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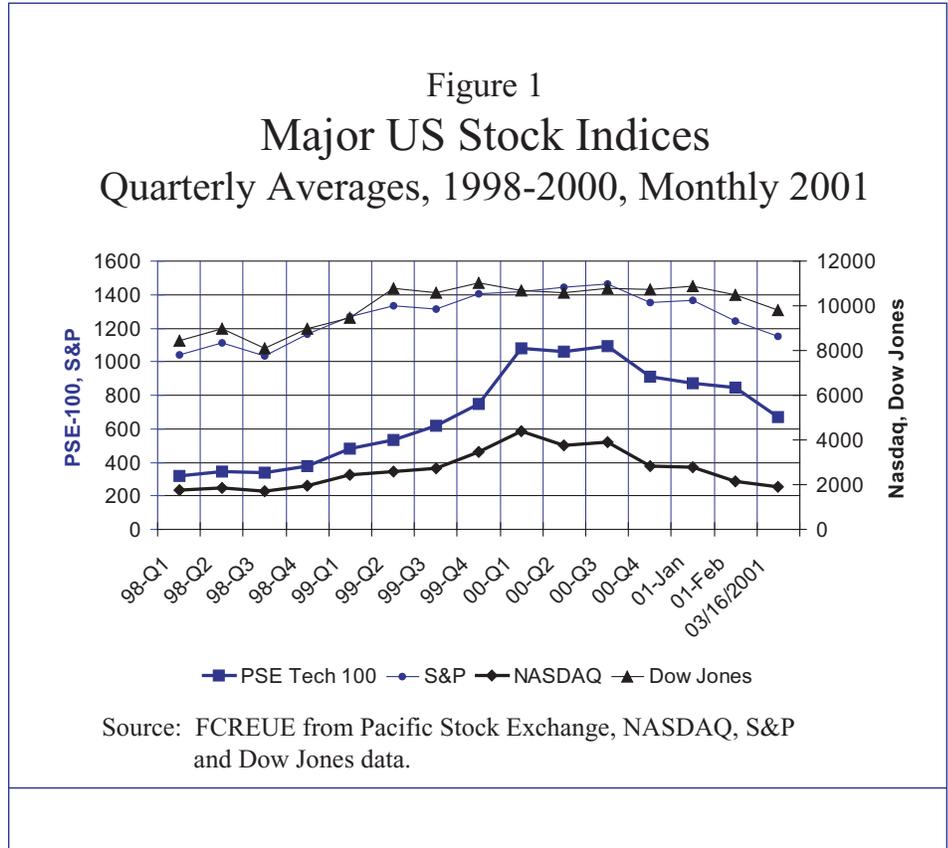
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The Bubble Has Burst – How Will California Fare?

Dwight M. Jaffee and Cynthia A. Kroll

California is just ending a growth spurt reminiscent of the gold rush. Opportunities for wealth accumulation accrued to Internet entrepreneurs, dot-com employees, and owners of residential and commercial real estate. In Silicon Valley, the heart of the boom, housing prices rose by 50% in 2 years, office rental rates more than doubled, and vacancy rates were halved, dropping to their lowest level in 20 years. Many of these fortunes expanded with the stock market.

Since reaching a peak over 5,000 early last year, the NASDAQ bubble has burst, with the index falling below 2000. Echoing the stock market collapse, there are reports of a sharp correction beginning in the office markets of San Jose and San Francisco. Nevertheless, it is worth noting that a March 2001 update by the California Employment Development Department shows California employment growth continuing into 1st quarter 2001, and February unemployment at 4.5%, the lowest in over 30 years. In



this article, we examine the experience of the California economy in past recessions in order to evaluate the type of adjustments that California will likely face in coming months, going forward from current conditions.

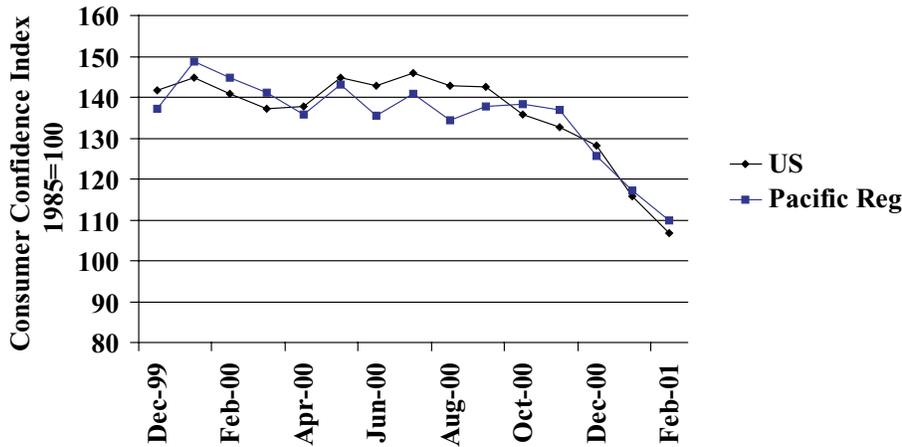
Signs of Trouble

After 10 years of steady expansion, US growth has taken a downward turn. The stock mar-

ket has grabbed the largest headlines. As of mid-March, the NASDAQ composite index was down 60% from a high of above 5000. All of the gains of 1999 and early 2000 have been lost by investors. Adjustments are less severe in other stock indices, but by March 2001, these, too, were steadily dropping (See Figure 1).

