

# Economic Context

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## 2008 Valuation of State-Assessed Properties

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

#### U.S. Economy and Financial Markets

**Economy Weakens in Late 2007.** Economic growth was weak in late 2007 and early 2008, as rising energy prices and falling residential real estate prices and sales reduced economic activity. U.S. real gross domestic product (GDP) rose at annual rate of just 0.6 percent in the last quarter of 2007. According to the Federal Reserve Board, declines in residential real estate reduced the annual rate of growth of real GDP in the second half of 2007 by more than one percentage point, and this trend is continuing into 2008.<sup>1</sup>

**Recap of 2007.** Real GDP increased 2.2 percent for all of 2007, compared to a ten-year average of 2.9 percent annual growth. The household sector was resilient, as real consumer spending rose 2.9 percent in 2007, down only slightly from 3.1 percent growth in 2006. Consumer spending on durable goods increased 4.7 percent, while nondurables purchases increased 2.4 percent. Steep declines in residential real estate investment were responsible for much of the 2007 decline. Real residential real estate investment fell 17.0 percent in 2007, the largest decrease since 1982. The only major sectors with strong growth were exports and nonresidential investment. Real exports increased 8.0 percent, while real nonresidential real estate investment rose 13.1 percent.

**Steadily Rising Energy Costs.** Crude oil prices increased steadily in 2007 and early 2008. The average U.S. refiners' acquisition price rose from \$50.74 per barrel in January 2007 to \$86.87 per barrel by January 2008 (see Chart 1). While short term factors are currently keeping crude oil prices relatively high, the U.S. Energy Information Administration (EIA) expects crude oil prices to ease somewhat from their current levels later this year. The EIA forecasts that crude oil prices will average close to \$90 per barrel in 2008.

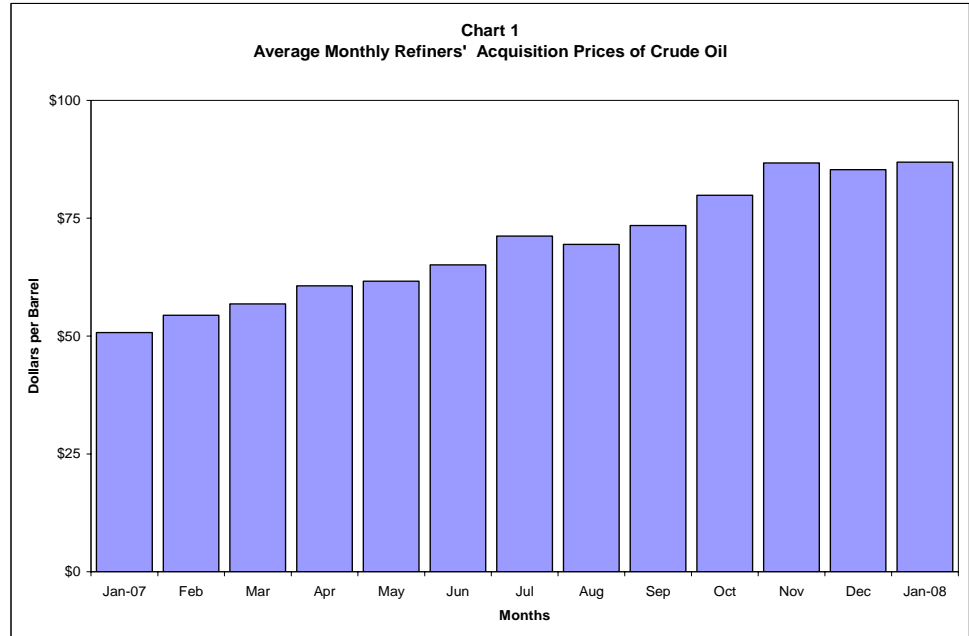
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<sup>1</sup> *Monetary Policy Report to the Congress*, Board of Governors of the Federal Reserve System, February 27, 2008.




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**Energy Costs Increasing Overall Inflation Rate.** The U.S. consumer price index (CPI) rose 2.8 percent in 2007, down from 3.2 percent in 2006. Energy and medical care cost increases had large impacts on the overall inflation rate. While increase in the CPI was less than it was in 2006, prices rose fastest in the latter part of the year, as they were affected by the trend of steadily rising crude oil prices.

