

# ECONOMIC OUTLOOK AND FORECASTS

## The Nation, Southern California and Orange County

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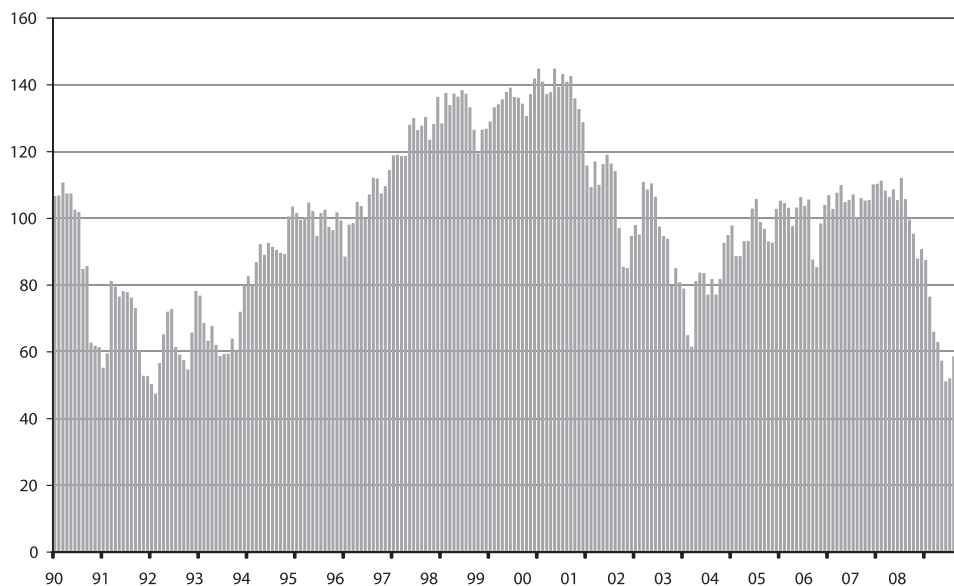
## U.S. Economic Outlook and Forecasts

This report is one of a kind. You either read about it in economic history books or have the daunting task of writing it once in a lifetime. As of the writing of this report (October 10-13th), the very foundation of our global financial system seems on the verge of collapse with the threat ominously spreading to all sectors of the economy. Although analyzing and forecasting the outlook of the U.S. economy has always presented its own challenges, this time around the complexity of issues and their implication for the future course of the economy has increased exponentially. One thing we can be certain of: when all is said and done, 2008 will have earned a prominent spot in history as the year that fundamentally changed our capital markets and financial system. This marks the end of the era of unfettered financial innovations with little government regulation of the markets.

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Economists' and market analysts' views on the future of the U.S. economy span the entire gamut of "worse" and "worst" case scenarios. Words like crisis, panic, recession, deep recession, depression, and Great Depression are doled out on a daily basis further eroding market confidence and consumer sentiment which is currently at an all time low [Figure 1]. Neither is there any reassurance on the part of those who are looked upon to temper overreaction. On the contrary, in their pitch to Congress and the nation for a gigantic \$700 billion financial market bailout, the administration, the Treasury, and the Federal Reserve consistently underscored the near-catastrophic circumstances our financial system and the broader economy is currently facing. In all fairness, the administration could do little to soothe the market and the consumer; it's impossible to sell the idea that the financial system is safe and sound when in the same breath you ask for a mammoth handout.

**FIGURE 1**  
**U.S. Consumer Confidence (level)**



*This discussion provides the basic foundation for our economic outlook and national forecasts and serves as a cornerstone for our regional economic analysis of Southern California and Orange County.*

In light of these events, our outlook for the U.S. economy has downshifted significantly even compared to our fairly bearish forecasts of October 2007 and April 2008. Our projections indicate that the U.S. is poised for a severe and protracted economic downturn for the remainder of this year and 2009, which very likely will turn into an outright recession. There is little hope of avoiding a full-blown recession and for that to happen many things will have to work exactly right: the “Paulson plan” is successful, credit markets loosen up, the housing market starts recovering, and consumer spending picks up. More importantly, all these factors have to improve at an almost light-speed. We are highly skeptical that these conditions will be met in such a short time.

Moreover, even when the economic recovery begins (an event that we place sometime in late 2009/early 2010), it will be slow and will stretch over many quarters with below trend growth and accompanied with much higher unemployment levels. Below we lay out this scenario as it relates to the major risk-factors currently weighting on the economy - the bailout plan, economic activity, housing, inflation, and the global economy. This discussion provides the basic foundation for our economic outlook and national forecasts and serves as a cornerstone for our regional economic analysis of Southern California and Orange County.

### **The Supreme New Deal**

After attempting for one full year to patch the ailing financial sector with small band-aids, Fed Chairman Bernanke and Treasury Secretary Paulson embarked on what would perhaps be the hardest and most distasteful mission of their lives: asking Congress and the American people for \$700 billion to avoid a full-blown, systemic financial crisis that would have far-reaching implications at home and abroad. The proposal requested that the \$700 billion be used to purchase the toxic and virtually illiquid mortgage-backed securities (MBS) from the balance sheets of financial institutions and direct equity investment in an effort to recapitalize them and unfreeze the credit market. The bill had one unifying feature, everyone - opponents or proponents - found something in it to dislike. The House of Representative failed to pass it the first time around (the Dow plunged 778 points on that day), but it was signed into law on October 3, after an additional \$150 billion “sweeteners” were added to the bill in order to gain bipartisan support.

The plan is by far the most sweeping intervention since the Great Depression. Its goal is to stop the deepening of the financial crisis that has claimed numerous banks and financial institutions over the span of six months. Up until now, the Fed and the Treasury have taken a reactive, piecemeal approach to the looming crisis. On March 16, the Fed facilitated credit (\$30 billion) and approved the financing arrangement for the acquisition of Bear Stearns by JPMorgan Chase. In mid July, the California-based firm IndyMac Bancorp collapsed, making it the country's third biggest bank failure, with estimated assets of \$32 billion dollars. On September 7, the U.S. government placed the two largest government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac into conservatorship, wiping out the value of their common and preferred stock. The total loss of equity that came with the government intervention placed increased downward pressure on equities of other troubled financial institutions. On September 16, Lehman brothers filed for bankruptcy

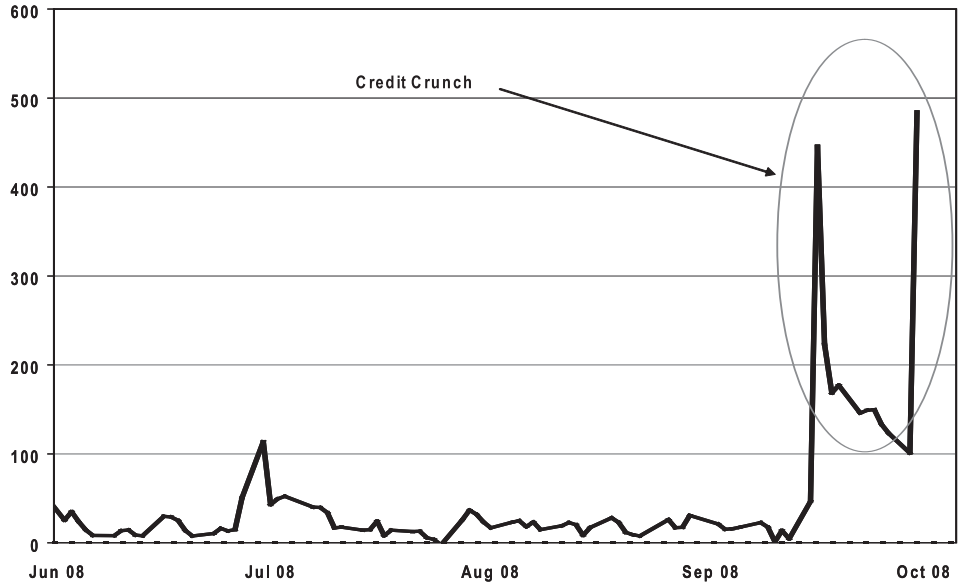
and Merrill Lynch was absorbed by Bank of America for \$50 billion. On the same day, an emergency \$85 billion was given to the insurance giant AIG in exchange for an 80% stake in the company. On September 26, WaMu became America's largest bank failure with \$67.7 billion in assets, and a few days later Wachovia was in takeover negotiations with Wells Fargo and Citibank.