The stock market is not always a very good predictor of

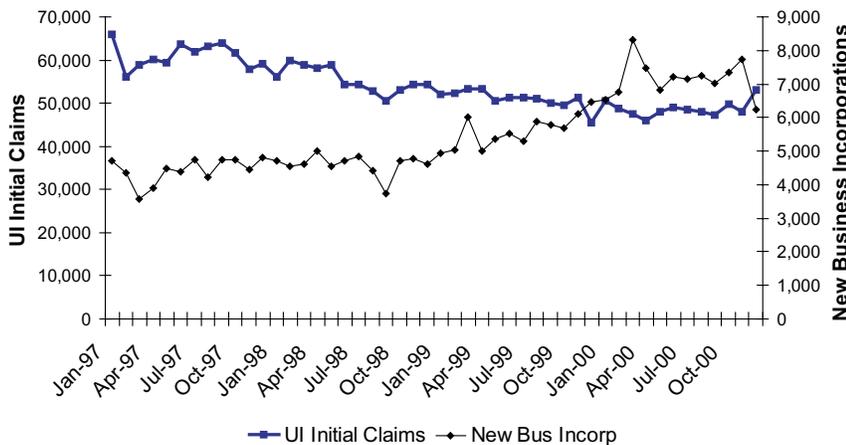
Figure 2
Consumer Confidence
 December 1999-February 2001



Source: Conference Board

recession in itself. In 1987, for example, a much more severe percentage drop in the index was followed by a few months of price recovery and by no apparent impact on GDP or employment growth. In the present case, however, there are already other signs of slowing. Real GDP growth, which hit a high of 8.0% in 4th quarter 1999 slowed to an annual rate of 1.0% by 4th quarter 2000, the lowest since 2nd quarter 1995. US employment growth also slowed during 4th quarter. The US entered 2000 with an annual rate of employment growth of 2.3% but ended the year with a 4th quarter annual growth rate of 1.6%. Another key factor is that the consumer confidence index (with a base of 100 in 1985) has dropped sharply in recent months, from a level of over 140 for most of 2000, to 106 in February 2001.

Figure 3
California Unemployment Insurance Initial Claims and New Business Incorporations,
 Jan 1997-Dec 2000



Source: California Department of Finance.

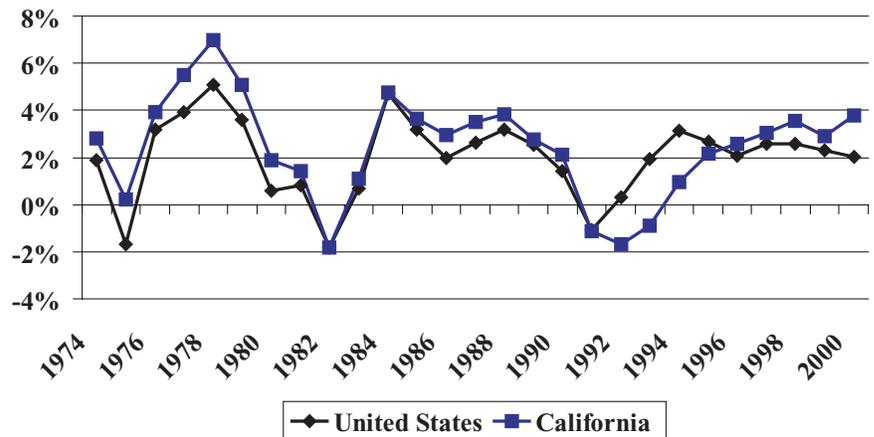
Comparatively, California's employment and income growth actually remained strong through 2000, but the state has other signs that all is not smooth sailing. The Pacific Region consumer confidence index has experienced a drop similar to the US decline, as shown in Figure 2. Initial unemployment insurance claims were turning upward, as of December 2000, and new business incorporations were showing signs of dropping. (See Figure 3). Two thirds of California's largest pub-

lic companies (in terms of market value or employment size) reported earnings increases for their most recent period. However, the outlook is not as bright, with 60% expecting earnings to drop in 2001.

These expectations show signs of translating into employment losses later in the year. Two of California's largest high-tech employers, Cisco and Intel, announced slower than expected growth and intentions to layoff thousands of employees each. In late February another high-tech employer, 3-Comm, announced plans to layoff 10% of its 13,000 workforce. The Walt Disney Company has cut back its Internet group by about 20%. The problems are felt beyond high-tech companies. Knight-Ridder, the parent company of the San Jose Mercury, announced (and later cancelled) an unspecified level of cutbacks to its staff of 1700, necessitated by falling recruitment ad revenues. In Southern California, the state's largest recreational vehicle manufacturer is cutting 1,100 jobs from a plant in Riverside.

