

# Economic Context

## I. Overview of U.S. and California Economies

### U.S. Economy

#### **The “Great Recession” Increases Unemployment.**

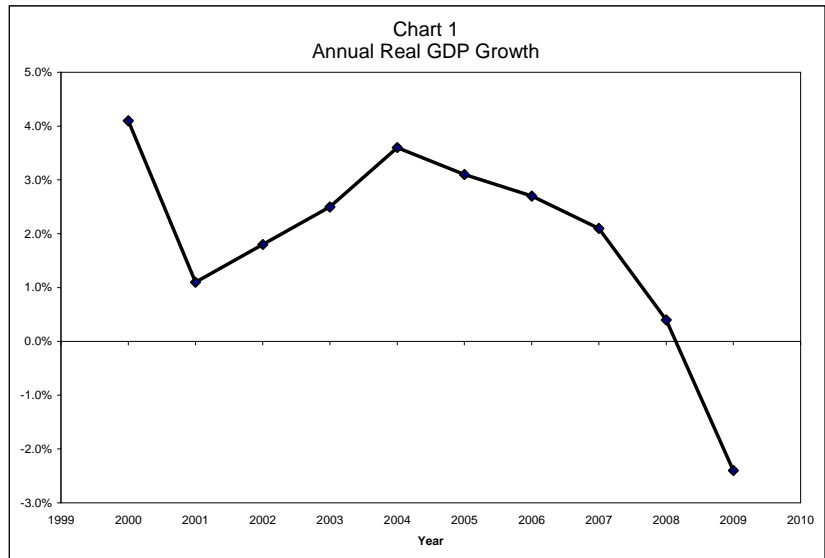
Starting in December 2007 the national economy experienced what many economists consider to be the worst recession in both duration and magnitude since the 1930s. A major financial meltdown was barely avoided in the fall of 2008 and in early 2009 as the federal government and the Federal Reserve Board took unprecedented steps to stabilize the economy and prevent what could have been a major depression according to many analysts. Most economists believe that the recession ended sometime in mid-2009, and recent data indicate that economic growth is resuming. However, the unemployment rates remain high in the aftermath of the recession. The U.S. unemployment rate doubled from 5.0 percent when the recession began to a high of 10.1 percent reached in October 2009. In early 2010 the U.S. unemployment rate remained close to 10 percent.

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**Recap of 2009.** As shown in Chart 1, real GDP decreased 2.4 percent in 2009, the largest decline since 1946. The last time real GDP fell close to this magnitude was 1982 when it declined 1.9 percent. Economic output would have declined even more last year were it not for the stimulus package that bolstered the incomes of many households.

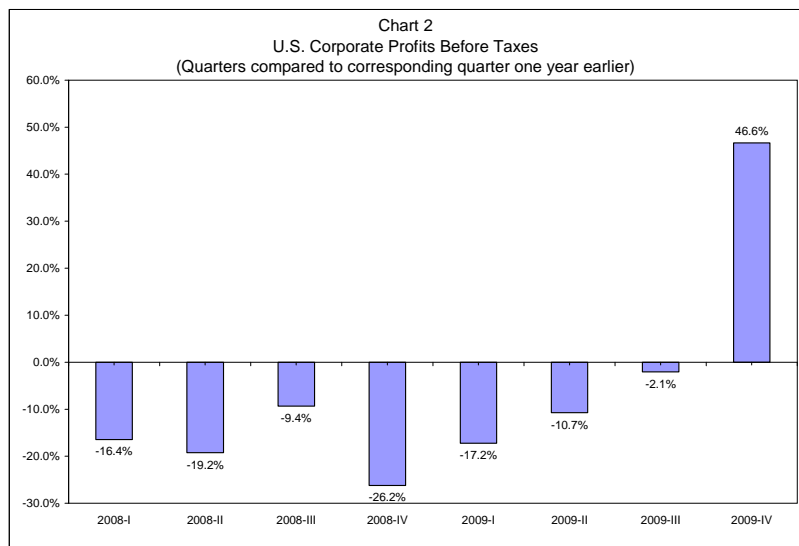


**Improving Corporate Earnings.** Since the recession began U.S. corporate earnings before taxes declined by an average of about 7 percent per quarter. However, the trend in corporate earnings declines improved dramatically in the fourth quarter, as shown in Chart 2.

