

Research Report

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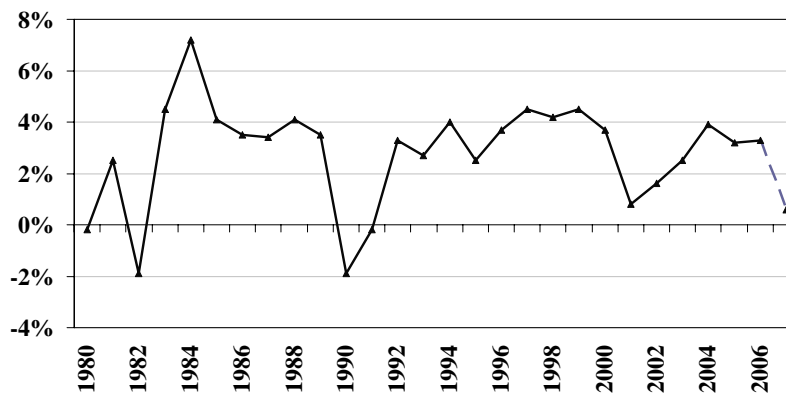
Factors Driving the Silicon Valley Housing Market in 2007

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Nationwide, home prices have begun to show the effects of rising foreclosures, declining home sales, and a slowing US economy. The OFHEO national same-home-sales index increased by only 0.45% in first quarter 2007, the slowest rate of price appreciation since 1996.¹ National Association of Realtor median home price figures for first quarter 2007 were down nationwide for the third straight quarter and 6.5% below the 2006 peak. These facts raise the question of how vulnerable high end housing markets like Silicon Valley's are to a price correction. Yet over the past decade, the Silicon Valley housing market has responded with strength to a number of different challenges. This article examines some of the factors that have helped support the market and discusses the uncertainties going forward.

Underlying National and State Trends

Figure 1
US GDP Growth
1980-2006 Annual, Quarter 1 2007
% Change – Chained 2000 Dollars



Source: US Bureau of Economic Analysis

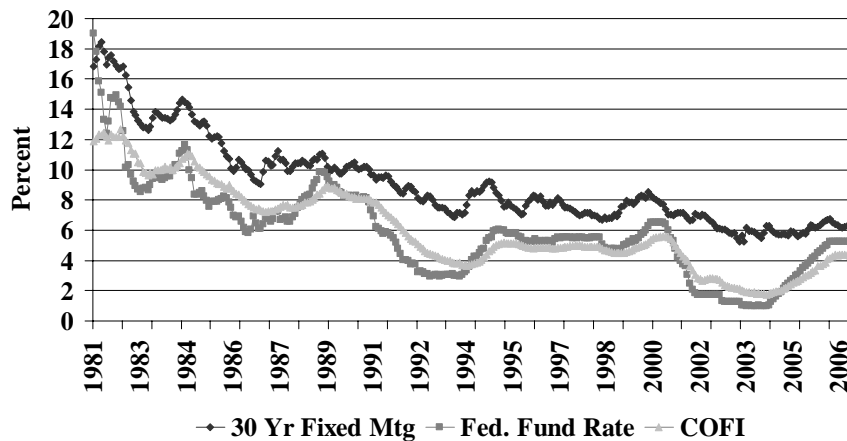
The growth rate of US Gross Domestic Product dropped to 0.6% in the first quarter of 2007, from a 2.5% rate of growth in the fourth quarter of 2006. (See Figure 1) Residential real estate played a significant role in this slowdown, with a 15% drop in gross private domestic residential investment in first quarter 2007. Investment in nonresidential real estate has continued to grow, increasing by 5.1% in first quarter 2007. A number of factors are involved in explaining this

¹ Office of Federal Housing Enterprise Oversight, <http://www.ofheo.gov/>.

difference, including the residential affordability pressures brought on by a decade of strong price increases, loan foreclosures and defaults following heavy use of creative financing by subprime lenders, and a recovery in the office and industrial markets from the sharp downturn that followed the 2001 recession.