Preceding many of these announcements of lower earnings expectations and layoffs came the realization that deregulation of the energy supply system in California had affected both the cost and reliability of power.

Figure 4
Employment Rate of Change, US and California
1974-2000



Source: FCREUE from BLS and California EDD data.

While most of California's major employers are not reliant on low cost energy (because it is a small part of their total production costs), many are heavily reliant on a reliable source of energy.

If the US continues on a path to recession, how will California fare? Are the continuing reports of employment growth a sign that the state's economy can smoothly weather a downturn, or will California share in the US troubles, even in proportion to the degree to which it shared in its prosperity? A look at the history of earlier recessions suggests that California is likely to share in any US downturn, and that the vulner-

ability is particularly high in the regions of the state that benefited most from the new economy bubble. Those real estate prices that have sharply escalated with the economic boom are especially vulnerable in a downturn.

Some Lessons from History

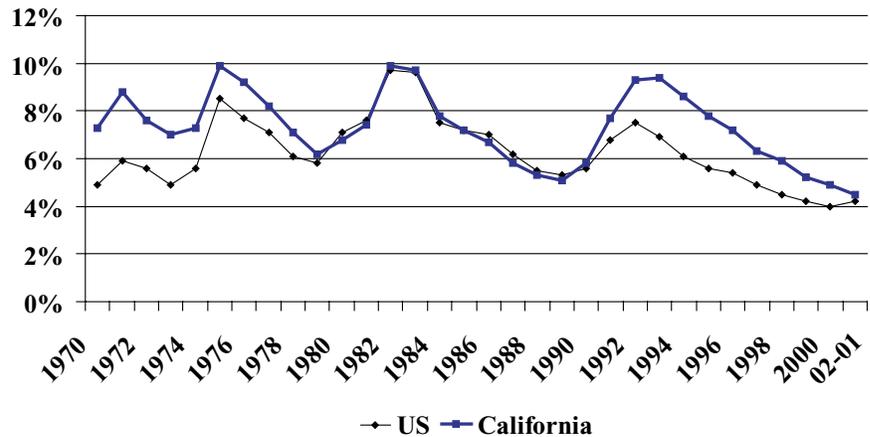
Past history indicates that far from being immune from US recessions, California's employment has closely followed the US cycles, as shown in Figure 4. In each cycle, the rate of employment growth dropped, although the slowdown from the peak generally took at least two years to reach negative growth rates. In most cycles, employment growth

peaked in California a year before the recession began, at times at even higher levels of growth than were experienced in 2000. The momentum of the economy has helped sustain or augment existing employment levels as long as GDP is still expanding, but once GDP drops to negative growth (as in 1975, 1982 and 1991), employment losses also occur. (In the 1991-1993 period, the California recession went on much longer than the US recession, when the state continued to be affected by cut-backs in defense spending, even after GDP was again growing.)

Unemployment rates for the state have tended to be at or above the US level, as shown in Figure 5. In the past 3 recessions, California unemployment rose sharply, approaching 10%, starting from levels as low as 5%. Assuming we have now reached the low point of the unemployment rate cycle, Figure 6 suggests that unemployment rates may sharply escalate over the next 3 years if this cycle follows the pattern of the last three California recessions.

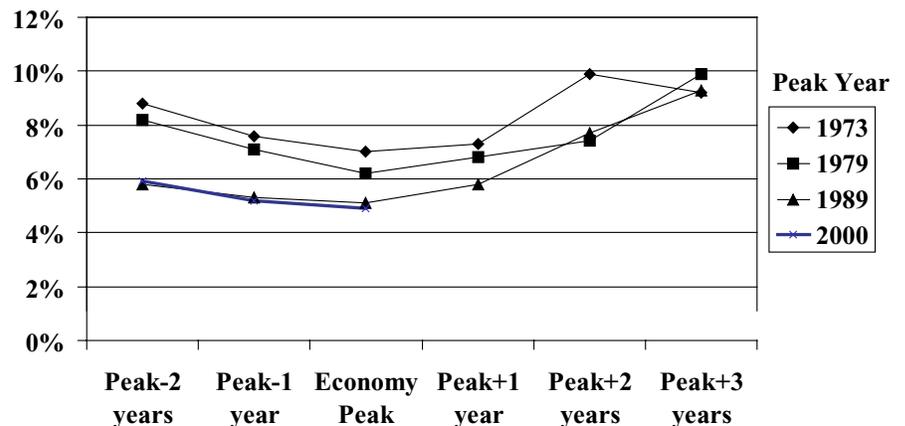
Real estate has proved equally vulnerable in recessions, although the degree of vulnerability has varied over time and among different regions of the state. Until the 1990s, California had not experienced a dip in home prices.