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*Major stock market indices declined precipitously from October 2007 to March 2009.*

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**Stock Indices Up Since March 2009.** Major stock market indices declined precipitously from October 2007 to March 2009. However, since March 2009 the stock markets have generally anticipated a recovery of the economy. The Standard and Poor's composite stock index rose about 48 percent from March 2009 to January 2010.

**Continuing Growth Anticipated.** Real GDP rose at an annual average rate of about 4 percent in the last half of 2009. A February 2010 survey of about 40 professional forecasters polled by the Federal Reserve Bank of Philadelphia calls for real GDP to rise 3.0 percent in 2010.<sup>1</sup> If this forecast is accurate, it would be well above the average annual long term growth rate of about 1.6 percent per year since 2000. This forecast also calls for stronger growth than experienced in the first calendar year following the 2001 recession, 1.8 percent growth in 2002. However, the unemployment rate is expected to decline only gradually as the economy improves. The economists surveyed by the Philadelphia Federal Reserve expect the unemployment rate to average 9.8 percent in 2010.

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**California Economy**

**California Faring Worse Than National Economy.**

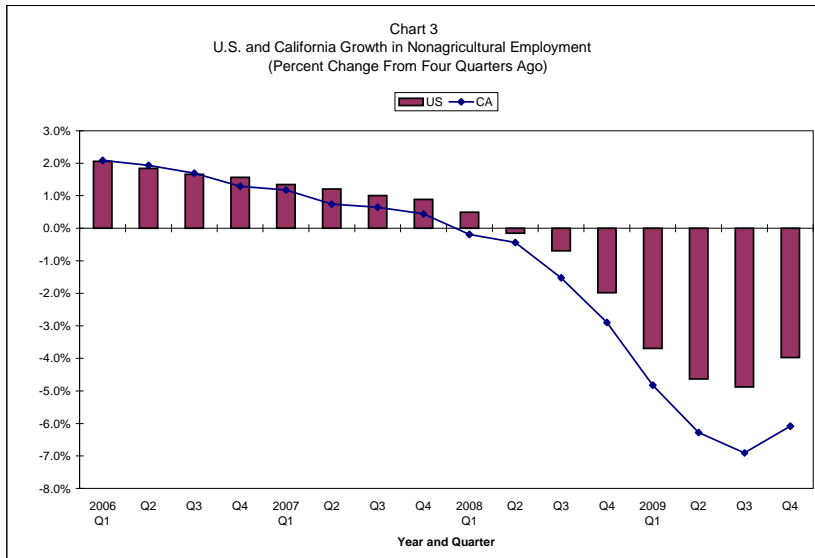
Available data indicate that the California economy has fared worse than the U.S. economy since the recession began. Chart 3 compares U.S. and California year-over-year percentage changes in quarterly nonagricultural employment (one of the broadest measures of economic activity available to states on a timely basis). Over both 2008 and 2009 California nonagricultural employment decreased an average of about 1.2 percent more than the U.S. as a whole. California is also suffering a much higher unemployment rate than the U.S. In January 2010, the California unemployment rate was 12.5 percent, compared to a U.S. rate of 9.7 percent.

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*Available data indicate that the California economy is improving along with the U.S. economy in early 2010.*

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<sup>1</sup> "Survey of Professional Forecasters," Federal Reserve Bank of Philadelphia, February 12, 2010.

**Home Construction at Record Lows.** Residential construction activity fell dramatically in California in 2009 from what was already a record low level in 2008. A total of 36,200 residential construction permits were issued in California in 2009. As measured by permits, residential construction activity is less than one-fifth of its level at the peak of the housing boom that preceded this recession. In 2004, the highest year of the most recent housing boom, 213,000 permits were issued.

Nonresidential construction was also extremely weak in 2009. The value of nonresidential permits issued in 2009 fell 44% from 2008, to \$10.8 billion. Nonresidential building activity has not been this weak since the mid-1990s.

