Goals of the Panel

- Understand how wireless networks are financed
- Understand key factors influencing investment decisions
- Discuss what policymakers can do to promote broadband & wireless investment
Financing Wireless Infrastructure: Historical Perspective

- Risk-based capital (domestic and foreign)
- Cash from financing critical in early years when companies lost money due to high start up capital costs
- Cash flow from operations
Annual Capital Expenditures on Wireless Structures / Equipment

Source: U.S. Census Annual Capital Expenditures Survey
Comparison of Reported Annual Wireless Spending (including winning spectrum bids at FCC)

Sources: U.S. Census Annual Capital Expenditures Survey, CTIA
Semi-Annual Wireless Survey, FCC
Financing Wireless Broadband Infrastructure: Looking Ahead

- Market factors
- Financing issues
- Government policy
Market Factors

- Explosion of consumer demand for mobile broadband capabilities and capacity needs of new devices / applications
- Migration to LTE / WIMAX requires network overlay
- Intense competitive pressures on prices
- Recession impact on consumer spending & business investment / spending
Financing Networks

- Capital markets
  - Wall Street expectations
  - Government debt & tax policy

- Cash flow from operations
  - Consumer & business spending
  - Taxes on service
Government Policy

- **Regulatory**
  - Spectrum availability & cost
  - Net neutrality / Internet regulation
  - Wireless tower siting policy

- **Tax policy – pro-investment?**
  - States: property taxes, sales taxes on equipment, general business tax policy, impact of consumer taxes on demand, investment incentives
  - Feds: tax rates on capital gains / dividends, rising USF charge impact on consumer demand
Investment Outlook: Conclusions

- Management making investment decisions in competitive, uncertain markets

- Federal and state policy decisions are a factor in investment decisions
## Capital Investment Follows Returns

<table>
<thead>
<tr>
<th>Company</th>
<th>ROI</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>20.5%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Amazon</td>
<td>24.6%</td>
<td>10.7%</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>5.4%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Verizon</td>
<td>4.4%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Time Warner</td>
<td>3.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Comcast</td>
<td>2.4%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Source: Darby & Fuhr, May 2008 data.

ROI – return on invested capital
ROA – return on assets
State Economic Development Perspective

- Broadband networks critical to growth and economic development
- Your constituents want faster networks and more competitive choices
- Every state wants more investment in wireless & broadband networks
What, if anything, can state legislatures do to help their states attract network investment?

What will be the impact of federal stimulus $?

Should governments take a more activist role in promoting network investment? If so, how?
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Sources for More Information