**Falling Short Term Interest Rates.** Responding to liquidity problems in the financial markets and a weakening economy, the Federal Reserve Board began decreasing the target for the federal funds interest rate in late summer of 2007 and has continued this policy into 2008. The target federal funds rate dropped sharply from 5.25 percent in August 2007 to 2.25 percent by April 2008 through a series of Federal Reserve Board cuts. Financial markets also dramatically “re-priced” risk upwards in the latter half of 2007, as investors became more risk averse because of turmoil in financial markets. As a result of the financial volatility and the Federal Reserve Board actions, the spread (the difference between long term and short term interest rates) increased in the later half of 2007. In February 2008 the interest rate for three-month U.S. Treasury bills averaged 2.2 percent, while ten-year U.S. treasury bonds averaged a yield of 3.7 percent, a spread of 1.5 percent. In contrast, the spread was -0.3 in February 2007, reflecting an unusual condition of a preference for risk. While the spread increased, it remains less than the average for the 1990s, when three-month treasury bills averaged 4.9 percent and ten-year U.S. treasury bond yields averaged 6.7 percent, a spread of 1.8 percent.

**Plateau in Corporate Earnings.** After five straight years of double-digit gains, increases in corporate earnings slowed sharply in 2007, rising 2.7 percent. In previous years strong economic growth, productivity growth, relatively low interest rates, and increasing energy prices combined to result in rapid growth in corporate profits. Despite the weakness last year, profits before taxes have more than doubled from 2001 to 2007.

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**Major Stock Indices Little Changed From Early 2007.** Compared to early 2007, prices of major stock market indices declined in early 2008. The Standard and Poor's composite stock index decreased 6 percent from February 2007 to February 2008. The Nasdaq stock index also decreased 6 percent over the same time period. There is a great disparity between financial and nonfinancial corporations in the health of their balance sheets. This disparity is associated with asset write-downs resulting from subprime lending and is reflected in stock prices. In contrast to the relatively small reductions in Standard and Poor's and Nasdaq indices, prices of financial companies listed on the New York Stock Exchange declined about 22 percent from February 2007 to February 2008.

**Below Average Growth Outlook for 2008.** Numerous economists believe a recession may have begun in early 2008. Many economic forecasters expect weak or even negative economic growth in the first half of 2008 before resuming to a near-normal rate of close to 3 percent in the later half. A February 2008 survey of about 50 professional forecasters polled by the Federal Reserve Bank of Philadelphia calls for real GDP to increase 1.8 percent in 2008.<sup>2</sup>

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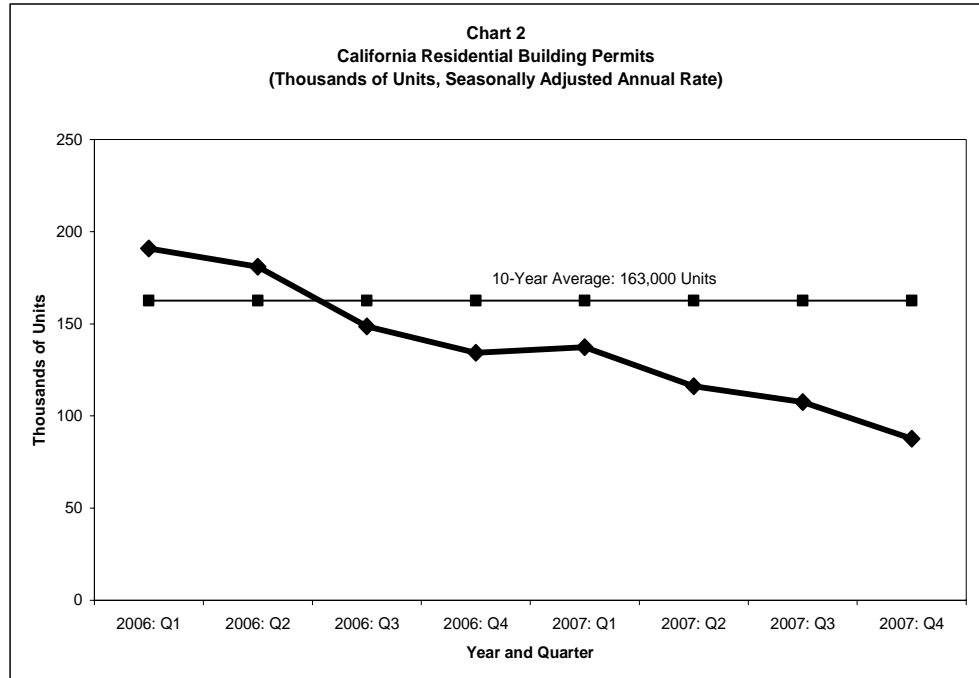
### **California Economy**