Interest rates have contributed to the shift in residential investment, largely through variable rate mortgages. The federal funds rate rose sharply from a low of 1% in the fourth quarter of 2003 through first quarter 2004 to 5.25% in late-2006 to early-2007. Interest on 30 year fixed mortgages had dropped much less than the federal funds rate in the preceding 3 years and has risen modestly since 2003, from a low of about 5.2% in mid-2003 to as high as 6.7% in mid-2006, as shown in Figure 2. The 11th district cost of funds index (COFI), the basis for adjusting many variable rate mortgages, tracked the federal funds rate closely. COFI has risen from a rate of below 1.8% in mid-2004 to over 4.3% in the second half of 2006, putting pressure on borrowers who had used low variable loan entry rates to stretch their ability to pay.

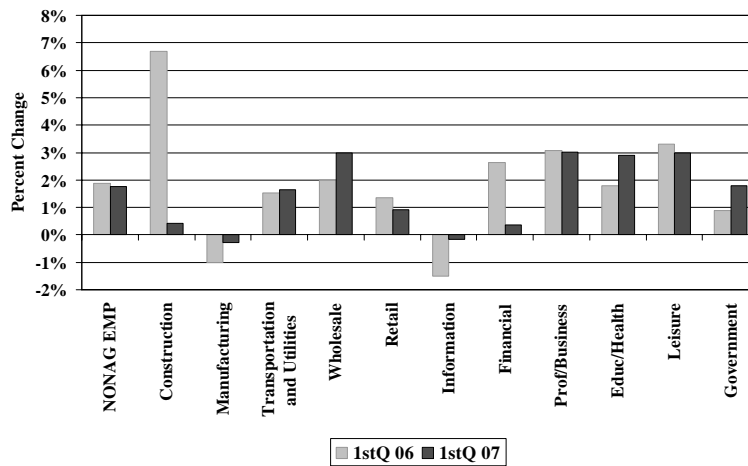
Figure 2
Interest Rates
July 1981 – March 2007



Source: Federal Reserve Board, Federal Home Loan Mortgage Corporation and Federal Home Loan Bank of San Francisco <http://www.fhlbsf.com/cofi/default.asp>.

Employment growth has shown some signs of the residential sector slowdown, but the results have not yet spilled over to the rest of the economy. Employment growth rates in both the US and California reached a 1.9% annual rate of growth in 2006 (significantly less than employment growth experienced in recovery from earlier recessions). First quarter of 2007 has shown a slight slowdown in employment growth, to annual rates of 1.6% nationwide and 1.8% in California. The aggregate figures mask sectoral differences in California trends. Construction employment growth has dropped to 0.4% in first quarter 2007, from 6.7% a year earlier, and employment growth in financial services has also slowed sharply, as shown in Figure 3. Most other sectors of the economy are maintaining or improving on 2006 trends. California's fastest growing sectors are a diverse mixture, including the performing arts, internet service providers, pharmaceutical manufacturing, beverage manufacturing, design services, and a variety of support services. The state unemployment rate, at 5.2% for first quarter 2007, is close to its level of a year earlier, despite the housing downturn.

Figure 3
Annual California Job Growth by Industry
Q1 of 2006 and 2007



Source: FCREUE from US Bureau of Labor Statistics data.

Silicon Valley and the Regional Context²

Between 2000 and 2004, the San Jose MSA, which covers most of Silicon Valley, lost over 180,000 jobs, approximately 17% of the employment base. By the 2006, employment was again increasing, but less than one-fifth of lost jobs had been recovered. Employment in the first quarter of 2007 was 85% of the first quarter 2001 level. In comparison, a somewhat less severe level of employment loss of 11% in the 1990s left Los Angeles County with unemployment as high as 10.8% in July 2004, and home prices depressed by up to 21%. It took ten years for Los Angeles employment and home prices to reach previous peaks and begin expanding again.