These developments have utterly disrupted financial markets, caused a precipitous plunge in share prices of financial companies, and completely frozen credit markets to the point that banks have stopped lending to each other from fear of substantial withdrawals by panicky depositors. The reluctance to lend can be seen from the difference between the LIBOR rate (rate at which banks lend to each other) and the federal funds rate (rate at which they borrow from the Federal Reserve) [Figure 2]. As

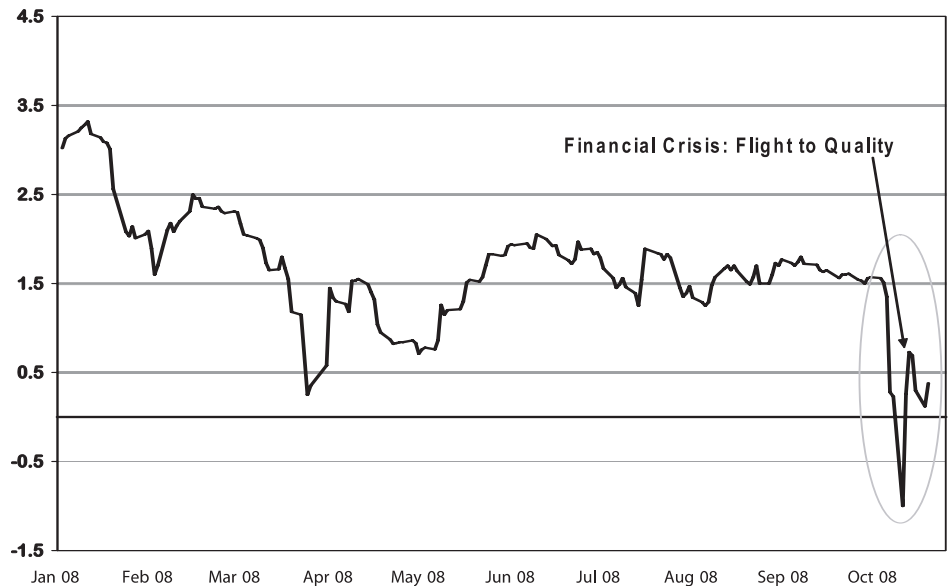
stock prices plunge, investors have increasingly sought the safe haven of Treasuries. On September 17, the interest on Treasury bills dropped below 1 basis point, indicating that investors were willing to pay the Treasury to store cash for the first time since the Great Depression [Figure 3].

Faced with the impossible task of dealing with each individual financial institution, the "Paulson plan" as it is now known, intends to deal with the entire financial sector in one sweeping move, answering with a systemic response to a systemic crises by purging the system from illiquid assets. Yet, as many have argued, there are several fundamental issues with the plan. First, since Mortgage backed securities have no market to trade, their value and price is uncertain. If the Treasury overpays for the assets, the taxpayers would be saddled with large losses. If the Treasury sets a price that is too low, it may not purchase enough securities and banks balance sheets will not be cleansed. Buying an equity stake is perhaps a more effective way to stabilize the banking sector. Second, there is no guarantee that once the plan is in place, it will work and banks will start lending again.

**FIGURE 2**  
**Spread between LIBOR and Federal Funds Rate**  
**(basis points)**



**FIGURE 3**  
**4 Week Treasury Rate**  
**(level)**



*On a somewhat more positive note, it is important to bear in mind that despite the gloom and doomsday scenarios out there, the current situation contrasts sharply with the Great Depression and with Japan in the early '90s.*

More importantly in our view, the \$700 billion, price-tag may be “a few dollars short and a few days late” to have the maximum impact. There are roughly \$11.25 trillion mortgages outstanding. About half of these are backed by Fannie and Freddie and the rest by others. At the same time, the total number of homes in foreclosure is currently at 2.75 percent, triple the rate recorded three years ago and 6.41 percent of all home mortgages are one or more payments overdue. The estimated losses from the foreclosed and at-risk homes is between \$1.3-\$1.7 trillion, roughly double the amount of what the Treasury proposes to purchase. The situation may get worse if housing prices continue to decline and there is no clear indication that any reversal is likely to occur anytime soon.

With benefit of hindsight, one may also argue that this massive intervention is a bit late. Had it been implemented sometime during the summer months perhaps the tumultuous events of September would have been forestalled or at least minimized. From the time the plan was proposed until its approval more than two weeks passed. The Dow shed \$1.3 trillion worth of wealth in one day alone. During this time, the crises had further mutated, spilling from the housing sector to auto loans, credit lines and student loans.

The financial crises we are facing is no longer a liquidity issue but an insolvency one. In addition, the government has inadvertently increased the level of risk aversion by sounding the alarm bells. Consumers, who were already beset by high gas prices, job losses, house price declines and low income growth, are told by the government and experts of an “impending and catastrophic financial crises.” The end-result is a complete erosion of consumer confidence, which in our view will translate in much lower consumer spending. And since consumption makes up roughly 70% of real gross domestic product (RGDP), any retrenchment in consumption will result in lower economic growth.

On a somewhat more positive note, it is important to bear in mind that despite the gloom and doomsday scenarios out there, the current situation contrasts sharply with the Great Depression and with Japan in the early '90s. The unemployment rate during the Great Depression reached 25% and foreclosure rates were over 40%. From the beginning of the crisis in 1929 until the bank holiday, three and a half years had elapsed during which the government did little in response to the crises. Japan's banks began to fail in 1991, but a mechanism for taking over large insolvent banks was not set up until 1998. In contrast, the current unemployment rate is barely above 6%, foreclosures are 2.75%, troubled mortgages with a real possibility of foreclosure make up only 4%, and the first signs of crisis became evident only one year ago. The response of the U.S. government to the crisis has been both aggressive and decisive as U.S. policymakers seek to learn from and avoid past mistakes.

## Real Economic Activity

Contrasting the real economic activity indicators with the current financial meltdown, one would think that the data are taken not only from two different points in time, but literally from different decades. The disconnect is rather astounding when we're faced with a financial system that is being resuscitated to live another day, while the real economy, although significantly downshifted, does not seem to reflect the depth and the breadth of the crisis.

In fact, economic activity has held up reasonably well during the current year. Real gross domestic

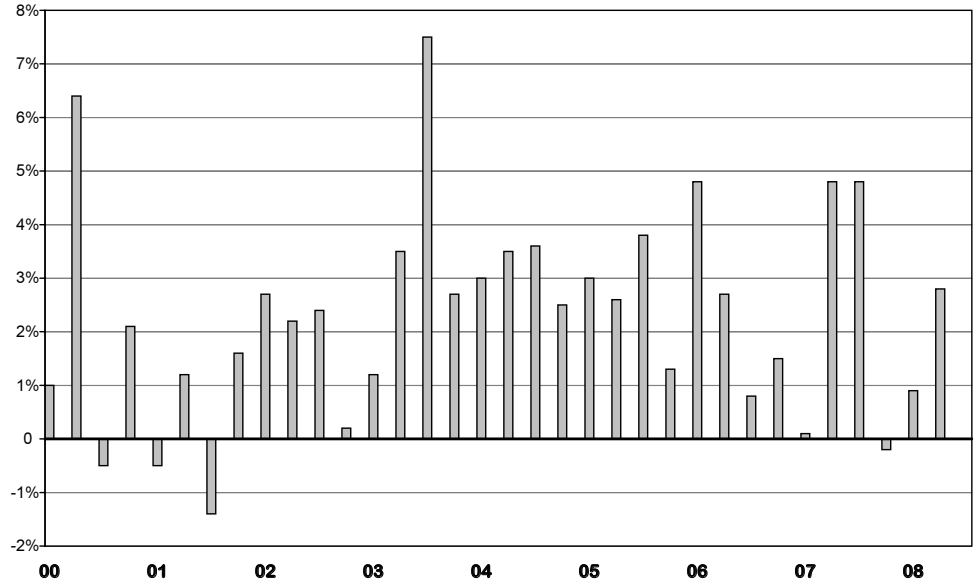
product (real GDP), which measures economic growth, increased by 0.9% and 2.8% during the first two quarters of 2008, after declining by 0.2% during the fourth quarter of 2007 (the first negative quarterly growth rate since the 2001 recession)

[Figure 4].