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*Nonresidential construction was extremely weak in 2009.*

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**Improving Economy so far in 2010.** Available data indicate that the California economy is improving along with the U.S. economy in early 2010. California nonagricultural employment losses appear to have stabilized in early 2010.

## II. Electricity and Natural Gas Industries

**Recap of 2009 Assessments.** Electric, natural gas, and water companies accounted for about 66 percent of all Board-assessed values in fiscal year 2009-10. The combined assessed value of these companies increased 5.4 percent over the previous year. Electric generating facilities firms accounted for 15 percent of the total value for these companies. The vast majority of the remaining 85 percent of assessed values for electric, natural gas, and water companies were accounted for by the large regulated utilities: Pacific Gas & Electric, Southern California Edison, Southern California Gas, and San Diego Gas and Electric.

### Electricity

**Regulatory Background.** Traditionally, natural gas and electricity markets were heavily regulated as “natural monopolies” through most of the twentieth century. In the late 1990s, California began using a more market-based regulatory structure. Now the transmission and distribution systems remain regulated, while the generation system is market-based for generating facilities not owned by the utilities.

**More Renewable Energy Encouraged.** In 2006 an important piece of legislation was passed regulating the emission of greenhouse gases emitted by power plants. AB 32<sup>2</sup>, the California Global Warming Solutions Act of 2006, will "...require the state [Air Resources Board] board to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program as specified. The bill would require the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990, to be achieved by 2020, as specified." The bill also authorizes the Air Resources Board to adopt market-based compliance mechanisms to achieve the greenhouse gases limits. AB 32 also states that it does not affect "...the obligation of an electrical corporation to provide customers with safe and reliable electric service."

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In December 2008, the California Air Resources Board approved a scoping plan, as required by AB 32.<sup>3</sup> According to the California Energy Commission, about 13 percent of the California retail electricity load for investor-owned utilities is currently met by renewable resources.<sup>4</sup> The renewables' share is expected to increase to 20 percent by the end of 2010 under the current Renewables Portfolio Standard (RPS). The scoping plan increases the renewables standard to 33 percent of the retail electricity load by 2020. Executive Order S-21—09 directs the Air Resources Board to adopt regulations by August 2010 in order to implement this new standard.

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The scoping plan includes a mix of direct mandates and a market-based cap-and-trade program. The cap-and-trade program will cap emissions from the largest greenhouse gas emitters starting in 2012. Over time, the cap will be lowered to meet the reduction goal mandated by AB 32. The ownership, quantities and market values of emissions trading rights would be determined and evaluated.<sup>5</sup> Details of how utilities will achieve this standard are still being developed, but it seems likely that utilities will receive rate-based regulations to pay the increased costs of meeting the higher standard. In addition to the California incentives, the 2009 federal economic stimulus package had several provisions to increase or expand incentives for generating more electricity from renewable sources.<sup>6</sup>

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<sup>2</sup> Assembly Bill 32 (Nunez), Chapter 488, Statutes of 2006.

<sup>3</sup> *Climate Change Proposed Scoping Plan*, California Air Resources Board, October 2008.

<sup>4</sup> *2009 Integrated Energy Policy Report*, California Energy Commission, December 2009.

<sup>5</sup> "California Realities and Federal Plans," Michael A. Yuffee, *Public Utilities Fortnightly*, August 2009.

<sup>6</sup> *Description of the American Recovery and Reinvestment Tax Act of 2009*, U.S. Congress Joint Committee on Taxation, JCX-10-09, January 23, 2009.

Uncertainties such as weather and the economy make it difficult to ascertain whether utilities will meet the 20 percent RPS standard by the end of 2010. However, there is much activity towards achieving the goal of using more renewable energy sources in generating electricity. Progress is being made in meeting both the 2010 and the 2020 renewables portfolio standards. Utilities are currently developing renewable energy generating facilities and aggressively signing contracts with generators constructing such facilities to meet the 2010 requirement. For the longer term many large solar energy projects are being proposed in California's desert areas on federal Bureau of Land Management (BLM) land. The BLM has received right-of-way requests for 34 large solar thermal power plant projects totaling about 24,000 megawatts.

