Agenda

• Overview
• Business Analysis
• Economic Analysis
• Financial Analysis
• Valuation Analysis
• Recommendation
Overview
Sector Size & Industries

- Total Telecom Sector Market Capitalization: $1.76 Trillion
- S5TELS Market Capitalization: 499.2 Billion = 2.76% of S&P500

- Industries:
  - Wireless Telecommunication Service
  - Integrated Telecommunication Service
Telecommunication Industries (Cont.)

- Integrated Telecommunication Service (Wireless & Fixed-Line)

<table>
<thead>
<tr>
<th>Company</th>
<th>Market Cap (in Millions)</th>
<th>% of Telecom Sector</th>
<th>% of S&amp;P 500</th>
<th>% of SSTELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T (T)</td>
<td>$ 240.33</td>
<td>13.7%</td>
<td>1.3%</td>
<td>48.1%</td>
</tr>
<tr>
<td>Verizon (VZ)</td>
<td>$ 217.87</td>
<td>12.4%</td>
<td>1.2%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Century Link (CTL)</td>
<td>$ 16.90</td>
<td>1.0%</td>
<td>0.1%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Frontier (FTR)</td>
<td>$ 6.19</td>
<td>0.4%</td>
<td>0.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Level 3 (LVLT)</td>
<td>$ 18.43</td>
<td>1.0%</td>
<td>0.1%</td>
<td>3.7%</td>
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</table>

- Wireless Telecommunication Service (Wireless Only)

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<tr>
<th>Company</th>
<th>Market Cap (in Millions)</th>
<th>% of Telecom Sector</th>
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</thead>
<tbody>
<tr>
<td>Sprint (S)</td>
<td>$ 12.95</td>
<td>0.7%</td>
</tr>
<tr>
<td>T-Mobile (TMUS)</td>
<td>$ 30.31</td>
<td>1.7%</td>
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</table>
**Telecommunication Services**

**Performance**

**Year-To-Date**
- Telecom Sector YTD = 14.06%
- S&P 500 YTD = -0.34%
- Outperformed

**Quarter-To-Date**
- Telecom Sector QTD = 12.98%
- S&P 500 QTD = -1.16%
- Outperformed
Business Analysis
Business Cycle

- No clear pattern
- Stable demand – steady growth
- High dividend yield

➢ Defensive
94% of the US population has access to 4G LTE

4G LTE subscribers to exceed 3.5 billion by 2020, with a 5-year CAGR of 20.8%

6.01 GB data per month in 2018, up from 3.45 GB in 2015

Demand is exploding
Life Cycle

- 16 months / 57 months to get 170M subscribers
- With the technological innovations, the life cycle is getting shorter
- Additional capacity = More capital expenditures
- Digital Strategy
  Service provider ➔ Content provider
- Verizon acquired AOL
Potter’s Five Forces

**Rivalry (High)**
- Identical service & Products – Seeking the lowest price

**Threat of New Entrants (Low)**
- Monopolistic Competition
- Capital requirements
- Network effect (Customer switching cost)
- Reliable brand

**Threat of Substitute (High)**
- Voice-Over-Internet
- Blurred boundaries between Telecommunication Services and Information Technology

**Bargaining Power of Buyers (Low)**
- Mainly personal business (Either Accept or Walk away)

**Bargaining Power of Suppliers (Moderate)**
- A number of large equipment makers
- Partnership
Economic Analysis
Telecom vs. S&P 500
Telecom vs. Russel 3000
Telecom vs. SIM Portfolio

![Graph showing correlation between S&P 500 Telecom Service Index and SIM Class Portfolio Index]
Financial Analysis
Telecom Sector Sales

Sector Sales

Sector Sales Growth

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<tbody>
<tr>
<td>($)</td>
<td>$0.98</td>
<td>$1.02</td>
<td>$1.04</td>
<td>$1.06</td>
<td>$1.08</td>
<td>$1.10</td>
<td>$1.12</td>
<td>$1.14</td>
<td>$1.16</td>
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<tbody>
<tr>
<td></td>
<td>(2)</td>
<td>(4)</td>
<td>(6)</td>
<td>(8)</td>
<td>(10)</td>
<td>(2)</td>
<td>(4)</td>
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Major Company Sales

Sales of Major Companies

Sales Growth YoY
Margins

• Both Operating and Net Margins are cyclical.
• Can be attributed to the cellular technology cycle.
10 Year Performance
Valuation Analysis
# Ratio Valuation

<table>
<thead>
<tr>
<th>SSTELS</th>
<th>High</th>
<th>Low</th>
<th>Median</th>
<th>Current</th>
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</thead>
<tbody>
<tr>
<td>P/E</td>
<td>21.98</td>
<td>12.77</td>
<td>15.38</td>
<td>15.19</td>
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<tr>
<td>P/B</td>
<td>3.49</td>
<td>1.62</td>
<td>2.55</td>
<td>2.96</td>
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<tr>
<td>P/S</td>
<td>1.54</td>
<td>1.07</td>
<td>1.32</td>
<td>1.54</td>
</tr>
<tr>
<td>P/EBITDA</td>
<td>5.36</td>
<td>3.18</td>
<td>4.48</td>
<td>4.48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative to S&amp;P</th>
<th>High</th>
<th>Low</th>
<th>Median</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/E</td>
<td>1.191</td>
<td>1.010</td>
<td>0.945</td>
<td>0.823</td>
</tr>
<tr>
<td>P/B</td>
<td>1.233</td>
<td>0.888</td>
<td>1.053</td>
<td>1.074</td>
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<tr>
<td>P/S</td>
<td>0.840</td>
<td>0.944</td>
<td>0.865</td>
<td>0.847</td>
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<tr>
<td>P/EBITDA</td>
<td>0.504</td>
<td>0.522</td>
<td>0.522</td>
<td>0.421</td>
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</table>
Technical Analysis: Bollinger Bands
Technical Analysis: Relative Strength Index
Recommendation
Recommendation

- Recommended Position: **HOLD 2.75%**
  - No signs of consistent under performance / over performance
  - Uncertainty
  - Safe Investment
Questions?