**California Parallels National Economy.** Available data indicate that the California economy generally slowed along with the U.S. economy in 2007. California nonagricultural employment (one of the broadest measures of economic activity available to states on a timely basis) increased 0.7 percent in 2007, down sharply from 1.7 percent in 2006. The California unemployment rate averaged 5.4 percent in 2007, up from 4.9 percent in 2006.

As with much of the rest of the nation, residential construction activity fell dramatically in California in 2007 following a real estate boom of previous years (see Chart 2). A total of 113,000 residential building permits were issued in California in 2007, down 31 percent from 164,000 issued in 2006. The 2007 permits total was the lowest it has been since 1997. Over the past ten years an average of 163,000 units per year were issued. The inflation-adjusted total value of nonresidential construction rose 1.6 percent in 2007, reflecting the relatively stronger performance of business investment in structures.

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<sup>2</sup> "Survey of Professional Forecasters," Federal Reserve Bank of Philadelphia, February 12, 2008.



Many forecasters expect weakness in the California economy to continue throughout 2008. According to the April 2008 issue of the *Western Blue Chip Economic Forecast* (which includes a survey of eight California economists) the average forecast calls for California nonagricultural employment to increase just 0.4 percent in 2008. These forecasters also predict that California personal income will increase 4.1 percent and that taxable sales will increase 1.9 percent in 2008. The *Western Blue Chip* forecast also expects continued weakness in residential construction, with a consensus forecast that single family home permits will decline 22 percent in 2008.

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## Electricity and Natural Gas Industries

**Recap of 2007 Assessments.** Electric, natural gas, and water companies accounted for about 62 percent of all Board-assessed values in fiscal year 2007-08. Electric generating facilities firms accounted for 16 percent of the total value for these companies. The vast majority of the remaining 84 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 and Recent Developments.** 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.

Much of the current mixed regulatory system resulted from the consequences of a severe energy crisis that developed in California in 2000 and 2001. This crisis resulted in Pacific Gas & Electric's (PG&E), a major California electric utility, becoming financially insolvent in early 2001 because the company was unable to pass on dramatic increases in wholesale electricity prices charged by generators. In April 2004, PG&E emerged from bankruptcy and once again appears to be healthy financially.

**Short Run Electricity Outlook.** While the California public utilities, which are regulated, are currently healthy, the outlook for the deregulated electric generating facilities is mixed. There appears to be a small short-run electricity generating capacity surplus in California.<sup>3</sup> More new generating facilities are under construction and are scheduled to come on-line in the next few years. As a result, many old generating facilities which are not as efficient as the new ones, are expected to be retired. Before demand can catch up with the new supply, newly constructed generating facilities may experience lower than expected returns on their investment in the short-run.

Because of the new construction, the California electricity supply currently appears to be adequate, or even in surplus. The demand for California electricity peaks in the summer months, with increased usage of air conditioning equipment. While electricity supplies are likely to be adequate, they could become tight and prices could spike upward in certain locations if the summer is abnormally hot. However, with typical weather patterns, the outlook for electricity supply should be a positive one for electricity consumers.

**Long Run Electricity Outlook.** In 2006, an important piece of legislation was passed regulating the emission of greenhouse gases emitted by power plants. AB 32, the California Global Warming Solutions Act of 2006, will "...require the state [Air Resources] 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."<sup>4</sup>

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<sup>3</sup> "Post-Meltdown Valuation," Devrim Albuz and Gary L. Hunt, *Public Utilities Fortnightly*, January 2008.