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**Short Run Electricity Outlook.** In the short run, California's electricity generating capacity appears to be somewhat in surplus. The weak economy has reduced the demand for electricity. U.S. electricity output declined 3.7 percent in 2009, the largest drop since 1938.<sup>7</sup> While complete year data are not yet available, electricity generation from January through November 2009 for the Western United States (California, Oregon, and Washington) was down 3.6 percent compared to the same months of 2008. In the Mountain states (from which California imports significant quantities of electricity) generation was also down 3.6 percent from January through November, similar to the national drop for all of 2009. In California, as discussed earlier, more new generating facilities are under construction and are scheduled to come on-line in the next few years.

### **Natural Gas**

Unless price increases are dramatic, valuations of gas and electric distribution utilities are not materially affected by natural gas prices because increases are passed directly to the consumers, and not borne by the utilities. However in the long-term outlook, natural gas prices affect the competitiveness of alternative renewable sources of electricity generation such as wind and solar energy.

Natural gas prices at the wellhead were relatively high in early 2008, but prices declined sharply with the weakening economy. U.S. natural gas prices at the wellhead fell from a high of \$9.86 per thousand cubic feet (Mcf) in the second quarter of 2008 to \$3.17 by the third quarter of 2009 before rising slightly. For all of 2009,

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<sup>7</sup> "Turmoil in Power Sector," *Wall Street Journal*, January 14, 2010.

natural gas prices average \$3.71 per Mcf, less than half of the 2008 average of \$8.08 per Mcf. With a recovering economy and an expected decrease in production, the U.S. Energy Information Administration (EIA) predicts wellhead natural gas prices to average \$4.92 per Mcf in 2010, a 33 percent increase from the average price in 2009.<sup>8</sup>

### III. Communications Industries

**Recap of 2009 Assessments.** Telephone and telegraph companies accounted for 29 percent of all Board-assessed values in fiscal year 2009-10. Local exchange companies had the highest valuation, followed by wireless and interexchange companies. Local exchange carriers accounted for 49 percent of Board-assessed values in the telephone and telegraph industries in fiscal year 2009-10. Wireless companies accounted for 32 percent of Board communications assessments and interexchange companies 18 percent.

**Developments in Recent Years.** In September 2007, the California Public Utilities Commission took action to further deregulate the telephone industry by making changes that will reduce subsidies that support universal service goals. The approach relies heavily on competitive market forces to keep basic rates affordable. Deregulation will be phased in over several years to avoid the risk of sudden large rate increases for basic service.<sup>9</sup>

**Broadband Adoption Widespread.** A major key to increased competition in telecommunications is the widespread adoption of broadband Internet service. According to the *Pew Research Center*, about 63 percent of U.S. households had a broadband Internet connection at home in March 2009, while 7 percent had dialup connections (See Chart 4). While specific percentages varied for different sociologic groups, broadband adoption was widespread among many of them. In April 2009, the average broadband price reported by *Pew* was \$39.00 per month, while the average dialup price was \$26.60.<sup>10</sup>

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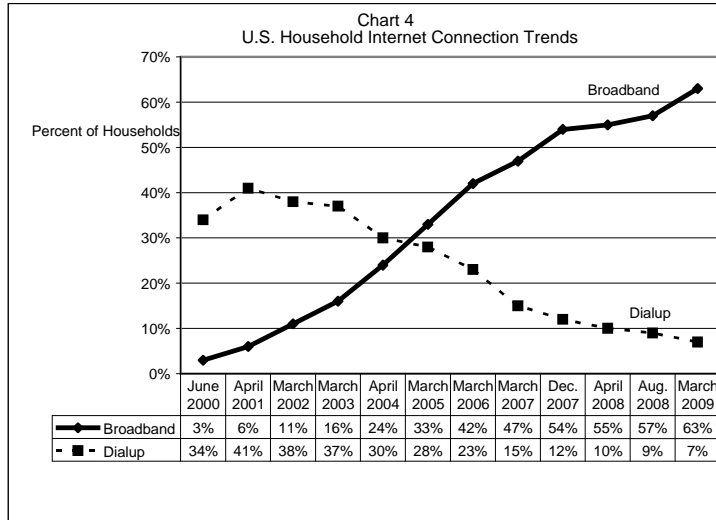
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<sup>8</sup> "Short-Term Energy Outlook – February 2010," U.S. Department of Energy, Energy Information Administration, 2010.