Figure 5
US and California Unemployment Rates
1970-2000 and February 2001 (SA)



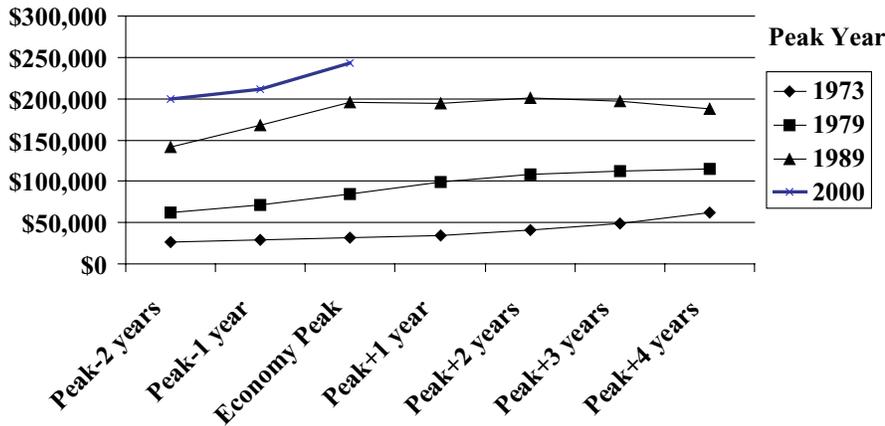
Source: California Employment Development Department.

Figure 6
California Unemployment Rate Trends over
the Business Cycle



Source: Authors from US Bureau of Economic Analysis and California Employment Development Department data.

Figure 7
California Median Housing Price Trends over the Business Cycle



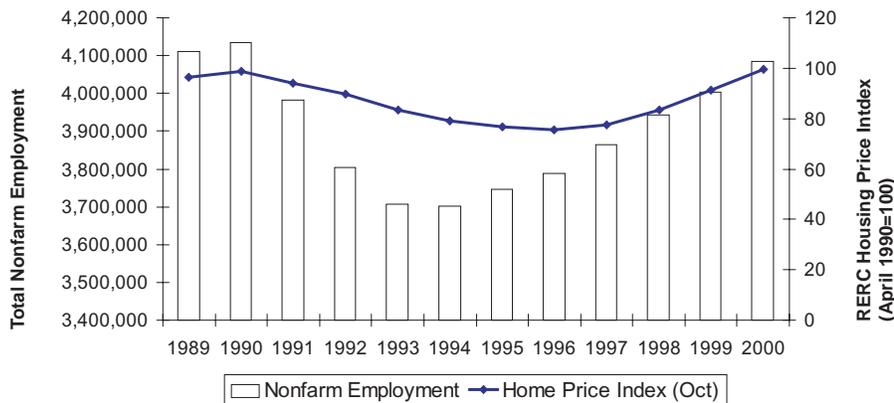
Source: Authors from US Bureau of Economic Analysis and California Association of Realtors data.

In the mid-1970s, prices had been growing at close to the US average, the economic recovery came quickly, and home prices continued to rise despite a dip in the economy (see Figure 7). In the 1979 to early 1980s period, home prices had risen more rapidly prior to the recession. Prices stopped rising during the recessionary period but did not drop (on an annual basis, not adjusted for general inflation). In this case, a drop in interest rates from very high levels may have helped bolster demand.

The boom that peaked in 1989 had seen a repeat in the run-up in prices that had occurred prior to the previous recession. However, prices proved softer than in the earlier period. The median price of homes continued to rise until 1991, but by 1993 had dropped below even the 1989 level. Prices did not again exceed the 1989 level until 1998 and only surpassed the 1991 peak in 1999. The length of the downturn in prices is certainly related to the length of the recession, which was much longer in California than in the US as a whole.

During the 1991-1993 California recession, prices were particularly soft in the Los Angeles area, which also received the greatest job losses. According to the Real Estate Research Council home price index, home

Figure 8
Los Angeles Employment Levels and Home Price Index, 1989-2001



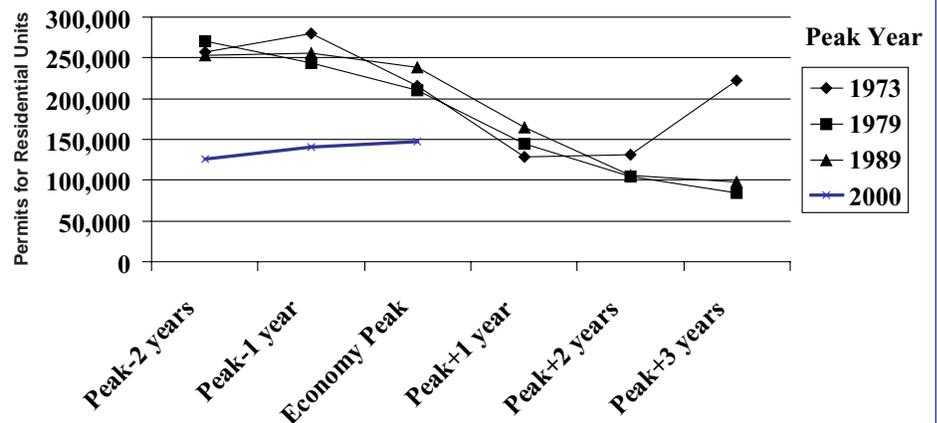
Source: Authors from California Employment Development Department and Real Estate Research Council of Southern California data.

values in the Los Angeles area had dropped by over 20% by 1996 and did not recover to the 1990 peak value until 2000, when full job recovery was also reached. (See Figure 8).