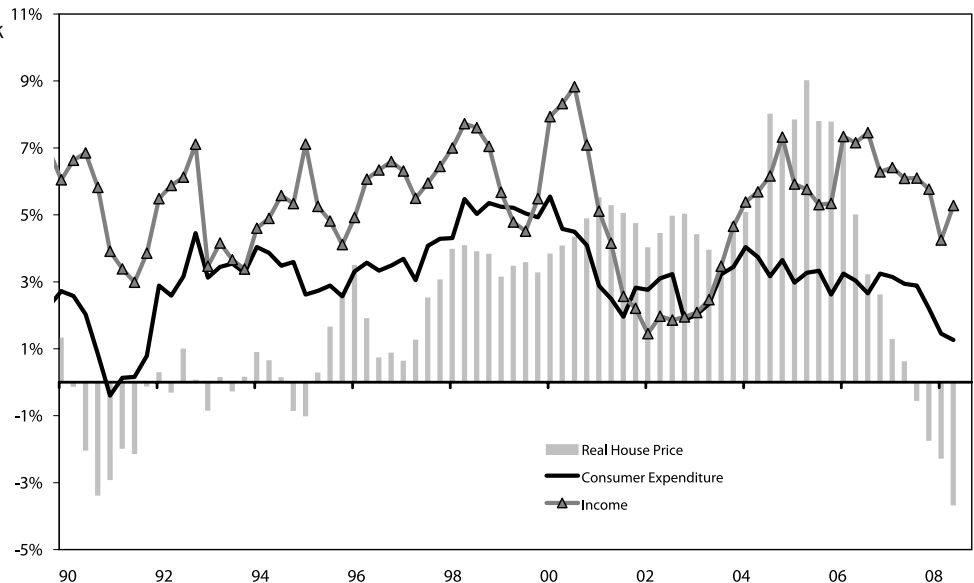
The two pictures do not square up. There are several reasons for this phenomenon. First, real GDP numbers tend to be lagging indicators and, as such, have not yet absorbed the shocks to the financial sector. On average, an adverse financial shock filters through the economy with a lag of roughly six months. A systemic financial crisis like the one we are currently experiencing may hit the economy sooner and we expect Q4 2008 RGDP to contract. Second, tax rebates which were handed out and spent during the second quarter of this year, propped up consumer spending and with it real economic activity. Thus the economic activity data have yet to pick up the recent turmoil in financial market.

Consumer expenditures posted anemic gains of 0.9% (2008 Q1) and 1.5% (2008 Q2), well below the historical average of 3.3% [Figure 5]. The second quarter pick-up in consumer spending is largely due to the tax rebate checks which were distributed to the majority of consumers by the end of June. The fiscal stimulus amounted to about 1% of the GDP

**FIGURE 4**  
**U.S. Real GDP Growth**  
(percent quarter-to-quarter)



**FIGURE 5**  
**Consumption, Income and Real House Prices**  
(percent year-to-year)



*Consumer spending is the main force that drives the bulk of the U.S. economy. It constitutes 71% of the real GDP while investment accounts for 14%, exports for 13% and government spending for 17%.*

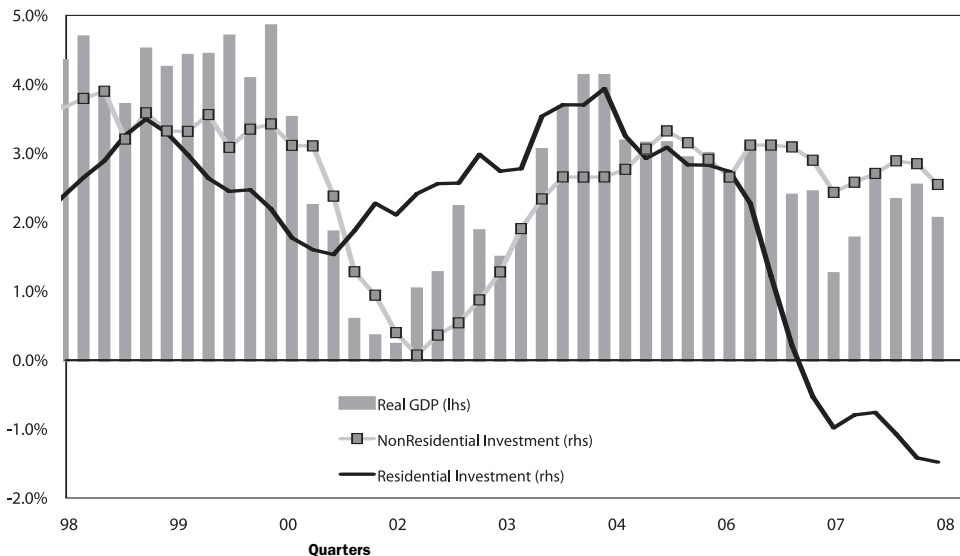
and is estimated to have provided a boost to economic activity to the tune of roughly 0.7%. Since most of the rebates are already spent, and with no immediate plan for another fiscal injection, the consumer expenditure will slow down further for the remainder of this year and during 2009.

Consumer spending is the main force that drives the bulk of the U.S. economy. It constitutes 71% of the real GDP while investment accounts for 14%, exports for 13% and government spending for 17%. Faced with falling home prices, rising costs, increasing unemployment rate, rising debt and an erosion of wealth, consumers have scaled back substantially in the first two quarters of this year. The decline in home prices has almost entirely eliminated home-equity withdrawals and lowered household net wealth by \$1.5 trillion (or 2.6%) in the first quarter of 2008 compared to the previous year. Borrowing via credit cards and other types of loans increased significantly during the first half of the year. In June 2008, consumer credit rose by \$14.3 billion to \$2.59 trillion. At the same time, household debt service payments and financial obligations as a percentage of disposable personal income continues to remain at an all-time high revealing further constraints on consumer expenditure.

Financial market woes have yet to enter this picture and show their full impact on consumer expenditure, but evidence of slowdown is accumulating. First, anecdotal evidence over the last two weeks (the official data are not out yet) points to a marked deterioration in consumer confidence. Second, as the credit markets have seized up, even those who are willing to purchase goods have found it increasingly difficult to get a loan to finance spending no matter how good their credit rating is or how solvent their personal accounts are.

As consumer spending stalls, the potential for a contraction in U.S. economic growth increases. Government fiscal deficit has already swollen to gigantic proportions. Private investments won't be of any help any time soon as they continue to decline

**FIGURE 6**  
**Real GDP, Non-Residential and Residential Investments**  
**(percent year-to-year)**



for the seventh straight quarter (on a year-over-year basis) reflecting decreased activity in residential and non-residential construction, lack of investment opportunities, lack of credit, and increased caution on the part of businesses to embark on new projects. Residential investments declined by 25.1% and 13.3% in the first two quarters of 2008 [Figure 6]. Given the high inventory of unsold homes, residential investment is expected to continue its current downtrend well into 2009 and beyond. Non-residential investment, which comprises the larger portion of private investments, has also slowed down significantly, but continues to post positive growth rates. But the fate of non-residential investment is uncertain given the

tightening of credit markets. It can easily push the growth of this sector into negative territory should liquidity concerns continue to plague the economy.

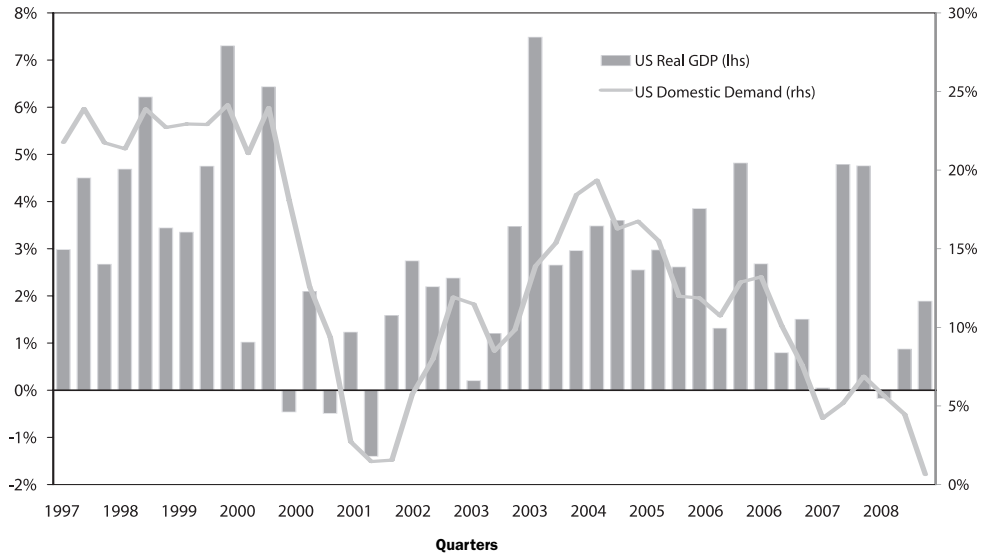
Net exports seem to have provided the much needed boost for U.S. growth during the first half of 2008. A comparison between “Domestic Demand” - an alternative measure of economic growth which excludes international trade - and real GDP, shows that domestic demand is well below real GDP, indicating that consumer

spending and investments have decreased dramatically and international trade is one of the main factors adding to economic growth [Figure 7]. Net exports should continue to contribute to economic growth over the next few quarters, but their effect is likely to be much more muted due to the dramatic slowing of global demand that has materialized as one of the casualties of the U.S. financial crises.