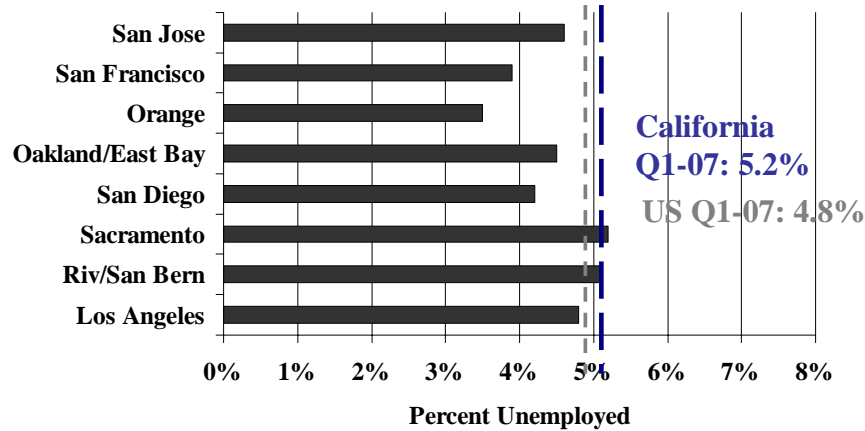
Silicon Valley, despite a higher percentage employment loss, has fared better in many ways over the past half decade than did the Los Angeles area in the 1990s, and the current economic outlook looks hopeful. Unemployment among Silicon Valley residents went from a low of 2.7% in December 2000 to a high of 9% in March 2003 (still well below the share of jobs lost), but dropped back to 4.6% by first quarter 2007. Housing values, based on the OFHEO index, dropped briefly by 4% between second quarter 2001 and first quarter 2002, but rebounded by third quarter 2002. By first quarter 2007, housing values had increased another 49%.

The San Jose MSA unemployment level is above several of the state's other large metropolitan areas (a change from the area's very tight labor market of 2000), but below both US and California unemployment rates, as shown in Figure 4. The metropolitan area's employment growth rate has

² Employment data used for the US and California shown in figures for the earlier section comes directly from the US Bureau of Labor Statistics (BLS) web site. The employment data for Silicon Valley (the San Jose Metropolitan Statistical Area, which includes Santa Clara and San Benito counties) comes from the California Employment Development Department web site, which is also based on BLS data. The wage data reported later in this section comes from the BLS occupations series; the data used in this section is for Santa Clara County only, which was the only county in the 1990 definition of the San Jose MSA. BLS only began using the 2003 metro area definitions with the 2005 data, so longer periods of wage change comparisons in the post-dot-com period are not yet possible.

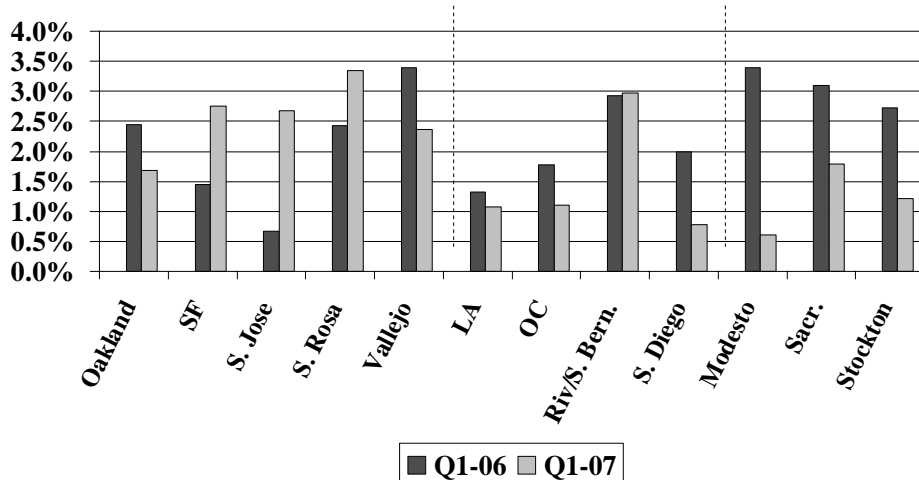
revived--the region has recovered from being the slowest growing large metro area in the state a year ago to being among the fastest growing (see Figure 5).

Figure 4
 Unemployment Rates, California MSAs
 Q1 2007 (unadjusted)



Source: FCREUE from California EDD data.
 Note: The California overall unemployment figure is higher than the MSAs listed here because it also includes smaller MSAs and nonmetropolitan areas with much higher unemployment levels.

