40, 1%
- **Life Sciences Tools & Services**, $159.50, 4%
<table>
<thead>
<tr>
<th>Company</th>
<th>Market Cap ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson &amp; Johnson</td>
<td>$272.04</td>
</tr>
<tr>
<td>Novartis AG</td>
<td>$229.52</td>
</tr>
<tr>
<td>Pfizer, Inc.</td>
<td>$212.22</td>
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<tr>
<td>Gilead Sciences, Inc.</td>
<td>$150.91</td>
</tr>
<tr>
<td>Novo Nordisk A/S</td>
<td>$147.37</td>
</tr>
<tr>
<td>Merck &amp; Company, Inc.</td>
<td>$145</td>
</tr>
<tr>
<td>Sanofi</td>
<td>$132.52</td>
</tr>
<tr>
<td>Amgen Inc.</td>
<td>$115.72</td>
</tr>
<tr>
<td>CVS Health Corp.</td>
<td>$115.22</td>
</tr>
<tr>
<td>UnitedHealth Group Inc.</td>
<td>$114.41</td>
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</tbody>
</table>
Profitability and pricing by reviewing:

- Power of Suppliers
- Power of Buyers
- Threats of New Entrants
- Threats of Substitutes

Industry Rivalry
Business Analysis

High Entry Barriers

- Pharma/Biotech: Huge upfront investment is required
- Health insurance: large consumer base, brand, network

5 Forces Analysis: Threats of New Entrants

- High requirements on research and new medicine
- Hard to seize market shares from existing players

Hard to enter a industry, leading to low attraction, but good for ongoing players
5 Forces Analysis: Power of Suppliers

Low Power of Suppliers

- Fragmented industry
- Relatively low switching costs
- Many suppliers out there
Low Power of Buyers

Pharma/Biotech
Buyers: Pharmacies, Retailers
(Patent, Example of Turing Pharmaceuticals)

Health insurance
Policyholders, through employers, switch cost is low.
(OSU example)
2 Business Analysis

5 Forces Analysis: Threats of Substitutes

**Low Level of Subs**

Stable performance with nearly low substitutes will increase the attraction.

- Health services is a necessity
- Alternative therapies not viable
- Obama Care
Business Analysis

High Competition

- Especially in generic drugs (Cost leader)
- Race for new drugs (Significantly affect the stock price)
- Patented drug is monopoly (Differentiation, High profit Margin)
- M&A activity may increase though

Decreasing the attraction of the industry and weakening the ability to gain profits
• Health Care can be considered as an attractive industry
• Especially good for established players
• Hard for newcomers and smaller companies
• Competition/Consolidation can impact margins
Economic Analysis

Economy Outlook

- Healthcare sector key issues
- U.S. economy: Mid-cycle expansion
- Expectations to grow jobs and healthcare spending

Strong U.S. Dollar

Lower Interest Rate

Lower Inflation Rate

Lower Unemployment Rate

Economy Background

- Addressing costs of providing care
- Transitioning to value-based care;
- Adapting to a realigned market;
- Achieving scale;
- Managing regulatory and risk

Strong U.S. Dollar

Lower Interest Rate

Lower Inflation Rate

Lower Unemployment Rate
Economic Analysis

Characteristics

- Growing populations and consumer wealth, Expanding middle market in developing countries
- Aging global population, aging societies and chronic diseases
- Defensive industry
- Relatively inelastic demand
- Consolidation among companies
Economic Analysis

External Factors

- Patient Protection and Affordable Care Act (Obamacare)
  - More people under coverage

- FDA Regulations
  - Slowing patent expirations (TPP)
  - Expanded coverage
Economic Analysis

Regression

- Raw Beta: 0.988
- R(Correlation): 0.825
<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Current</th>
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</thead>
<tbody>
<tr>
<td>Gross Margin</td>
<td>34.35%</td>
<td>33.85%</td>
<td>33.90%</td>
<td>33.53%</td>
<td>32.92%</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>12.25%</td>
<td>11.74%</td>
<td>10.62%</td>
<td>10.68%</td>
<td>10.29%</td>
</tr>
<tr>
<td>Net margin</td>
<td>7.59%</td>
<td>7.60%</td>
<td>8.33%</td>
<td>7.88%</td>
<td>7.31%</td>
</tr>
<tr>
<td>ROE</td>
<td>16.36%</td>
<td>15.68%</td>
<td>17.57%</td>
<td>17.28%</td>
<td>16.55</td>
</tr>
<tr>
<td>R&amp;D%</td>
<td>-</td>
<td>4.86%</td>
<td>4.89%</td>
<td>4.76%</td>
<td>4.39%</td>
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</table>