Residential building activity has fluctuated more sharply with the economy than have home prices. In the previous three economic cycles, residential building activity peaked about a year before the economy peak, at between 240,000 and 280,000 units annually, as shown in Figure 9. Building activity fell quickly with the economic slowdown, dropping below 100,000 in both the early 1980s and early 1990s. In the current cycle, residential building activity never reached the peaks of the previous cycles, rising from a low point of 85,000 in 1993 to just under 150,000 by 2000 (not much above the trough of the mid 1970s). It is thus unclear how much of a decline is in prospect from a recession; because the starting point is much lower relative to previous cyclical peaks, the percentage impact on builders is likely to be substantially less.

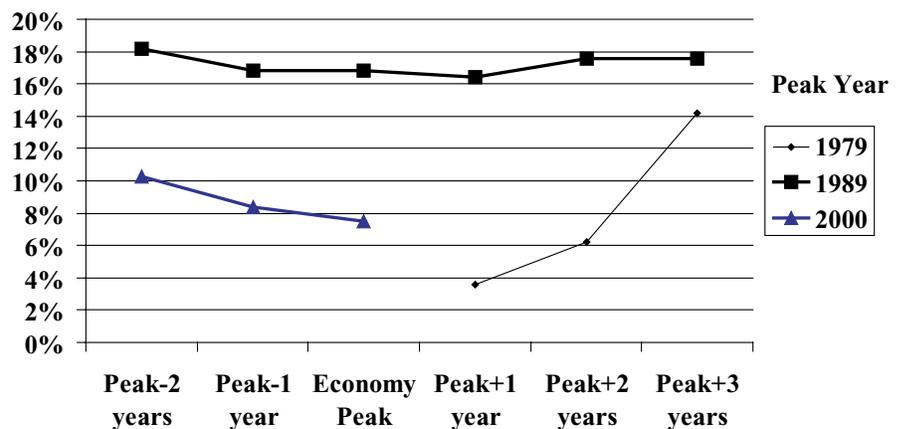
Experience in the office sector is much more varied than the residential market over previous recessions, as can be seen in Figure 10. The 1980/82 recessions may have been a minor factor in the very high rise in vacan-

Figure 9
Residential Construction Trends over the Business Cycle, California



Source: Authors from US Bureau of Economic Analysis and California Construction Industry Research Board data.

Figure 10
California Office Vacancy Rates over the Business Cycle



Source: Authors from FCREUE unpublished office data series and US Bureau of Economic Analysis data.

cies in the early 1980s, since a huge increase in building activity was a major contributor to vacancy increases during that period. By the late 1980s, office markets were finally beginning to recover from the investments in space of earlier in the decade. A sharp cut-off of building activity allowed vacancies to rise very little during the early 1990s despite significant job losses. Nonresidential construction in 1993 was down by more than 50% from 1988; office construction was down by 80-85% during the early 1990s.

The current period falls somewhere between the two previous experiences. Statewide office vacancies in 2000, at under 8%, were at their lowest point since 1981. In the San Francisco Bay Area, 1st Quarter 2000 office vacancies were an estimated 2%, lower than any level measured in the previous 20 years. The value of office building permits is up sharply from the early 1990s, but through most of the 1990s expansion remained almost 50% below the levels of the late 1980s. Only in 2000 did the value of office permits exceed those of the late 1980s, with the sudden spurt entirely due to increases in the San Francisco Bay Area. Much of the increase occurred in San Francisco itself, the “Measure K and L effect,” where builders filed plans before January 2001 in expectation of a moratorium on

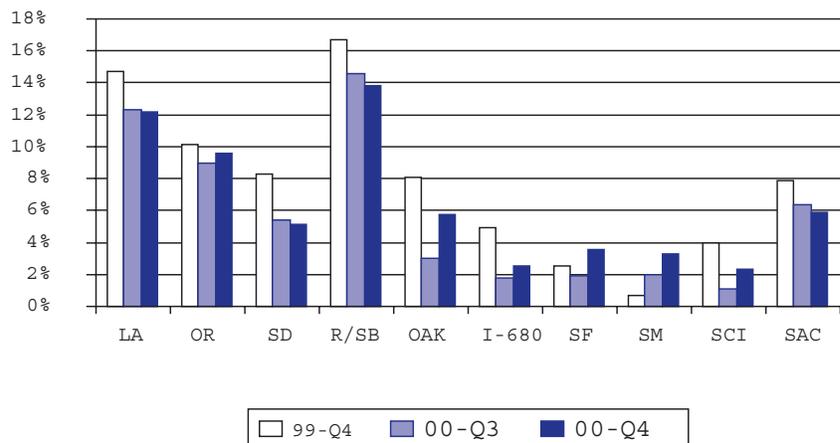
new permits following the passage of either measure. Neither measure passed, and even without an economic slowdown, the 2000 level of permit activity would not have been sustained.