<sup>9</sup> "Interim Opinion Adopting Reforms to the High Cost Fund-B Mechanism," California Public Utilities Commission, Decision 07-09-020, September 6, 2007.

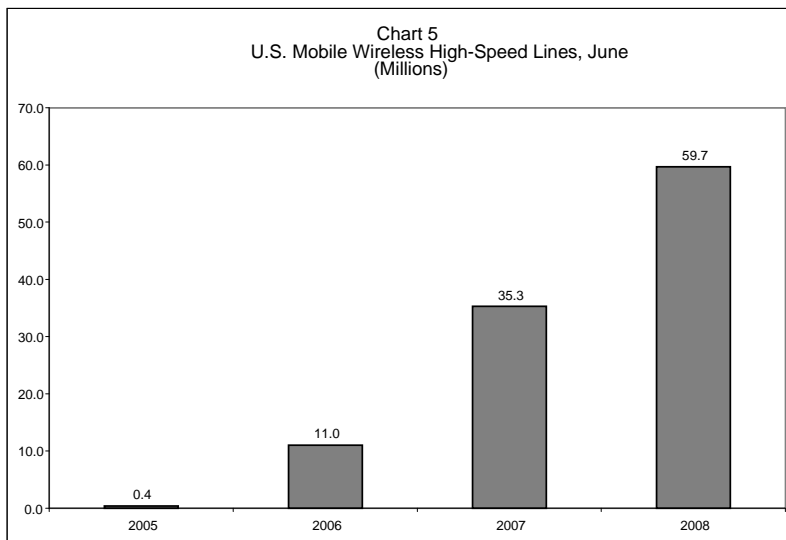
<sup>10</sup> *Home Broadband Adoption 2009*, Pew Internet & American Life Project, June 2009.

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*The number of U.S. mobile high-speed lines has grown from about 0.4 million in June of 2005 to 59.7 million by June 2008*  
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Source: Websiteoptimization.com (Pew Internet and American Life Surveys)

Larger numbers of people are accessing the Internet on mobile devices. According to the *Pew Research Center*, in April 2009 32 percent of Americans had gotten online using mobile devices, up from 24 percent in December 2007.<sup>11</sup> Numbers of mobile high-speed lines have grown exponentially in recent years. As shown in Chart 5, the number of U.S. mobile high-speed lines (over 200 kilobits per second in at least one direction) has grown from about 0.4 million in June of 2005 to 59.7 million by June 2008.<sup>12</sup>



<sup>11</sup> *Wireless Internet Use*, Pew Internet & American Life Project, July 2009.

<sup>12</sup> *High-Speed Services for Internet Access: Status as of December 31, 2008*, Federal Communications Commission, February 2010. Note: The FCC definitions of high-speed mobile access changed for survey reports made after June 2008. The June data are used in the chart so the historical data in the chart use consistent definitions.

**VOIP Technology Gaining Rapid Adoption.** A major reason that broadband adoption is an important factor in telecommunications competition because of Voice Over Internet Protocol (VOIP) technology. VOIP converts a voice telephone call into “packets,” sends them over the Internet, and reconstructs the packets at the destination of the call. Compared to conventional telephone transmission technology, VOIP is relatively inexpensive.

It is also possible for consumers to use VOIP directly and bypass the need for local telephone service. An estimated 19 million households use VOIP directly, and this number is expected to grow rapidly over the next couple of years.<sup>13</sup>

Cost is only one of the many factors favoring VOIP. Growth of mobile phones, the Internet, and the rapid integration of wireless and wireline service (the so-called Fixed Mobile Convergence) are additional reasons for its growth. VOIP allows a seamless integration of wireline, wireless and Internet services.<sup>14</sup>

**Broadband Transition.** Congress has made broadband deployment a major national objective. The American Recovery and Reinvestment Act of 2009 directed the Federal Communications Commission (FCC) to create a national broadband plan that seeks to “ensure that all people in the United States have access to broadband capability.” The *National Broadband Plan* was released in mid-March, 2010.<sup>15</sup>