Figure 5
 Employment Growth in California Regions
 Q1 2006 and Q1 2007, Annual Rate of Growth



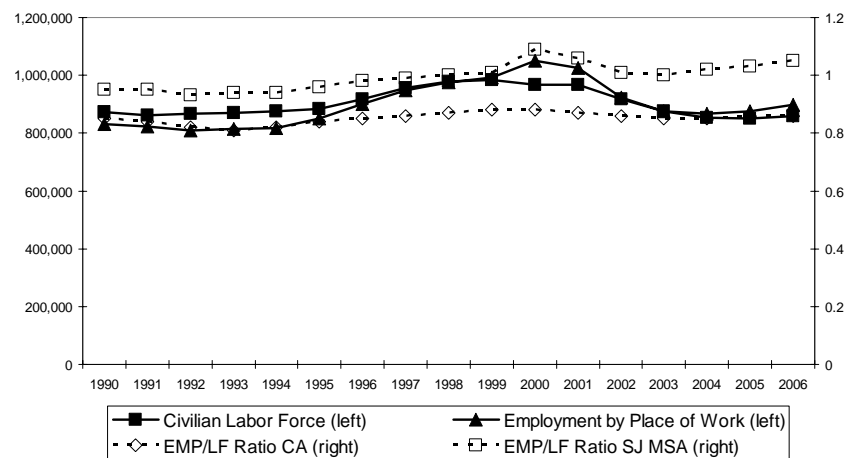
Source: FCREUE from California Employment Development Department data.

Although the San Jose MSA has regained only a small fraction of jobs lost, there are now strong signs that employment is in recovery. The fastest growing employment sectors are contributing to recovery and diversification of the area's primary high-tech employment base and to expansion of the services to that base and to the general population. Within the region's high-

tech base, the expansion has been largely in services, rather than manufacturing. The entire information sector, after losing one third of its employment between 2000 and 2003, grew by 6% in first quarter 2007 and since 2003 has regained more than half of the jobs lost following the dot-com bust (unlike the sector statewide, which is still losing jobs, albeit at a much slower pace). Employment also expanded in computer systems design and investigative and security services. Other strong growth sectors include wholesale trade, leisure and hospitality, health care, and construction (despite the housing slowdown).

San Jose MSA unemployment and employment growth statistics do not fully illustrate the tightness of the region's labor market. The San Jose MSA has for many years drawn commuters from the surrounding region, but only in the late 1990s reached the point where the metro area had more job positions than people in the labor force. Job losses eased the situation only slightly and temporarily in 2001 to 2003. Employment growth has again exceeded labor force growth since 2003, giving the San Jose MSA a job to labor force ratio greater than 1 (compared to the overall statewide job-to-labor-force ratio of close to 0.85--see Figure 6).³

Figure 6
San Jose MSA Employment and Labor Force



Source: FCREUE from California Employment Development Department data.

Wage changes are further evidence that the labor market has tightened and also indicate that restructuring following the dot-com bust has led to a concentration of even more highly skilled and highly paid workers than earlier. In the 2002 to 2004 period, for example, the San Jose MSA

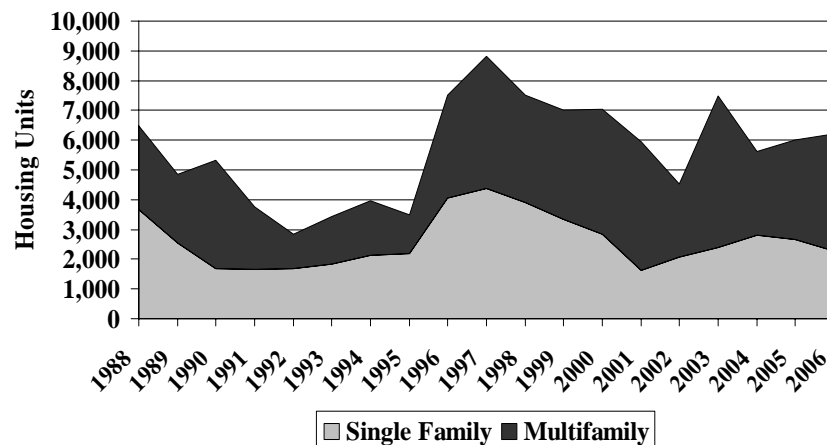
³ The job to employed resident ration described here is the number employed in wage and salary jobs at businesses located in the geographic area in question (San Jose MSA, California) divided by the number of people in the "civilian labor force" (employed or seeking employment) residing in the geographic area. The California ratio is surprisingly steady, despite changing employment levels, suggesting that some labor force participation is influenced by the availability of jobs. The 14-16% in the labor force but not employed in California wage and salary jobs would include unemployed workers, self-employed workers, and workers employed out-of-state. Silicon Valley as well has shown some fluidity in the civilian labor force--in order for unemployment to have stayed below 10 percent following the dot-com bust, a significant percentage of workers residing in the area and surrounding places would have had to have left the region or left the labor force.