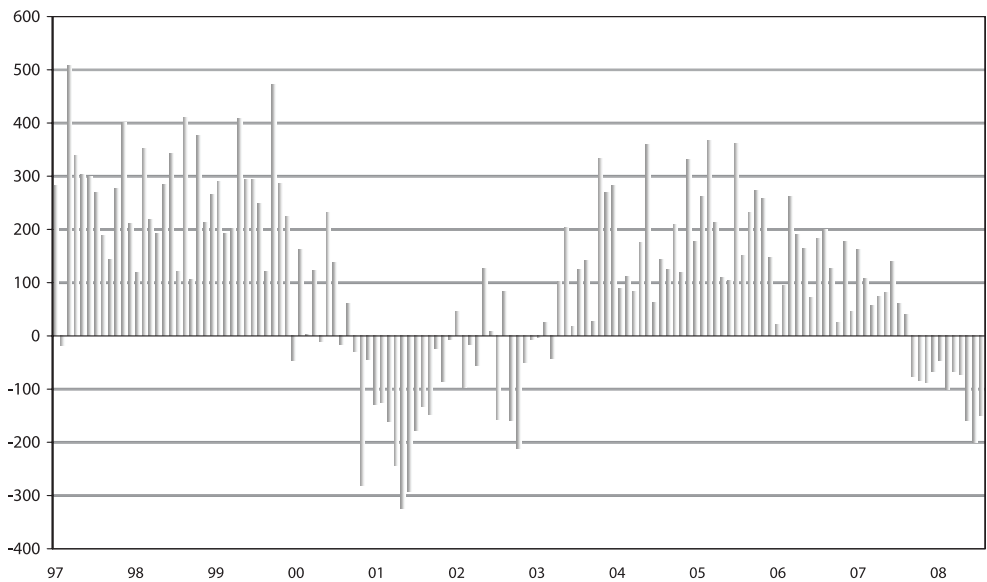
One of the most worrisome factors over the near-term is the prospect for job growth. In line with our expectations, labor markets have further weakened during the current year, shedding a total of 760,000 jobs from January to September [Figure 8]. The unemployment rate has shot up from an average of 4.6% in 2007 to 6.1% in September of 2008. Recent job losses from financial companies who have gone under or merged with others have yet to be reflected in these numbers. Some estimates indicate that financial sector alone is likely to post an additional 100,000 job

losses in the months to come reflecting the virulent crisis that has seized Wall Street. Given the continued deterioration of economic conditions, we expect further declines in payroll employment well into 2009, with the unemployment rate climbing above 7%.

**Figure 7**  
**U.S. Real Gross Domestic Product and Domestic Demand**  
**(percent quarter-to-quarter)**



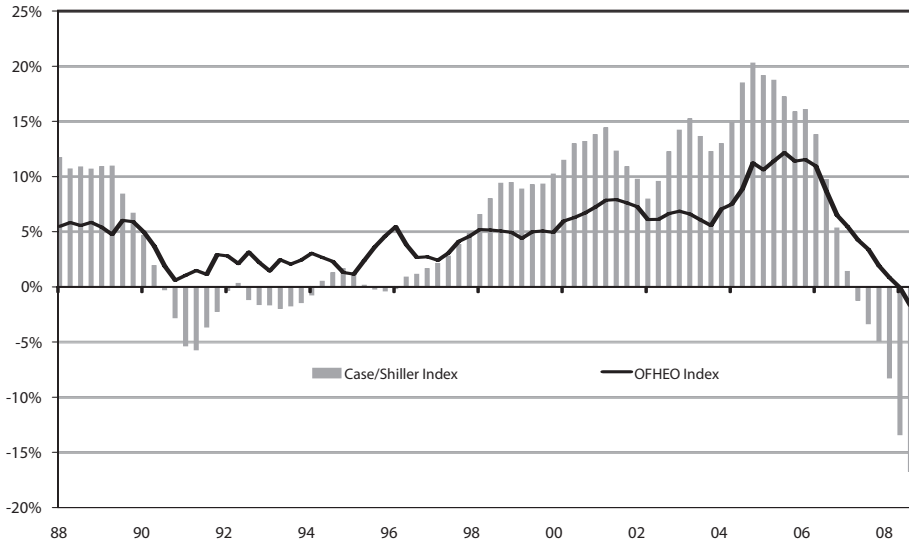
**Figure 8**  
**Nonfarm Payroll**  
**(thousands of employees)**



## Housing Market

The root-cause of the challenges we are facing, the housing sector, does not seem to show any signs of stability in the near future. The S&P500 Case Shiller index reached a new record annual decline of 17.5%, while the Office of the Federal Housing Enterprise Oversight (OFHEO) index fell by 5.3% on a year-over-year basis, marking the sharpest decline on record [Figure 9].

**FIGURE 9**  
**National House Prices: OFHEO vs. Case/Shiller Index**  
 (percent year to year)

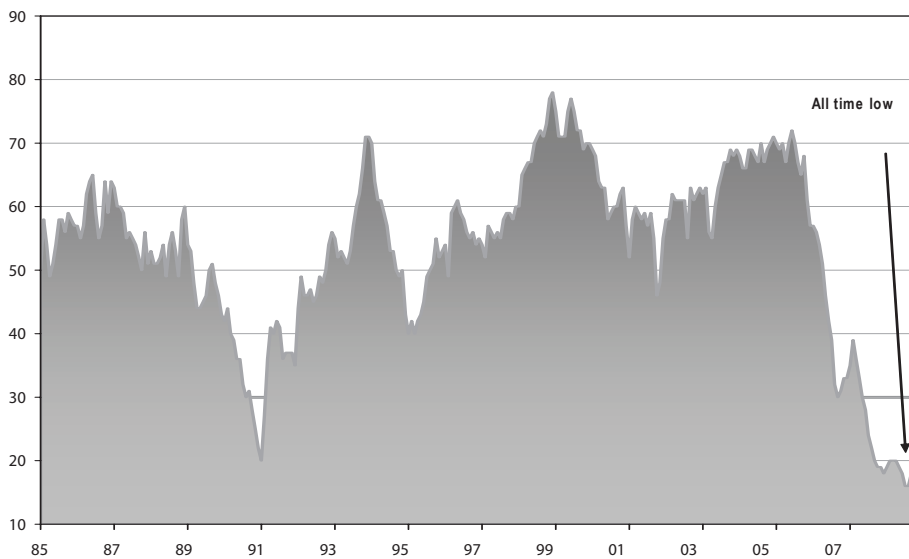


Though there are signs of a slowdown in the rate of house price declines across the metro areas, there is no evidence that the downward spiral is approaching the bottom any time soon.

Home sales are not faring better and have fallen by 15.5% compared to one year ago. The decline in existing home sales is less pronounced in the West compared to the rest of the nation given the large price reversal that has already occurred in the region. The main indices compiled by the National Association of Homebuilders (NAHB) - homebuilder

confidence, single family sales and buyer floor traffic, continue to remain at historically low levels [Figure 10]. In addition, single family starts tumbled 43%, the overall vacancy rate rose to a record-high of 2.8%, and new homes sales median time in the market was a record 8.4 months.

**FIGURE 10**  
**NAHB Homebuilder Sentiment Index**  
 (level)



The rate of foreclosures rose to 2.75%, more than double the historical average. Four percent of all mortgages outstanding are now seriously delinquent and 6% have missed at least one month of payment. At 21%, California makes up the bulk of national foreclosures followed by Florida's 15%. Subprime mortgages comprise 9% of the market, but account for 53% of foreclosures; prime mortgages make up 50% of all mortgages and account for 33% of foreclosures. The rate of foreclosures among prime borrowers is troubling since it indicates that housing issues are no longer confined to the sub-

prime market. The continued decline in house prices, job losses, credit issues, and tighter lending practices have placed enormous stress on the borrowers of all categories.

As the credit and financial crisis intensifies and the rate of foreclosures rises, it is very likely that the government will expand its efforts to help homeowners by implementing more sweeping legislation and broader assistance measures in an effort to stop the vicious circle which has caused a virtual implosion of the markets.