As discussed in the *Broadband Plan*, broadband is not a standalone communications service, but a platform over which Internet Protocol (IP) based voice, data, and video “converge” with the traditional Public Switched Telephone Network (PSTN). With this convergence, many customers have left the PSTN, and as a result the largely fixed costs of its provision are spread over fewer remaining customers, which increases the average costs per line. According to estimates cited in the report, between 2003 and 2009 the average cost per line has increased almost 20 percent. From a long-term perspective, U.S. telecommunications are in the midst of switching from PSTN to an IP based network. This process is likely to take many years. As discussed in the *National Broadband Plan*, “Regulations require certain carriers to maintain POTS (plain old telephone service) —a requirement that is not sustainable—and

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<sup>13</sup> “Comments of AT&T Inc. on the Transition From the Legacy Circuit-Switched Network to Broadband,” Before the Federal Communications Commission, Comments – NBP Public Notice #25, December 21, 2009.

<sup>14</sup> “VOIP is the New POTS,” *VON Magazine*, January 15, 2006.

<sup>15</sup> *Connecting America: The National Broadband Plan*, Federal Communications Commission, March 2010.

lead to investments in assets that could be stranded.” The implications of how this changeover occurs are very important for regulated phone companies. As stated in the *National Broadband Plan*,

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*“Increasing competition in the telecommunications industry has produced substantial benefits for consumers, and has the potential to generate even greater benefits in the future.”*

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As with earlier transitions, the transition from a circuit switched network will take a number of years. But to ensure that the transition does not dramatically disrupt communications or make it difficult to achieve certain public policy goals, the country should start considering the necessary elements of this transition in parallel with efforts to accelerate broadband deployment and adoption. As such, the FCC should start a proceeding on the transition that asks for comment on a number of questions, including whether the FCC should set a timeline for a transition and, if so, what the timeline should be, quality of service requirements and safeguarding emergency communications.

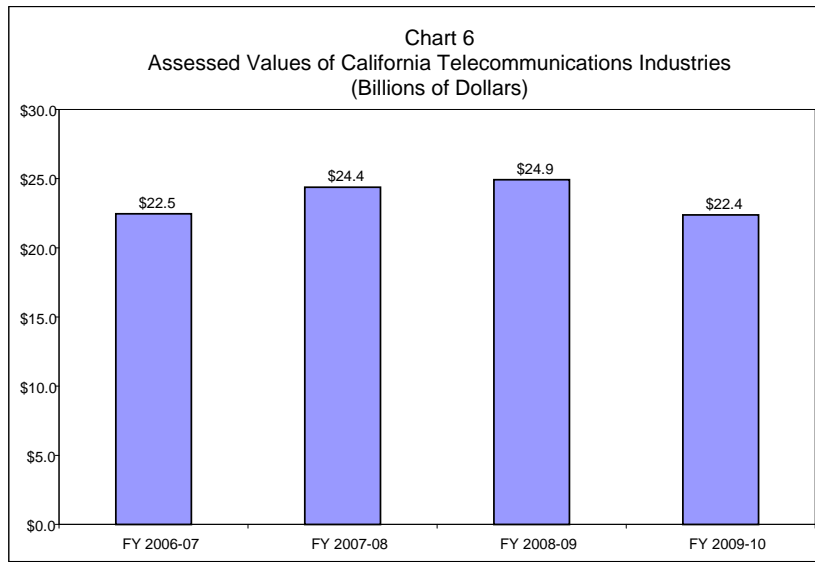
**Competition in Telecommunications.** Broadband and its associated IP network are largely responsible for resulting in what appears to be strong competition among telephone, cable, Internet, wireless and satellite companies in providing telecommunications services. A 2008 report from the U.S. Department of Justice states: “Increasing competition in the telecommunications industry has produced substantial benefits for consumers, and has the potential to generate even greater benefits in the future.”<sup>16</sup> According to the Federal Communications Commission’s (FCC) latest report to Congress on the state of competition in the wireless industry, “The *Thirteenth Report* finds that U.S. consumers continue to reap significant benefits – including low prices, new technologies, improved service quality, and choice among providers – from competition in the CMRS [Commercial Mobile Radio Services] marketplace, both in terrestrial and satellite CMRS.”<sup>17</sup>

There is also evidence of competition in the telecommunications industry in California. As shown in Chart 6, assessments of all four telecommunications industries combined declined during the recession, and now stand close to their 2006-07 value, totaling \$22.4 billion.