still had almost 5% fewer jobs, but overall wage levels increased by 8.8%. The state as a whole, in contrast, had a slight increase in jobs over the period and a wage increase of 4.7%. Among computer systems analysts, the contrast was even greater in Silicon Valley, with a 10.9% decrease in jobs and a 12.2% increase in wages.

Silicon Valley's Residential Market

Silicon Valley's single family residential market held up surprisingly well during the period of economic restructuring in the early 2000s as well as in the recent housing downturn. The rental market showed much more cyclical sensitivity, but also showed some strength on the investment side. Several factors distinguish the Silicon Valley market's recent experience from the rest of the state. Builders have continued to file for single family building permits, median home prices have increased more rapidly than elsewhere in the state, and foreclosure rates are lower than elsewhere.

Figure 7
Residential Building Permits
Santa Clara County 1988-2006

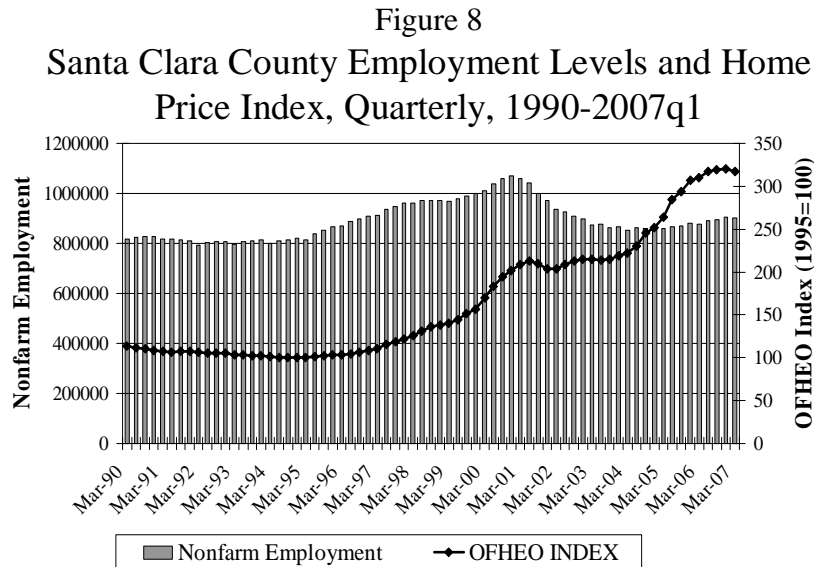


Source: FCREUE from Construction Industry Research Board data.

Residential building activity has taken a different path in Silicon Valley than in the state as a whole over the past 5 years and currently. California residential building permit activity remained below peak levels of the 1980s even during the strongest years of the past decade. Single family construction has regularly dominated the mix of California residential building activity, and has been the strongest construction sector among all permit types statewide in recent years. In Santa Clara County, residential permits filed in 2006 were almost as high as in the late 1980s (although below peak levels of the late 1990s), as shown in Figure 7. More multifamily permits than single family permits have been filed in the county for all but one of the past 10 years. Statewide, all permit types dropped sharply in the first quarter of 2007 (residential and nonresidential alike). Santa Clara County's first quarter 2007 permits have held firm or risen in most nonresidential as well as single family construction, while multifamily permits have dropped sharply.