Vacancies will certainly rise in an economic slowdown in California. Indeed, 4th quarter reports show this has already begun in San Francisco Bay Area markets, as shown in Figure 11. Newspaper reports quoting brokers in San Francisco and San Jose suggest that 1st quarter 2001 vacancies are rising more sharply than in the early 1990s in parts of the San Francisco Bay Area. Results of a brief e-mail survey of office and industrial brokers

belonging to the Northern California chapter of the Society of Industrial and Office Realtors confirms that the greatest effect is in the Silicon Valley and San Francisco areas, where lease rates are dropping sharply (but generally by less than 25%) and listings are rising. While some Central Valley markets are holding steady, others are beginning to feel some effects as well, either from declines in demand for warehouse space related to Internet retail businesses or from general caution on the part of manufacturers and distributors concerned about California’s energy crisis.

Areas of Vulnerability in California

Figure 11
California MSA Office Vacancy Rates
1999 and 2000



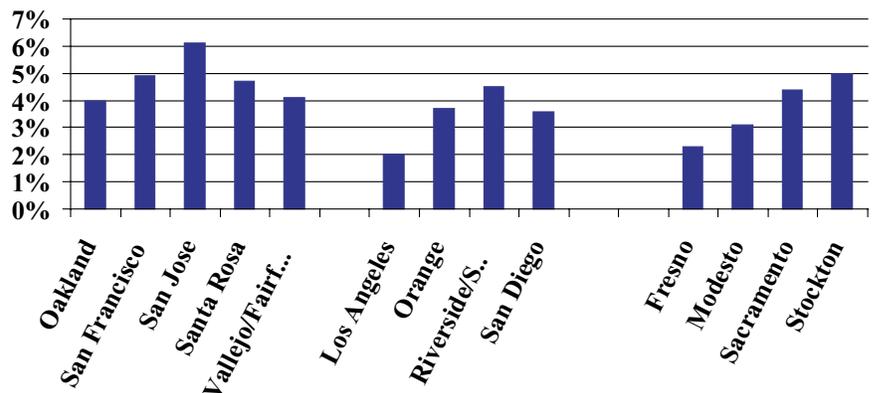
Source: FCREUE from CB-Richard Ellis, Cushman & Wakefield, Grubb & Ellis data.

A spotlight on the areas of strong growth in 2000 also highlights the areas of greatest vulnerability in 2001 and 2002.

Statewide, employment grew by 3.8% during 2000, a growth level that continued even during the 4th quarter of the year. The fastest growing employment sector was Computer Programming and Related Services, which increased at an unprecedented annual rate of 32.5% during 2000, adding over 90,000 jobs from a year earlier, despite the changing fortunes of the “new economy” and dot-com layoffs. This sector accounted for almost 60% of the state’s growth in Business Services in 2000 and for 17% of all nonfarm wage and salary employment growth during the year.

Personnel Supply, another significant Business Services category, also increased rapidly, growing by 10.3% and adding 47,200 new jobs. The growth in these two sectors reflects the rapid explosion of Internet-related jobs. Combined, growth in these sectors accounted for 25% of the state’s job growth in 2000. To put this in perspective, in 1999, all of Business Services accounted for less than 18% of the state’s job growth, and Computer Programming and Related Services grew by only 25,900 jobs, only 6.5% of the total job growth for the year. Comparing

Figure 12
Employment Growth in California Regions
4th Quarter 2000, Annual Rate of Growth



Source: FCREUE from California Employment Development Department data.

1999 and 2000 growth, we estimate that the employment bubble induced by the dot-com/high-tech bubble may have generated as many as 70,000 additional jobs in these two employment sectors alone over a more normal level of growth. These jobs are particularly vulnerable to a dot-com/high-tech adjustment.

The San Francisco Bay Area was the growth leader in the state by the end of 2000, as shown in Figure 12. Silicon Valley led the state, with an annual rate of growth of 6.1% in 4th quarter 2000. The San Francisco MSA, often an area of more moderate paced growth, expanded at an

annual rate of almost 5%. The San Francisco and San Jose metropolitan areas combined accounted for one third of the state’s growth in Business Services, and certainly for a much larger share of the Internet/dot-com generated growth in 2000. Any adjustment to jobs in Computer Programming and Related Services and Personnel Supply will be felt in similar proportion to their recent growth in this part of the state.

The concentration of the employment surge in the San Francisco Bay Area is also reflected in real estate prices.