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<sup>16</sup> *Voice, Video and Broadband: The Changing Competitive Landscape and its Impact on Consumers*, U.S. Department of Justice, November 2008.

<sup>17</sup> *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Released January 15, 2009, Federal Communications Commission.



**Cable Services Revenues Rising.** U.S. cable providers have been expanding revenues by adding a telephone services option to programming. Revenues of cable and other distribution companies increased to \$115 billion in 2008. U.S. cable revenues have grown by double digit rates over the past three years.

One reason for the growth in cable revenues in recent years has been high-speed broadband lines. As shown in Chart 7, the number of U.S. high-speed cable modem lines has grown faster than U.S. high-speed DSL lines since 2005. In December 2008 there were 41.5 million U.S. cable modem lines and 30.2 million U.S. DSL lines.<sup>18</sup>

**Wired Services Revenues Declining.** Revenues of U.S. wired services telecommunications companies have generally been declining since 2000, but the declines have leveled off in recent years. U.S. Wired services revenues fell 1.1 percent in 2008.

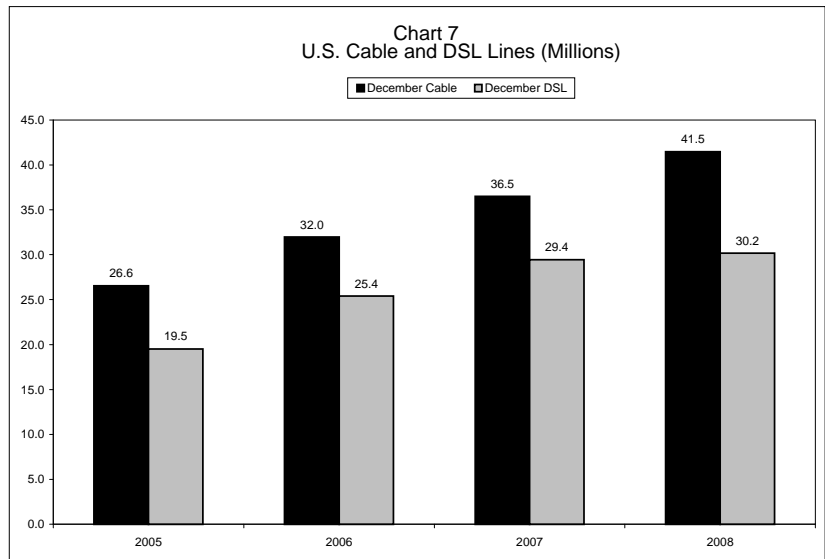
**Wireless Services Revenues Growth Slowing.** Until 2008 revenue growth of U.S. wireless communications carriers had been increasing at double digit rates. However, in recent years the industry has matured and the growth of new subscribers has slowed. Revenue growth of U.S. wireless telecommunications carriers rose 6.3 percent in 2008. Total U.S. wired and wireless communications industry revenue increased 2.4 percent in 2008 to \$380 billion.

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<sup>18</sup> *High-Speed Services for Internet Access: Status as of December 31, 2008*, Federal Communications Commission, February 2010.



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*The demographic group with the largest share of wireless-only households in 2008 was the group with those aged 25-29; 46 percent of these households only had wireless phones.*

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### **Fewer Wired Access Lines, More Wireless Subscriptions.**

Because of definitional differences, classifying access line changes can vary greatly depending on the source from which they are derived. Furthermore, unknown numbers of traditional telephone access lines, rather than disappearing, have instead been replaced by broadband lines. However, most analysts agree that numbers of general use wired access lines have decreased in recent years, while wireless subscriptions have increased. According to Federal Communications Commission (FCC) data, the number of U.S. wireline telephone lines peaked at 192.4 million in 2000 then declined by about 13 percent to 167.5 million lines by 2006.<sup>19</sup> In contrast, U.S. wireless subscriptions increased from 97.0 million in 2000 to 276.6 million by June 2009.<sup>20</sup>