### Inflation

Through the first half of this year, inflation commanded much attention and seemed to present an even bigger challenge than the slowdown in economic growth. As of August, the average headline inflation rate (which includes food and energy prices) stands at 4.5%, a sharp increase from the 2.8% average recorded during 2007. The up-tick in inflation is largely due to the escalation of oil and energy

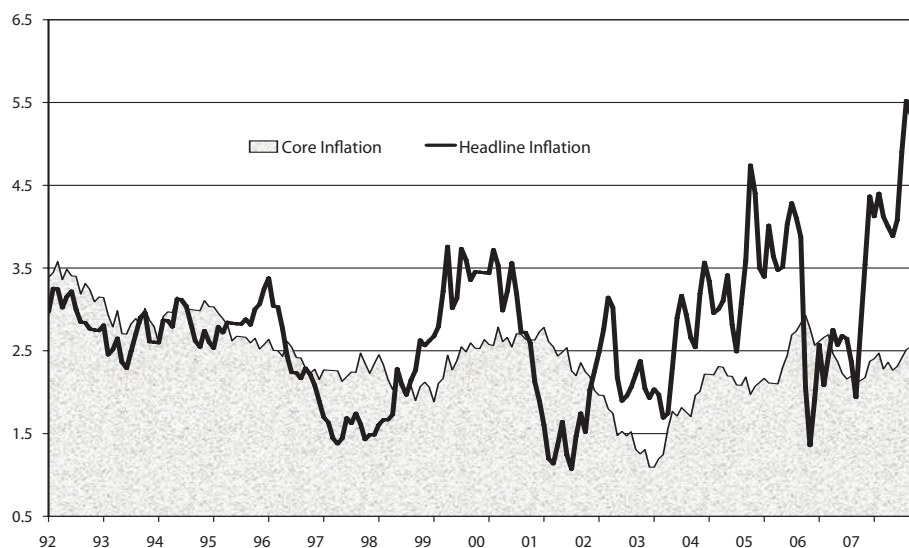
costs which reached record-high levels in mid summer. If we look strictly at core inflation (which excludes volatile prices such as food and energy), the average rate is 2.4%, slightly above the 2.3% core inflation rate that prevailed in 2007 [Figure 11].

Over the past few weeks however, inflation has become an afterthought; inflationary pressures have abated significantly, with oil prices coming off their \$147 July peak and currently settling in the low-\$90 range. We expect oil prices to post additional declines during the remainder of the year as domestic demand slackens, global economic growth stalls, and the appetite for crude oil from emerging economies decreases significantly reflecting the current slowdown in economic growth.

Inflationary pressures, while still elevated as recent escalation in oil prices work their way through the rest of the economy, should moderate significantly during the remainder of this year and in 2009 reflecting the ongoing decline in economic activity and the recent dramatic decrease in oil and commodity prices. Consumer prices are expected to average 4.1% in 2008 and decline to around 3.4% in 2009.

One word of caution is in order: while inflation can be relatively safely placed on the backburner in the short-and medium-term (next six quarters or so), the risks of a future inflationary surge are on the upside. The unprecedented liquidity that is currently being pumped in the market by central banks around the globe to shore up the financial sector and provide the much needed liquidity for the credit market, is likely to increase inflationary pressures when economic conditions start to turn around.

**FIGURE 11**  
**U.S. Headline vs. Core Inflation**  
**(percent year to year)**



## The Global Economy

*...a broad-based dollar slide at this time is highly unlikely given the global economic landscape: Asian central banks hold vast amounts of U.S. debt, Middle East economies are awash in U.S. dollar reserves, while Europe and Japan cannot afford sharp currency appreciation against the dollar, which would add more woes to their already anemic economies.*

The past few weeks seem to have dispelled for good the growing notion that the world has become somewhat insulated from U.S. shocks or the so-called “decoupling” theory. It has not. Troubles in the U.S. financial sector sent shockwaves around the world crippling both industrialized and emerging economies' equity markets. There are many reasons for this financial contagion. First, financial markets have become much more interdependent during the globalization process. Second, some of the “toxic” assets were sold to international investors, spreading the risk across the globe. China alone holds \$376 billion of Freddie Mac and Fannie Mae's long-term debt. Third, neither Europe nor Asia were immune to the housing bubble; Europe, in particular (Great Britain, Spain and Ireland), has experienced excesses in the housing sector that parallel those of the U.S. Finally, a U.S. slowdown spells trouble for export-growth economies such as Japan and China, which receive much of their economic boost from the American consumer.

Troubles in the U.S. financial sector quickly spread in all the continents. Europe was the hardest hit, with bank failures averaging around one per day. Although the response was slow to come, European policymakers are taking steps similar to their American counterparts. Underlining the broad scope of the market malaise, Germany negotiated a \$69 billion deal for commercial lender Hypo Real Estate AG. French BNP Paribas said it would buy 75% of troubled Fortis' Belgium bank after a government bailout failed to reassure investors. Iceland took control of three of the nation's major banks to try to shore up a teetering banking system. England injected around \$87 billion in financial markets, and in a rare coordinated move major central banks around the globe cut interest rates by 50 basis points.

Aggressive government intervention domestically and abroad has, so far, failed to restore confidence in the market. Investor skepticism that the government will be able to remedy the problems in a short time and increased pessimism on future growth as economic fundamentals deteriorate sharply around the world, are some of the factors contributing to the sharp sell-off in equity markets. In face of these developments, it is very likely that more expansive government intervention from across the globe is shortly forthcoming.

The current economic landscape has broad implications for the U.S. dollar. Since its peak in February 2002, the dollar has shed 31% against industrialized currencies and 4.5% against emerging markets **[Figure 12]**. The dollar depreciated significantly against major currencies for most of the year, reversing this trend in mid-summer and performing particularly strong during the recent crisis. By all accounts, the opposite should occur: the escalation of national debt to an estimated \$11.3 trillion, the unprecedented excess liquidity provided by the Federal Reserve, and the \$700 billion bailout plan, should all adversely impact the dollar. Nonetheless, a broad-based dollar slide at this time is highly unlikely given the global economic landscape: Asian central banks hold vast amounts of U.S. debt, Middle East economies are awash in U.S. dollar reserves, and Europe and Japan cannot afford sharp currency appreciation against the dollar, which would add more woes to their already anemic economies.

FIGURE 12

## U.S. Dollar Indices (level)



For the rest of 2008, we expect the dollar to post marginal gains against both industrialized and emerging economies as the former struggle to avoid recession and the latter attempt to maintain growth. During 2009, the dollar is expected to depreciate at a modest rate of 3-4% against emerging market economies, reflecting adjustments in these currencies that align with economic fundamentals.

### National Forecasts

There is little doubt that the U.S. economy is and will continue to undergo a severe economic downturn of historic proportions over the near term. When the final chapter on the current crisis is ultimately written, it will show a financial landscape that is fundamentally different from the one we are familiar with. In the short-term, we expect continued financial turbulence in equity markets across the globe as government interventions take time to work through the system and restore investor confidence.

More intervention is likely to occur both in terms of providing liquidity to banks and helping out troubled marginal homeowners. The Fed has already adopted a few more drastic steps by providing direct injection of cash to corporations in order to prevent a prolonged and painful recession. We would not be surprised if this trend continues with credit lines extended to small businesses; massive liquidity provisions offered to banks, non-banks and the corporate sector; and a radical recapitalization of the banking system. Although not in the same magnitude, similar measures are expected from governments around the globe, in particular from industrialized nations.

Equity markets are expected to rebound well before the real economy. The current financial shockwaves will most likely hit the real economy hard and with a lag of 2-3 months. We anticipate an overall U.S. GDP growth rate of 1.3% in 2008 and 0.5% in 2009. Consumption growth should continue its current downtrend, which is expected to last well into 2009 as job losses, shattered confidence and troubles in the housing market restrain household spending. The hemorrhage of job losses is expected to continue in earnest with payroll numbers posting massive job cuts across all sectors for the remainder of the year and well into 2009. The unemployment rate is expected to average 5.4% in the current year, and reach above 7% in the second half of 2009. A detailed summary of our projections for other national variables is presented in Table 1 following this report.

*Orange County and Southern California have not escaped the fate of the national economy. In fact, in selected sectors the regions have suffered more during the past two years.*

Our longer term, best-case scenario places the beginning of an economic recovery in late 2009/early 2010, assuming the global government intervention work as intended and additional support is provided in the market. Even then, our forecasts indicate that recovery will be painfully slow and protracted with below-trend growth and above full-capacity unemployment rates.