<sup>4</sup> Assembly Bill 32 (Nunez), Statutes of 2005-06.

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*The California Energy Commission adopted greenhouse gases emissions standards for electric public utilities in August 2007.*

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How AB 32 will affect electricity generators is not yet clear. If market-based compliance solutions are adopted, the ownership, quantities and market values of emissions trading rights would need to be determined and evaluated. In addition, the costs of various technological solutions to reduce power plant emissions would need to be analyzed, along with the values of electricity usage conservation by customers. AB 32 likely would result in the state attaining its goal of generating more electricity from renewable resources.<sup>5</sup>

Many specific incentives to generate more electricity from renewable resources still need to be formulated and implemented. However, progress is being made towards this goal. The California Energy Commission adopted greenhouse gases emissions standards for electric public utilities in August 2007.<sup>6</sup>

While it is early in the planning stages, there is much activity towards achieving the long-run goal of using more renewable energy sources in generating electricity. According to the California Energy Commission, 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.

### **Natural Gas.**

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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.

After reaching an all-time annual average high in 2005 of \$7.33 per thousand cubic feet (Mcf), natural gas prices at the wellhead declined in 2006 and stabilized in 2007, averaging about \$6.40 per (Mcf) in both years. The U.S. Energy Information Administration (EIA) predicts that U.S. natural gas prices will remain relatively high over the next couple of years because of a large increase in demand by electric utilities in 2007 and a relatively cold winter in early 2008. The EIA predicts wellhead natural gas prices to average \$7.24 per Mcf in 2008.<sup>7</sup>

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<sup>5</sup> 2006 Integrated Energy Policy Report Update, California Energy Commission, January 2007,

<sup>6</sup> Solar Energy: As the Cost of This Resource Becomes More Competitive With Other Renewable Resources, Applications to Construct New Solar Power Plants Should Increase, California State Auditor, January 2008.

<sup>7</sup> "Short-Term Energy Outlook – March 2008," U.S. Department of Energy, Energy Information Administration, 2008.

## Telecommunications Industries

**Recap of 2007 Assessments.** Telephone and telegraph companies accounted for 33 percent of all Board-assessed values in fiscal year 2007-08. Local exchange companies had the highest valuation, followed by wireless and interexchange companies. Local exchange carriers accounted for 46 percent Board-assessed values in the telephone and telegraph industries in fiscal year 2006-07. Wireless companies accounted for 37 percent of Board telecommunications assessments and interexchange companies 17 percent.

**Recent Developments.** In September 2007 the California Public Utilities Commission took action to 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>8</sup>

In 2006, an important piece of legislation was passed that changes the regulatory framework for cable television service providers. Among other measures, AB 2987 (the Digital Infrastructure and Video Competition Act of 2006) established a procedure for the issuance of state franchises for the provision of video service.<sup>9</sup> As a result of the bill, both cable service providers and telephone companies could obtain statewide video franchises through a streamlined process that does not require separate franchises in each individual city or county in which they operate. Such “one-stop shopping” is intended to promote competition for broadband and video service.

**Competition in Telecommunications.** AB 2987 is hastening convergence among telephone and cable service providers that has been made possible by recent technological advances. There are very few “pure play” telecommunications companies any more. Today’s telecommunications companies must provide more than one service in order to remain competitive. Convergence is occurring on many different levels, both for business and household end users. Intensifying competition and convergence among telephone, cable, Internet, wireless and satellite service providers has caused these various services to become more similar to one another. Competition and interrelationships among these services are providing more choices for consumers and businesses. Bundled services of wireless and wireline phone service, high speed Internet service, and cable television service all provided by a single company are seen by many

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<sup>8</sup> “Interim Opinion Adopting Reforms to the High Cost Fund-B Mechanism,” California Public Utilities Commission, Decision 07-09-020, September 6, 2007.

<sup>9</sup> Assembly Bill 2987 (Nunez), Statutes of 2005-06.

telecommunications industry analysts as a way to increase profits. However, to provide these services efficiently requires huge investments and the ability to spread fixed costs over large numbers of customers.