The Real Estate Research Council home price indices rose by 23% in the San Francisco Bay Area in 2000 but by only 12.2% in Southern California and by 11.4% in the Sacramento Area. Average apartment rents in the Bay Area reached \$1,600 in 3rd quarter 2000, up by 35.5% from a year earlier. In contrast, Southern California rents averaged \$1,047, only 11.9% above 1999 levels. The sharp real estate increases went far beyond downtown areas. Home prices in suburban areas once known for affordable housing reached new highs, as is discussed in the sidebar, "Spotlight on Contra Costa." By 2000, prices for existing homes in communities near the edge of the region were rising more rapidly than average, and the affordable proportion of new homes had dropped sharply.

The office rent gap between the Bay Area and other parts of the state widened even more sharply than apartment rents. By 4th quarter 2000, the San Jose area had the highest office rents in the state, with Class A asking rents averaging above \$70/square foot/year, more than 3.5 times the amount asked in Los Angeles. San Francisco asking rents were triple the Los Angeles level, and rental rates in downtown Oakland were more than twice the Los Angeles level. Historically, these

differentials have been much smaller, particularly in San Jose and Oakland. (These figures are drawn from CB-Richard Ellis, Cushman and Wakefield, and Grubb and Ellis 4th quarter reports on the World Wide Web).

Much of the San Francisco Bay Area's run-up in prices in the past year is directly related to the dot-com/high-tech bubble. As the bubble bursts, the impact may be tempered by a few factors. For the office market, the impact on rents is likely to be substantial. If rents were to return to their 4th quarter 1999 levels, Class A rents in San Francisco would drop by 10% (from the 4th quarter 2001 average of \$74/square foot, not the peaks of over \$100; drops in South of Market rents are much greater), and Class A office rents in Silicon Valley Class would drop by over 50%. As rents adjust to more realistic levels, rises in vacancy may be tempered. Firms that had been unable to lease new space under the peak prices (including more traditional office tenants) are already moving into space being offered for sublease by over ambitious dot-com tenants. Price adjustments may also make office leasing possible once again for Bay Area nonprofit organizations. The most vulnerable areas are places such as the South of Market area in San Francisco, where new space was

South of Market area in San Francisco, where new space was tailored to the needs of dot-com tenants and may be much less attractive to traditional office users.

In the residential market, the higher end of the market has historically seen the biggest negative adjustments during downturns. This is likely to hold true this time around as well. The end of the stock-option financed home purchase is already moving purchasers out of the highest luxury categories. As these buyers "move down," price effects may be much more modest at the lower end of the market. In the last downturn, lower priced housing markets near the employment core dropped much less than the most expensive market areas and recovered more quickly. More peripheral markets, such as the outskirts of the Bay Area, and the Riverside/San Bernardino markets in Southern California, were less vulnerable than the highest priced markets but suffered greater price adjustments than the more centralized moderate priced areas. As in the office market, vacancy effects in the residential market are likely to be smaller than price effects. Pent-up demand from homebuyers unable or unwilling to make purchases at the inflated rates of the last two years may bring new buyers into the market.

(continued from page 9)

SIDEBAR: Geography of Housing Costs in the San Francisco Bay Area – Spotlight on Contra Costa County

As home prices have soared in the San Francisco Bay Area, the impacts have been felt not only close to employment centers but further and further out. For the past year, we have been tracking the impact of these changes on the cost of housing in Contra Costa County, and particularly in the growing communities north and east of the major employment centers. Some of our key findings are:

- While Contra Costa County prices remain more moderate than neighboring Alameda County and well below the San Francisco, Peninsula and Silicon Valley areas, they have risen substantially in the past two years and the proportion of low to moderate cost dwellings is shrinking.
- Rents in Contra Costa County increased by 25% between fall 1999 and fall 2000 and are up by 36% from fall 1998. The current average rent in Contra Costa County is \$1220, above the regionwide average for one year ago, although historically Contra Costa rents have been at about 80% of the regionwide average.
- The Real Estate Research Council price index shows that the value of existing homes in the East Bay has risen more rapidly than for the region as a whole in the past two years. The differential is particularly striking for Eastern Contra Costa County, as shown in Figure S-1.
- New home construction data compiled by the Construction Industry Research Board

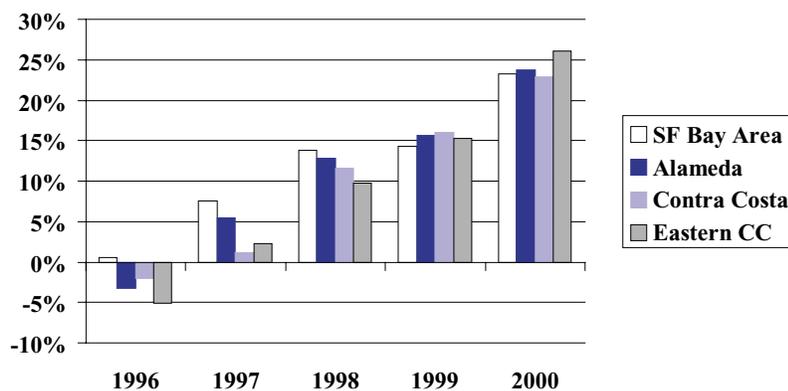
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Conclusions