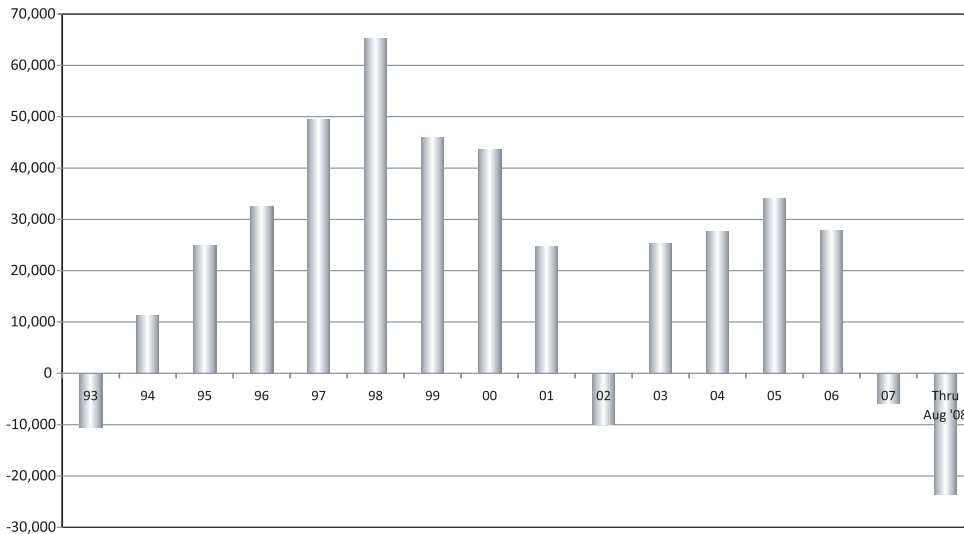
**Orange County and Southern California**

Orange County and Southern California have not escaped the fate of the national economy. In fact, in selected sectors the regions have suffered more during the past two years. Southern California region's large economy is highly diversified. In Orange County, construction, high-technology, leisure and hospitality, financial services and professional and business services make up the bulk of payroll employment. Yet the implosion of the national financial markets set off by troubles in the mortgage markets has had a significant deleterious effect on the County.

After losing approximately 6,000 payroll jobs in 2007, Orange County's employment through August 2008 is lower by 23,500, or a 1.6% fall on an annual basis

**[Figure 13].**

**FIGURE 13**  
**Orange County Payroll Employment Changes**  
**(year to year)**



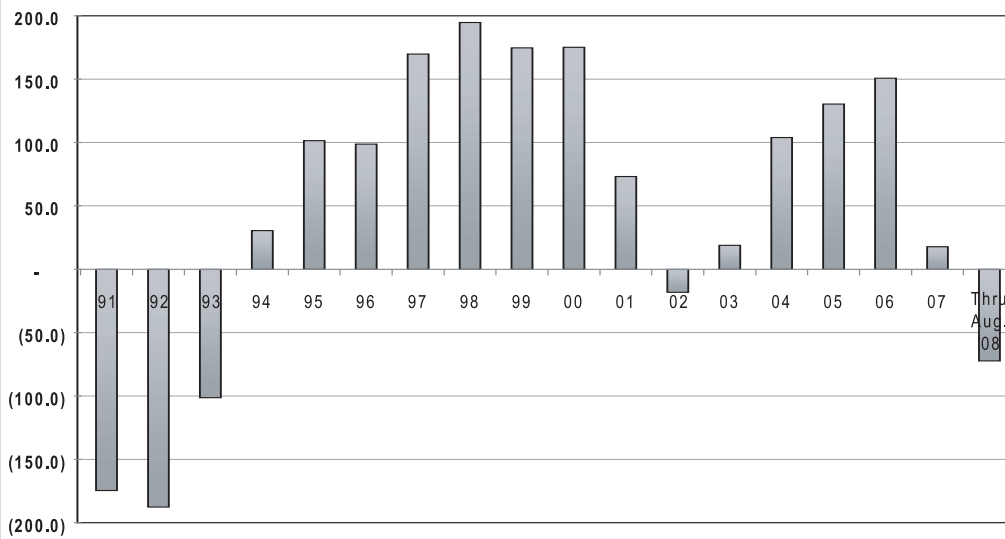
Household employment, another measure of the conditions in the job market, is currently declining at an annual rate of 15,600, or a 1% decrease. Part of the reason that this measure does not look worse than the payroll employment is that many people have stopped looking for a job in this economy. This lowers the size of the labor force, thus understating true labor market conditions. The unemployment rate in Orange County through August this year stands at 4.9% compared to the average rate of 3.9% for 2007. The corresponding average unemployment rate figures for this year and 2007 for Los Angeles were 6.6% and 5.0%, for Riverside County 7.7% and 5.7%, and for Ventura 6.0% and 5.0%.

Almost all sectors are losing employment so far this year in Southern California with a few exceptions. Payroll employment for Southern California, though higher by 18,000 jobs in 2007, has declined by 72,000 so far this year, for a 1% decline [Figure 14]. Leisure and hospitality sectors gained in Los Angeles, and education, healthcare and

**FIGURE 14**

**Southern California Payroll Employment**

the government sectors have positive growth in all the counties. In Orange County, education and health care added 1,900 jobs and government sector 2,400 jobs this year. In fact, the health care sub-sector has added jobs every year for the last eighteen years while education has done so since 2003, and the government sector since 2005.



While the size of an industry is one measure of its significance, it is helpful to look at the impact in payroll dollars that different sectors have.

Salaries differ across the

spectrum of industries and job losses in one sector have a different impact on purchasing power than those in another. Cluster Analysis allows us to examine this issue to the extent relevant data are available. We have only limited data available for Orange County, and it is presented in the accompanying table.

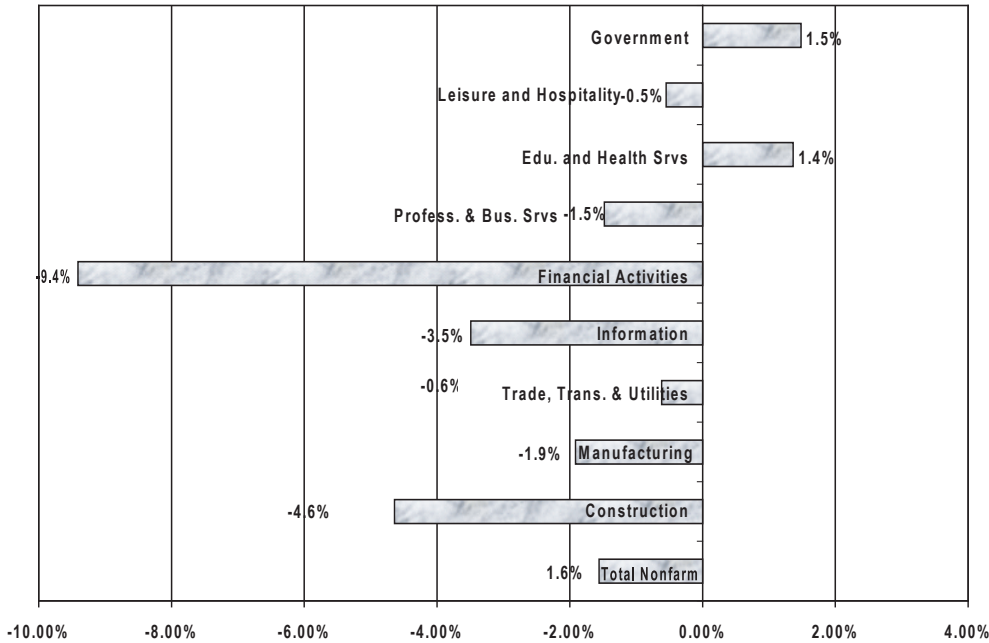
**Orange County Cluster Analysis**

| Panel A                             |         |                | Panel B        |                                     |
|-------------------------------------|---------|----------------|----------------|-------------------------------------|
| Sector                              | Jobs    | Average Salary | Weighted Share | Sector                              |
| Finance                             | 127,783 | \$79,319       | 14.3%          | Manufacturing                       |
| Business and Professional Services  | 113,604 | \$73,984       | 13.6%          | Finance                             |
| Biotechnology                       | 32,477  | \$73,660       | 11.3%          | Business and Professional Services  |
| Advanced Manufacturing              | 108,443 | \$73,400       | 10.7%          | Advanced Manufacturing              |
| Information Technology              | 30,250  | \$70,240       | 9.4%           | Logistics and Transportation        |
| Logistics and Transportation        | 102,991 | \$67,720       | 8.5%           | Management and Administration       |
| Manufacturing                       | 176,367 | \$60,338       | 7.7%           | Construction                        |
| Construction                        | 102,944 | \$55,787       | 7.7%           | Healthcare                          |
| Energy/Environment/Green Technology | 27,205  | \$55,024       | 4.9%           | Tourism                             |
| Healthcare                          | 120,583 | \$47,321       | 3.5%           | Hotels and Restaurants              |
| Management and Administration       | 154,941 | \$40,890       | 3.2%           | Biotechnology                       |
| Transportation                      | 8943    | \$36,916       | 2.9%           | Information Technology              |
| Tourism                             | 172,819 | \$21,009       | 2.0%           | Energy/Environment/Green Technology |
| Hotels and Restaurants              | 136,859 | \$19,158       | 0.4%           | Transportation                      |

Source: Orange County Business Council and authors' calculations-2007 data

Panel A shows 14 clusters ranked by salary level. Finance pays the highest average salary followed by business and professional services, and at the bottom is hotels and restaurants. We also show the size of these clusters as measured by the number of jobs in each category. Manufacturing, tourism, and management and administration are the three largest clusters.