Santa Clara County housing prices have not reacted as much as might be expected either to several years of lower employment or to decreased sales activity. In the 1990s recession, single

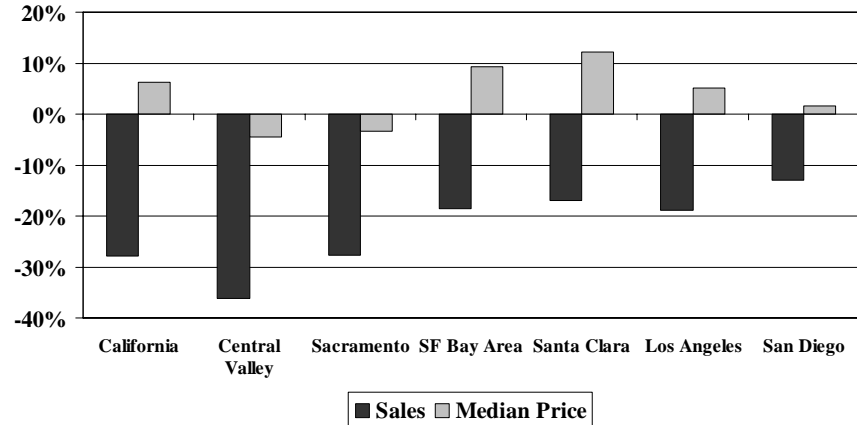
family home prices stayed depressed or flat for 8 years, even in Silicon Valley. Despite a much sharper employment downturn in 2001, and very slow employment recovery, home values flattened for less than 2 years and then began a sharp rise (see Figure 8). The OFHEO index, which is based on same-home resales rather than median price figures, shows some softening in recent months, in contrast to the median home price levels for existing homes as reported by the California Association of Realtors (CAR), which have continued to rise.



Source: FCREUE from California Employment Development Department and Office of Federal Housing Enterprise Oversight (OFHEO) data.

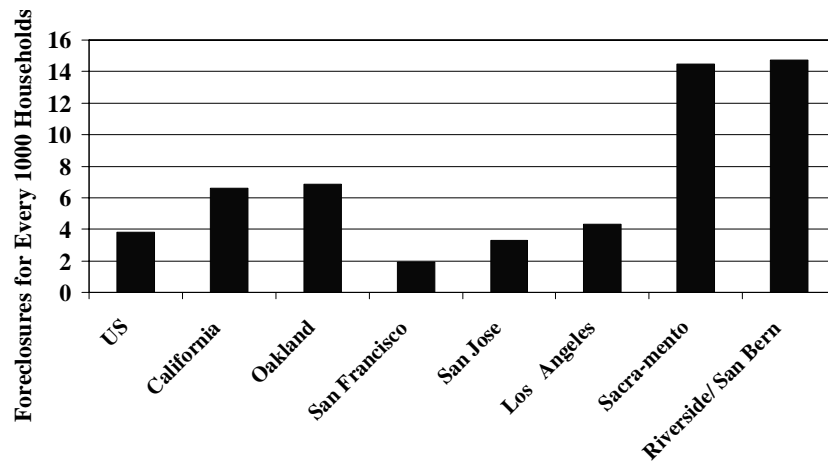
CAR data show that sales have slowed in Silicon Valley and the San Francisco Bay Area, but not as extensively as statewide (see Figure 9). Santa Clara County's median home price rose by more than 10% between April 2006 and April 2007. The median price data is more sensitive to the mix of homes sold than is the OFHEO index. For example, the median price can rise sharply if the homes at the lower end of the market begin selling more slowly than high end homes, as is likely to be the case with the current tightening of financing. Ironically, housing markets such as Santa Clara County's, at the upper end of the price range, may be less affected by the current combination of affordability limits and decreased mortgage availability than more moderate priced markets, simply because the buyers "on the edge" were already completely priced out of the most expensive markets. The foreclosure data is consistent with this argument. The share of homes in foreclosure is higher in the lower cost California markets, such as Sacramento and the Riverside/San Bernardino area, than in markets such as Santa Clara County and San Francisco (see Figure 10).

Figure 9
Recent Trends in Sales and Prices,
Selected California Markets
Annual Percent Change, April 2007



Source: FCREUE from California Association of Realtors data.