Based on past California cycles, the data presented here suggest that California employment and real estate market indicators are about to decline sharply, assuming the US economy continues with a slowdown or even a recession. Of course a softer landing for the US economy would help to mitigate the employment slowdown in California as well. However, the bursting of the dot-com bubble is real, and it seems all but certain that some slowdown in California job growth will be generated by the loss of dot-com jobs, given the large role the sector played in recent growth.

To the extent that real estate price increases were also spurred by the growth of the dot-com sector, these prices will also come down, even if growth continues to be positive overall. In the office sector this has already begun—normal growth of California's office using industries cannot sustain rental rates of over \$100/year in San Francisco and San Jose. Some effect will also occur in the housing sector, although it would certainly be lessened if an actual recession were avoided. Nevertheless, the prices paid at the upper end of the market in the last two years were heavily influenced by the wealth effects of the

Figure S-1
Annual Percent Change in Home Prices
SF Bay Area and Contra Costa County
1996-2000 (Based on October Index)



Source: Real Estate Research Council of Northern California, 2000.

stock market, which will not be sustained this year. At the moderate to lower end of the market, price effects resulted from waves of buyers moving over to the next most affordable category of homes. Some price adjustment is likely for these markets as well, but given the modest level of building activity over the past five years, any price decreases would be much more minimal were employment growth to continue to be positive throughout the year.

This report should not be read as a prediction of doom for California in general or for the San Francisco Bay Area in particular. The adjustments that can be expected to happen would be only in part due to a recession. Many of the adjustments would be the correction of conditions far out of balance from normal supply and demand forces. In the past, Silicon Valley has proved resilient even from sharp downturns in its key manufacturing sectors, and has ultimately continued to grow. Any moderation in real estate prices in the region can only help this process of recovery in the long term. The long term outlook is likely to be strong for the state and Bay Area, but the rosy statistics of the recent past offer no protection from a period of recession, job losses, and dropping real estate prices in coming months.

(Sidebar continued)

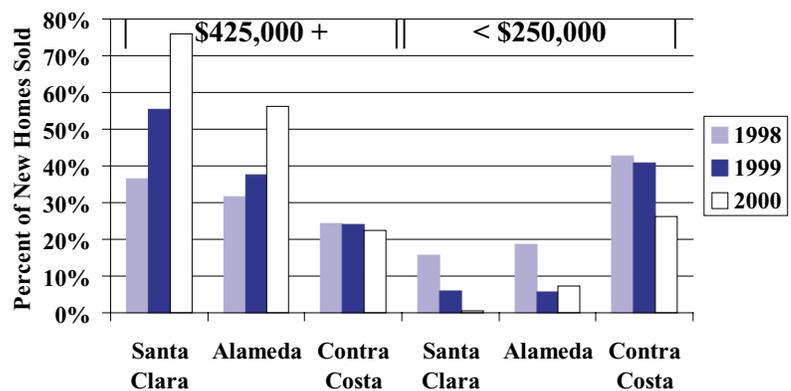
shows that the amount of affordable housing being built throughout the Bay Area decreased sharply in the past two years, leaving Santa Clara County as a high cost enclave, shrinking the proportion of moderate priced new homes to a mere 10% in Alameda County, and leaving even Contra Costa County with only one fourth of its new stock in moderate priced housing (i.e. homes below the California median of \$250,000). (See Figure S-2).

- Price increases to both existing and new homes in the East Bay reflect a broadening customer base for existing communities and new home developments. Data from several new developments in northern and eastern Contra Costa County, provided by Ryness Company and Richland Development Corp., show that as many as 40% of new home buyers in their developments hold jobs outside the East Bay, and 20% to 30% resided in San Francisco, San Mateo or Santa Clara County before making a home purchase in Contra Costa County.

Economic prosperity has brought changes to the communities near the outskirts of the region. Brokers report that the new homebuyers have brought stronger demands for services and quality schools. An economic slowdown could lower the cost of housing in these areas. Although moderate priced homes in general are more cushioned from price downturns than those at the highest end of the market, homes near the outskirts of urban areas are often more vulnerable than those near the major employment centers. Even if home values drop with a slowdown, history has shown that in the San Francisco Bay Area, these are likely to be temporary, because of the slow rate of new construction. The transformations that have begun in these communities are more likely to slow than to be reversed.

Cynthia A. Kroll, Regional Economist
 Joshua Bankhead, Intern

Figure S-2
 Percent of New Homes by Price Category
 Contra Costa, Alameda and Santa Clara Counties,
 1998 -2000



Source: Computed from Construction Industry Research Board New Homes Sold data.

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