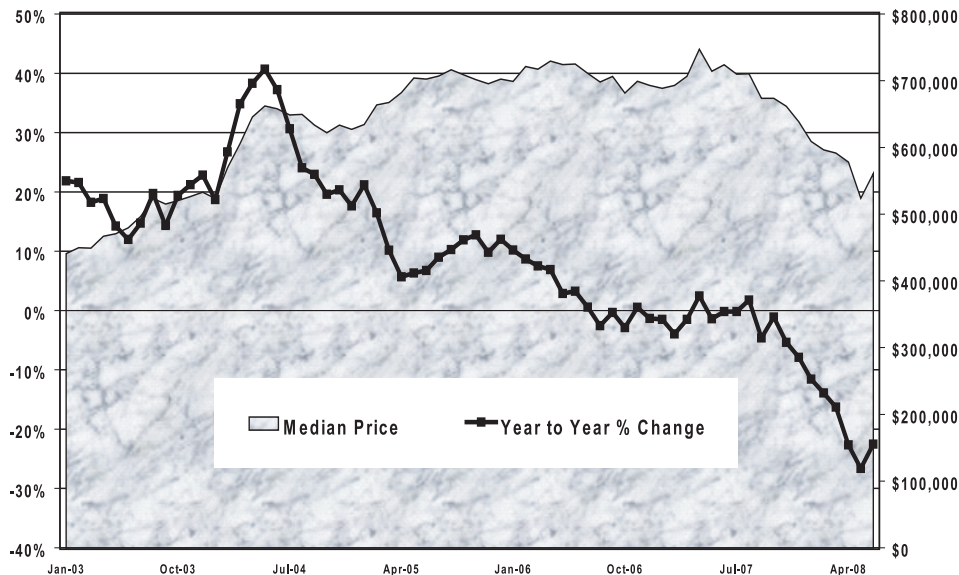
**FIGURE 15**  
**Orange County Sectoral Growth**  
**(January - August 2008)**



But to gauge the significance of the clusters for the County's economy, we need to look at the combined effect of the size of the cluster and salaries paid. We do that by calculating a weighted share of each cluster which is shown in Panel B, in decreasing order of importance. Manufacturing, finance, and business and professional services are the most impactful. While the overall payroll employment in Orange County has fallen by 0.4% in 2007 and is lower by 1.6% on an annual basis so far in 2008, these significant sectors have fallen by larger amounts [Figure 15]. Overall Manufacturing fell by 1.4% in 2007 and is lower by 1.9% in 2008, Financial activities sector employment has fallen

by 7% in 2007 and 9.4% in 2008, and business and professional services is lower by 0.8% in 2007 and another 1.4% in 2008. The percentage fall in the aggregate employment, therefore, underestimates the real impact of job losses. This is likely to result in proportionately larger declines in household spending in the coming months.

**FIGURE 16**  
**Orange County Median Price-Single Family Existing Homes**



(Source: California Association of Realtors)

**Finance, Construction and Housing**

Not surprisingly, finance and construction sectors have been the worst hit. In Orange County, construction lost 2,900 jobs in 2007 and is down by an additional 4,800 through August 2008. Financial activities sector lost 9,700 jobs in 2007 and is lower by an additional 12,100 jobs through August 2008. The financial activities sector made up more than half of the jobs lost and construction over 20% through August 2008. In other words, these two sectors have

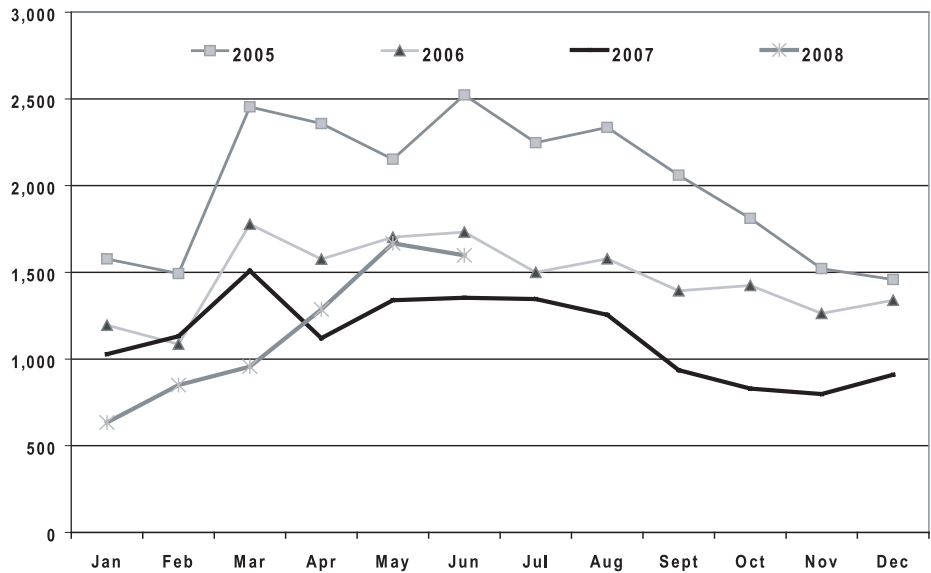
accounted for over 71% of the job losses so far this year.

The Median housing price of an existing home in Orange County this summer was at the same level as in the summer of 2004 [Figure 16]. In other words, the gains made in last four years have disappeared. From the peak reached in April 2007, the average median price this fall has declined by 25%. For Los Angeles, Riverside, and San Bernardino counties the declines from peak are in the range of 30% to 35%. These are about the same range as the national economy. Price corrections in Nevada and Arizona are much larger.

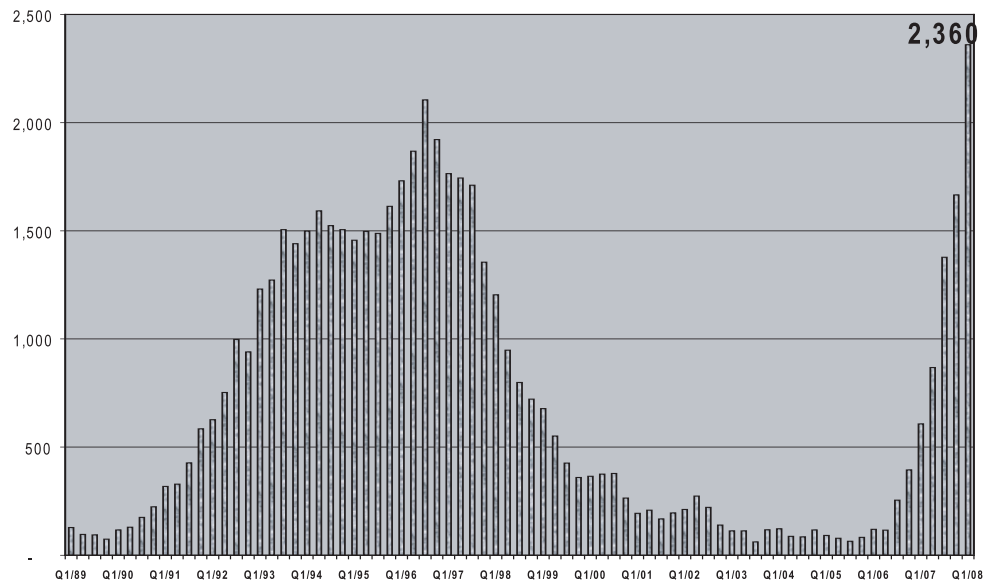
Housing Sales throughout Southern California are much lower, though the data has to be interpreted with care [Figure 17]. In Orange County, for example, the number of home sales appears to have jumped from about 634 in January to 1,598 in June; but many of these are foreclosure sales. A consequence of this is a much lower median price because prices of most homes in foreclosure are below the median price. The number of homes in foreclosure has been rising since the beginning of the year and is expected to continue to climb as financial markets struggle and economy continues to weaken. In June 2008, the number of foreclosed homes stood at 2,300 and it is believed to be above 3,300 as of September 2008 [Figure 18].

Residential and non-residential construction has been hit severely by the present market conditions. Housing permits are down by 54% in the first eight months of 2008 in Orange County and 54% for the Southern California region [Figure 19]. The individual county decreases are 37% in Los Angeles, 55% in Riverside, 65% in San Bernardino and 51% in Ventura. Residential valuations are lower by 39% in Orange County and 37% for the Southern California region. Because of an increase in non-residential construction in Los Angeles, the decline in that category for the region is only 10%. We expect these trends to continue for the remainder of this year and well into 2009.