Figure 10
Foreclosure Activity, US, California and Selected MSAs
2007 Q1

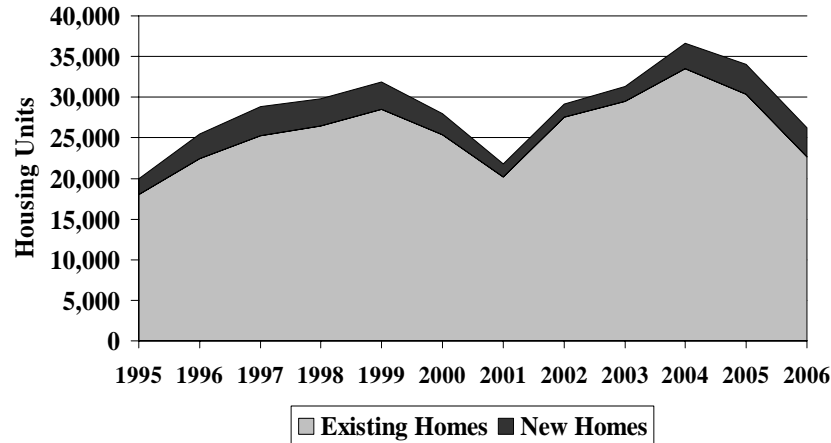


Source: FCREUE calculations from data reported by RealtyTrak.

Another factor that may influence the Santa Clara County trends shown by the CAR data is the different motivations of sellers. Dataquick reports sales and median prices for both existing and new homes, including attached as well as detached owner occupied units. These data indicate that the greatest drop-off in sales has been in the existing home category (see Figure 11). In contrast, new home sales have dropped much less, but prices dipped in 2002, rose again through 2004, and have dipped slightly in the last two years (see Figure 12). Home builders have stronger

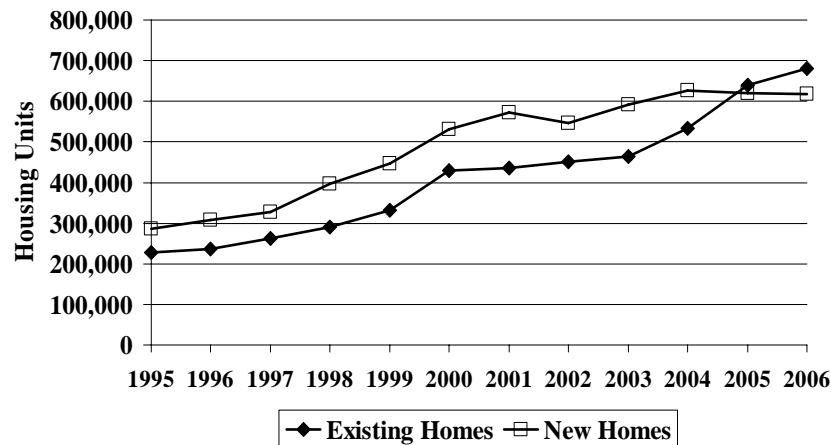
motivations to sell off existing inventory than do many existing home owners. The flat level of prices among new home sales may actually mask further price softening in the form of concessions on down payments and home improvements and accessories.

Figure 11
New and Existing Home Sales
Santa Clara County 1995-2006



Source: FCREUE from Real Estate Research Council compiled Data Quick Information Systems data.

Figure 12
Median Price, New and Existing Homes
Santa Clara County 1995-2006

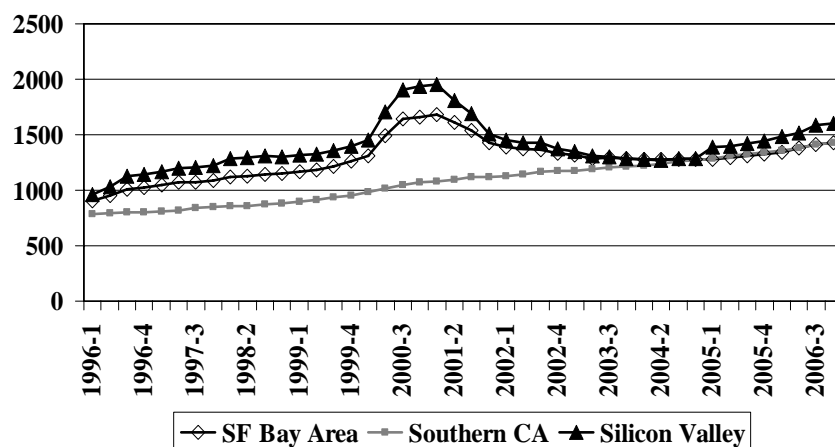


Source: FCREUE from Real Estate Research Council compiled Data Quick Information Systems data.