A 2005 article in *Business Economics*, the journal of the National Association for Business Economists, concludes that there is significant competition in the telecommunications industry:

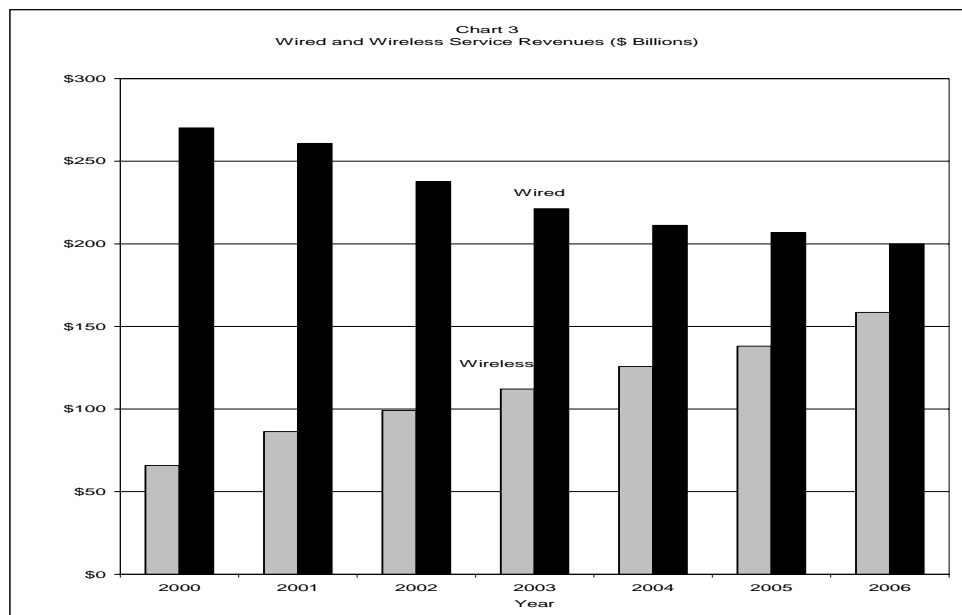
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The research presented here provides some evidence in the deregulation debate. The finding that intermodal competition is significant in the telecommunications market and that local competition is enhanced by it suggests regulatory policies ought to account for these effects – perhaps without regard to CLEC [competitive local exchange carrier] line share.<sup>10</sup>

**Wireless Services Revenues Converging With Wired.** The wireless industry has grown rapidly in recent years, and its revenues are beginning to approach those of wired services. At its peak in 2000, U.S. wired services revenues were about \$270 billion, while U.S. wireless revenues were about \$66 billion (see Chart 3).<sup>11</sup> By 2006 wired services revenues declined about 26 percent to \$200 billion. Over the same time period wireless services revenues increased 141 percent to \$159 billion. Total U.S. wired and wireless telecommunications industry revenue increased 3.9 percent in 2006 to \$358 billion.



<sup>10</sup> “Competition in Local Communications,” Christopher Swann and David G. Loomis, *Business Economics*, National Association for Business Economists, April 2005.

<sup>11</sup> *Service Annual Survey*, U.S. Census Bureau, January 2008 and prior issues.

**Fewer Wired Access Lines, More Wireless Subscriptions.** Paralleling the trends in revenue growth, numbers of wired access lines have decreased in recent years while wireless subscriptions have increased. The number of U.S. wireline telephone lines peaked at 192.4 million in 2000 then declined by about 9 percent to 175.2 million lines by 2005.<sup>12</sup> More recent data indicate that Regional Bell operating companies (RBOCs) have seen their numbers of access lines decrease an additional 7 percent in 2006.<sup>13</sup> In contrast, U.S. wireless subscriptions increased from 97.0 million in 2000 to 243.4 million by June 2007.<sup>14</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 2007, 12.8 percent of all U.S. households had only wireless phones, a sharp increase from 7.7 percent in 2005.<sup>15</sup>