**FIGURE 17**  
**Sales of Existing Homes, Orange County**

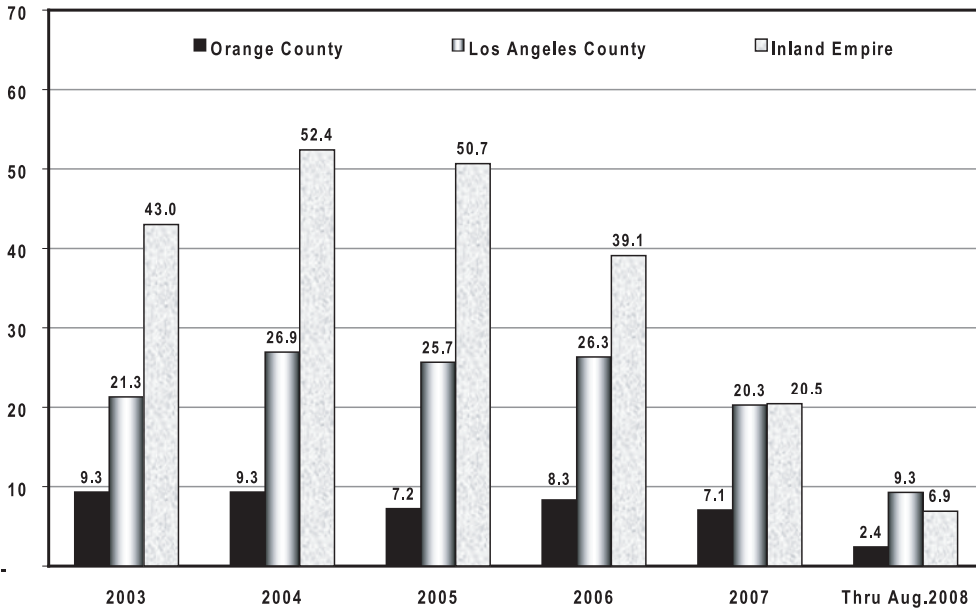


**FIGURE 18**  
**Foreclosures, Orange County**



### Forecasts for Orange County and Southern California

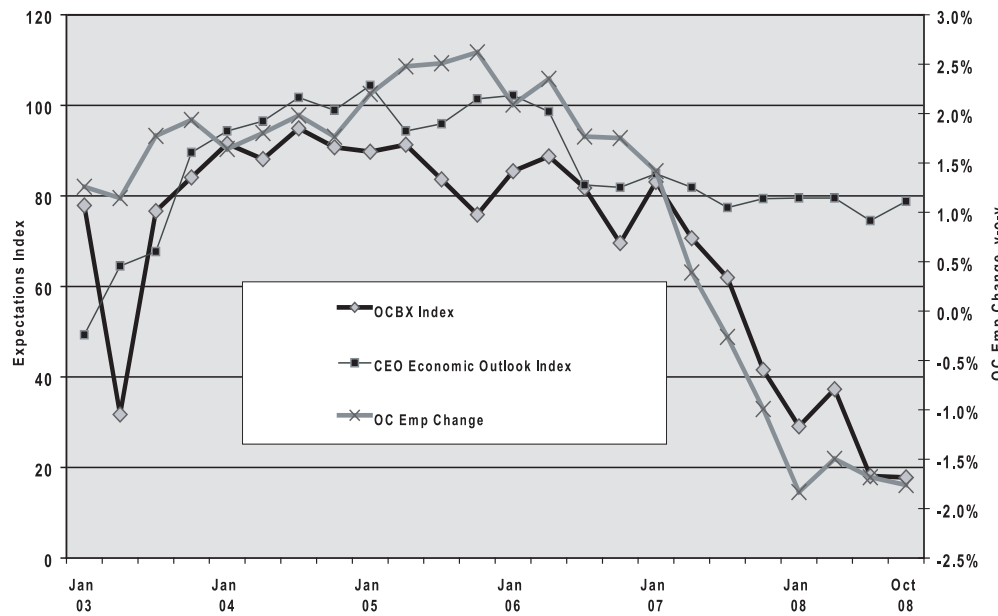
**FIGURE 19**  
**Building Permits**  
**(thousands)**



Orange County and Southern California will continue to suffer job losses this year and at least through the first half of 2009. While a recovery is expected from the global financial turbulence over the next two quarters, household and business spending will take longer to recover. Consumer and business confidence are at extremely low levels. We expect the national economy to weaken in the coming months as households and businesses try to cope with the financial turmoil.

The Institute for Economic and Environmental Studies undertakes quarterly surveys of business expectations for Orange County [Figure 20]. The overall index, OCBX, reached its lowest level in its five year history for the fourth quarter of 2008. A reading of 50 indicates no change. The index reached a low of 17.1. This measure has been compared to the national CEO Roundtable Survey and the percentage changes in Orange County payroll employment. It tracked the former until three quarters ago when the CEO index seemed to be giving false signals. The OCBX index has provided reliable forecasts of the economic conditions in Orange County and for the larger Southern California region.

**FIGURE 20**  
**Orange County and U.S. Business Expectations**



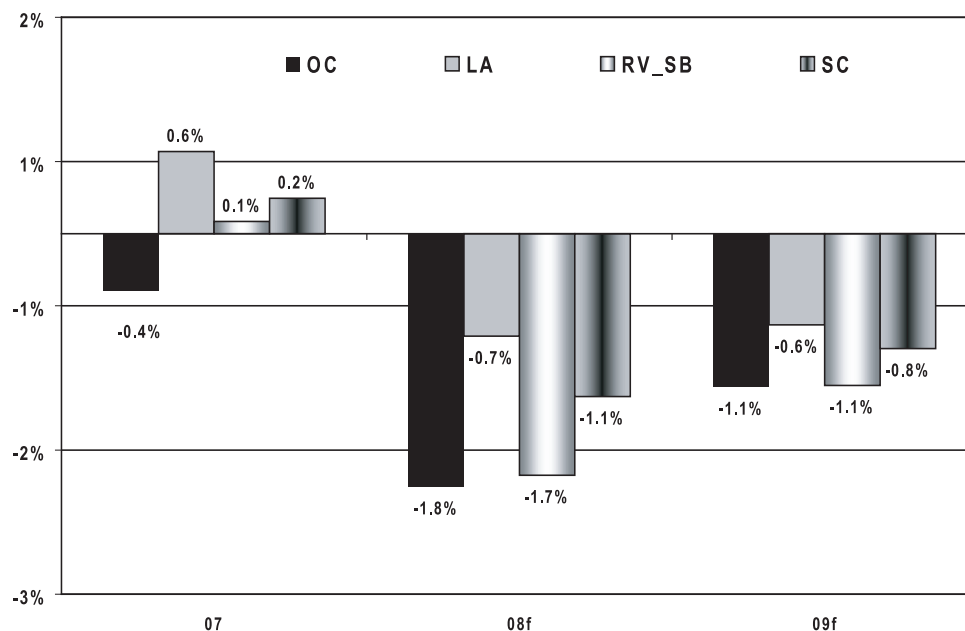
The unemployment rate will increase to over 6% in Orange County during the next 18 months. We expect the average unemployment rates to be 5.3% in 2008 and 6% in 2009 in Orange County. Non-farm payroll jobs are expected to decline by 1.8% and will further fall by 1.1% in 2009 before recovering at a rate of 1.5% in 2010 [Figure 21]. Finance, construction, and information will continue to shed jobs while a second half year recovery is expected in retail and business and professional

and 6% in 2009 in Orange County. Non-farm payroll jobs are expected to decline by 1.8% and will further fall by 1.1% in 2009 before recovering at a rate of 1.5% in 2010 [Figure 21]. Finance, construction, and information will continue to shed jobs while a second half year recovery is expected in retail and business and professional

services. The government sector which has added jobs consistently will come under pressure given the tightening budgetary situation at the state and local levels. Housing prices are expected to continue their downward slide over the next six months before stabilizing in the second half of 2009. Any recovery in housing prices will have to wait until the end of 2010.

In the Southern California six-county region (Orange, Los Angeles, Riverside, San Bernardino, Ventura and Imperial), the unemployment is expected to worsen during 2009. We expect the average unemployment rates to be 7% in 2008 and 8.1% in 2009 in the Southern California region. Non-farm payroll employment is expected to decrease by 1.1% in 2008 and by another 0.8% before recovering in 2010. Housing prices in the region's counties will follow the trend mentioned above for Orange County, a further decline over the next three quarters will lead to stabilization by the end of 2009 and only a minor recovery beginning at the end of 2010.

**FIGURE 21**  
**Payroll Employment**



Robert Giuliano's expert assistance is gratefully acknowledged. Any errors are the authors' responsibility.