Wireless substitution is seen as a significant reason for the decline in access lines. Many consumers are using wireless phones in lieu of having wired telephone line. Younger households in particular are making this substitution. In early 2009 about 23 percent of all U.S. households had only wireless phones, a sharp increase from 7.3 percent in 2005. The demographic group with the largest share of wireless-only households in 2008 was the group with those aged 25-29; 46 percent of these households only had wireless phones.<sup>21</sup>

<sup>19</sup> *Trends in Telephone Service*, Federal Communications Commission, August 2008.

<sup>20</sup> CITA-The Wireless Association.

<sup>21</sup> *Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, January – June 2009*, National Center for Health Statistics, December 2009.

**Benefits to Consumers.** Adoption of many of the technological changes discussed above and increased competition in communications have benefited consumers. According to the most recent FCC data, the numbers of wireless subscribers and minutes of usage rose while the average price per minute declined. In 2007, wireless subscriptions increased 9 percent, the average minutes of usage rose 8 percent, and the average revenue per minute decreased 14 percent. On average U.S. mobile subscribers paid about \$0.06 per minute in 2007, down from \$0.10 per minute in 2003.<sup>22</sup> U.S. Bureau of Labor Statistics data show that prices for all telephone services rose 1.0 percent in 2009, less than the 2.8 percent increase in the overall consumer price index (December 2009 compared to December 2008).

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*On average U.S. mobile subscribers paid about \$0.06 per minute in 2007, down from \$0.10 per minute in 2003.*

#### **IV. Railroad Transportation**

**Recap of 2009 Assessments.** Railroad companies accounted for about 2 percent of all Board-assessed values in fiscal year 2009-10.

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**Rail Industry.** After a series of mergers that took place over many years, the number of U.S. Class I railroad companies has declined to just seven. Four of these companies haul over 90 percent of all U.S. freight traffic.<sup>23</sup> Despite this market concentration, many analysts believe that the mergers have been successful in lowering costs, achieving economies of scale, and improving efficiency.<sup>24</sup> A recent study commissioned by the U.S. Surface Transportation Board concluded that the railroad industry does not appear to be earning above normal profits over a long term time period.<sup>25</sup>

**Rail Affected by Economy and Energy Prices.** Revenue and profit growth in the rail industry tend to be highly correlated with the overall economy and inversely related to trends in

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<sup>22</sup> *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Released January 15, 2009, Federal Communications Commission.

<sup>23</sup> "Quarterly Earnings Reports," U.S. Surface Transportation Board. Class I rail companies are defined as those with revenues over \$250 million and which generally operate across state lines.

<sup>24</sup> A study of operating efficiencies of the 1996 merger of the Union Pacific Railway Company and the Southern Pacific Transportation Company is found in "The Union Pacific/Southern Pacific Rail Merger: A Retrospective on the Merger Benefits," Dennis A. Breen, Federal Trade Commission, March 11, 2004. The study also includes discussion of the results of other studies made.

<sup>25</sup> "An Update to the Study of Competition in the U.S. Freight Railroad Industry," Laurits R. Christensen Associates, Inc., January 2010.

crude oil prices. U.S. rail carload originations peaked in 2006, at over 17 million carloads. Carload originations fell 16 percent in 2009, to 13.8 million carloads.<sup>26</sup>

Prior to 2009 (the worst part of the recession) the railroad industry performed relatively well. U.S. railroad industry profits rose 7 percent in 2008 to about \$9.9 billion, which was more than double their 2002 amount. *Value Line* estimated that profits for railroads dropped 17 percent in 2009, in line with the decline in carload originations.<sup>27</sup> The outlook for the rail industry in 2010 is for a return to typical long-term pre-recession revenue and profit growth rates as the economy improves.

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<sup>26</sup> "Rail Time Indicators," January 13, 2010, Association of American Railroads.

<sup>27</sup> "Railroad Industry," Value Line Publishing, Inc., December 4, 2009.