In contrast to home values, rental rates have shown much more sensitivity to the employment base. Silicon Valley apartment rents dropped by more than one third between the peak in the first quarter of 2001 and the fourth quarter of 2004. The collapse was sharper than in other parts of the state, and much closer to what might be expected from the level of economic adjustment that

occurred during that period. With recovery in employment, rents have begun to rise again, but remain below their 2001 peak (as does employment). See Figure 13. The greater sensitivity of rents to recent economic fluctuations is not unusual. In this case, the sharp decline in rents likely reflects high rates of outmigration of unemployed workers, with renters more easily mobile than homeowners, and the movement of employed renters into homeownership opportunities as the housing market began to soften and mortgage interest rates remained low. Rents are also responding quickly to the upturn in employment and declining unemployment rates, by rising steadily in 2005 and 2006.

Figure 13
Rent Levels, SF Bay Area, Silicon Valley and
Southern California
Quarterly, 1996- 2006



Source: Real Estate Research Council from RealFacts.

An Uncertain Outlook

Why are home prices in Silicon Valley holding up as well as they are, and will this strength continue? In particular, how can an economy that is still 15% below its peak employment level have experienced home price increases of 49% above levels at the peak of the employment market? With sales down by close to 20%, why are prices still rising? Is this sustainable?

On the positive side, the Silicon Valley economy appears to be in full recovery. The region's high tech skills are being applied to a new mix of industries, and salary levels have gone up for those working in the metro area. Nonresidential construction is increasing, single family construction has held steady, and while a boom in multifamily construction has ended, apartment rents are beginning to recover. A rising share of in-commuters to the metro area indicates pent-up demand for single family homes that will also help to support price levels.

However, questions remain about the current strength in home values. First, despite the rise in median home prices, home values appear to have flattened or even to have dipped slightly, based on the OFHEO index, and new home sales data also raise questions regarding reported price gains. Second, statistics may not fully capture the down side of the market. Reluctant sellers withhold homes from the market when they cannot get their expected price, and concessions on new homes

may take forms that are not easily captured in the price data, from added services to reduced down payments and interest rate buy-downs. In cases where the new home seller accepts an existing home as down-payment at current prices, both the price of new and existing home sales may be inflated, with price declines to be expected at a later time if the "down-payment home" is sold at a loss.

Third, the mortgage industry has not fully worked through the fall-out from current loan default levels. To the extent that home price appreciation was supported by creative approaches to qualifying borrowers, these options will be less available, and will be another factor keeping prices down. Fourth, slower appreciation levels may be self-reinforcing. After the dot-com bust, some investors moved from stocks to homeownership; with slowing home appreciation and recovering stock prices, some investors may return to the stock market and shift away from residential investments.

Looking forward, there are several possible scenarios:

1) A two-tiered market over the next year or two-- Homes at the high end may continue to sell to higher income professionals benefiting from the expanding economy. Homes at the lower end may face slower sales and less intense price pressures. Nevertheless, with the pressure of workers commuting from outside Santa Clara County, overall home prices in Silicon Valley would continue to rise.

2) A prolonged period of price stabilization--The positive news about rising median prices will bring more homes on the market. The "real" prices will emerge, as buyers continue to be limited by tighter financing standards, and sellers will have to bring down prices to move homes. The pool of homes for which sales have been postponed will act as "pent up supply" and will keep prices flat, perhaps for several years.

3) Employment slowdown and significant price declines--If the slowing US economy spills over into Silicon Valley's employment growth rate, and the job recovery is foreshortened, home sellers may begin to take less than their expected gains on sales, leading to overall price declines in the market.

In the long run, Silicon Valley employment levels seem likely to rise again, and the high wage structure of the economy will bring continued pressure on the housing market. However, in the near future, further periods of home price adjustment, or a several year period of flat home value levels are distinct possibilities.

Please send comments to kroll@haas.berkeley.edu

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