**Broadband Adoption Widespread.** U.S. broadband subscriptions for homes and businesses increased 52 percent in 2006, to 64.6 million lines. Close to half of the 2006 broadband growth was on mobile wireless platforms. Broadband adoption was widespread among many socio-demographic groups. Furthermore, average U.S. household digital subscriber line (DSL) broadband prices have dropped from \$38.00 to \$32.00 per month over the last couple of years. Cable modem users reported unchanged average prices of \$41.00 per month over the same period.<sup>16</sup> In 2005 about 64 percent of U.S. households had either broadband or narrow band Internet access.<sup>17</sup>

**VOIP Technology Gaining Rapid Adoption.** In recent years the Internet has become the key component of the telecommunications industry. A relatively new technology, Voice Over Internet Protocol (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. Many telecommunications companies, including wireless companies, are already using the technology. It is also possible for consumers to use VOIP directly and bypass the need for local telephone service.

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<sup>12</sup> *Trends in Telephone Service*, Federal Communications Commission, February 2007.

<sup>13</sup> *Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, Released February 4, 2008, Federal Communications Commission.

<sup>14</sup> CITA-The Wireless Association.

<sup>15</sup> CITA-The Wireless Association.

<sup>16</sup> Written Statement of Kevin J. Martin, Chairman, Federal Communications Commission, before the Committee on Commerce, Science and Transportation, U.S. Senate, February 1, 2007 and *High-Speed Services for Internet Access: Status as of June 30, 2006*, Federal Communications Commission, January 2007.

<sup>17</sup> “U.S. Households’ Internet growth will be flat in 2006,” *Internet Retailer*, March 7, 2006.

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>18</sup>

**Benefits to Consumers.** Adoption of many of the technological changes discussed above and increased competition in telecommunications have benefited consumers. Prices have declined for both wireline and wireless phone service over the past several years. According to the FCC, “In 2005, the price for long distance service was two-thirds of what it was in 2000, wireless phone service was half of its 2000 level, and the price for placing an international call was a quarter of what it was in 2000.”<sup>19</sup> Other data show that the consumer benefits for wireless subscribers have continued since 2005. The most recent U.S. data available show that the numbers of wireless subscribers and minutes of usage rose while the average price per minute declined. In 2006, wireless subscriptions increased 13 percent, the average minutes of usage rose 16 percent, and the average price decreased 14 percent.<sup>20</sup>

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## **Railroad Transportation**

**Recap of 2007 Assessments.** Railroad companies accounted for about 2 percent of all Board-assessed values in fiscal year 2006-07.

**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.<sup>21</sup> Four of these companies haul 95 percent of all U.S. freight traffic. Despite this market concentration, many analysts believe that the mergers have been successful in lowering costs, achieving economies of scale, and improving efficiency.<sup>22</sup>

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<sup>18</sup> “VOIP is the New POTS,” *VON Magazine*, January 15, 2006.

<sup>19</sup> Written Statement of Kevin J. Martin, Chairman, Federal Communications Commission, before the Committee on Commerce, Science and Transportation, U.S. Senate, February 1, 2007.

<sup>20</sup> “U.S. Communications Regulation and Market Developments,” a presentation by Chairman Kevin J. Martin, Federal Communications Commission, February 2007.

<sup>21</sup> The source of the following discussion is “Railroads; Asleep at the Switch,” *Businessweek*, April 2, 2001. Class I rail companies are defined as those with revenues over \$250 million and which generally operate across state lines. The number of Class I railroad companies was updated to reflect 2005 data using the *2008 Statistical Abstract of the U.S.*, U.S. Census Bureau.

<sup>22</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.

**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 crude oil prices. As might be expected, over the past several years the railroad industry has performed well. In late 2007 *Value Line* estimated that U.S. railroad industry profits rose about 10 percent in 2007 to about \$9.0 billion, which would be more than double their 2002 amount.<sup>23</sup> While profits were up, shipments were down slightly in 2007 largely because of fewer housing-related freight shipments. With the economy weakening and energy prices rising, the outlook for the rail industry in 2008 is uncertain, depending on how these two forces combine to impact shipments. *Value Line* is projecting a 5.6 percent increase in rail revenues in 2008.

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<sup>23</sup> "Railroad Industry," Value Line Publishing, Inc., December 7, 2007.