**Healthcare Sector Financial Performance**

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</thead>
<tbody>
<tr>
<td>Sector</td>
<td>1.18%</td>
<td>6.91%</td>
<td>11.81%</td>
<td>8.53%</td>
<td>13.53%</td>
<td>7.24%</td>
</tr>
<tr>
<td></td>
<td>-4.61%</td>
<td>2.32%</td>
<td>8.09%</td>
<td>6.52%</td>
<td>36.58%</td>
<td>10.90%</td>
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</tbody>
</table>

**Major Companies:**

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<tbody>
<tr>
<td>Johnson &amp; Johnson</td>
<td>3.4%</td>
<td>6.1%</td>
<td>4.2%</td>
<td>-5.3%</td>
<td>-5.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td></td>
<td>21.3%</td>
<td>22.2%</td>
<td>23%</td>
<td>22.9%</td>
<td>24.7%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Pfizer</td>
<td>-16.2%</td>
<td>-5.9%</td>
<td>-4.0%</td>
<td>-3.9%</td>
<td>-3.6%</td>
<td>9.4%</td>
</tr>
<tr>
<td></td>
<td>22.3%</td>
<td>23.5%</td>
<td>24.2%</td>
<td>23.5%</td>
<td>27.6%</td>
<td>27.8%</td>
</tr>
<tr>
<td>Gilead</td>
<td>15.7%</td>
<td>15.5%</td>
<td>122.2%</td>
<td>67.4%</td>
<td>26.7%</td>
<td>-2.1%</td>
</tr>
<tr>
<td></td>
<td>28%</td>
<td>28.1%</td>
<td>49.1%</td>
<td>51.9%</td>
<td>56.9%</td>
<td>55.9%</td>
</tr>
</tbody>
</table>
Financial Analysis

Observations

- Increasing revenues
- Shrinking margins
- Lower margin than the market
- Free cash flow generator
Recommendations

Risks

- Demand in foreign markets
- High Evaluations: Overvalued
- Anti-trust issues among consolidations
- Regulations
Recommendations

Strengthens

1. Outstanding performance
2. Sound fundamentals
3. Defensive nature
4. Advantageous regulations
5. Consolidations
### Healthcare Sector vs. Market

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Price/Earnings</strong></td>
<td>12.22</td>
<td>14.76</td>
<td>20.01</td>
<td>22.83</td>
<td><strong>21.91</strong></td>
<td>17.00</td>
<td>15.33</td>
</tr>
<tr>
<td><strong>S&amp;P 500</strong></td>
<td>13.45</td>
<td>14.36</td>
<td>17.48</td>
<td>18.24</td>
<td><strong>18.02</strong></td>
<td>17.18</td>
<td>15.65</td>
</tr>
<tr>
<td><strong>Price/Book</strong></td>
<td>2.52</td>
<td>2.68</td>
<td>3.50</td>
<td>4.15</td>
<td><strong>3.74</strong></td>
<td>3.56</td>
<td>3.26</td>
</tr>
<tr>
<td><strong>S&amp;P 500</strong></td>
<td>2.05</td>
<td>2.14</td>
<td>2.58</td>
<td>2.82</td>
<td><strong>2.73</strong></td>
<td>2.63</td>
<td>2.47</td>
</tr>
<tr>
<td><strong>EV/Sales</strong></td>
<td>1.22</td>
<td>1.42</td>
<td>1.83</td>
<td>2.0</td>
<td><strong>1.99</strong></td>
<td>1.90</td>
<td>1.77</td>
</tr>
<tr>
<td><strong>S&amp;P 500</strong></td>
<td>1.60</td>
<td>1.69</td>
<td>2.02</td>
<td>2.15</td>
<td><strong>2.17</strong></td>
<td>2.17</td>
<td>2.07</td>
</tr>
<tr>
<td><strong>EV/EBITDA</strong></td>
<td>7.63</td>
<td>8.84</td>
<td>13.0</td>
<td>13.97</td>
<td><strong>14.26</strong></td>
<td>11.70</td>
<td>10.65</td>
</tr>
<tr>
<td><strong>S&amp;P 500</strong></td>
<td>8.78</td>
<td>9.52</td>
<td>10.72</td>
<td>11.59</td>
<td><strong>12.11</strong></td>
<td>10.66</td>
<td>9.92</td>
</tr>
</tbody>
</table>

- **P/E** has a relatively contract trend.
- **Other** relative valuations remain constant.
- The sector is currently overweight (>100bps) and will remain slightly overvalued in the short future.
Recommendations

Weighting Recommendations

Portfolio

Cautiously underweight the sector in S&P 500. Therefore keep what we have in SIM.

- In S&P 500, healthcare sector is overvalued.
- SIM vs. S&P 500: 13.28% vs. 14.87%, SIM is already underweight. So keep it.
Questions ?
THANK YOU

Healthcare Sector Analysis