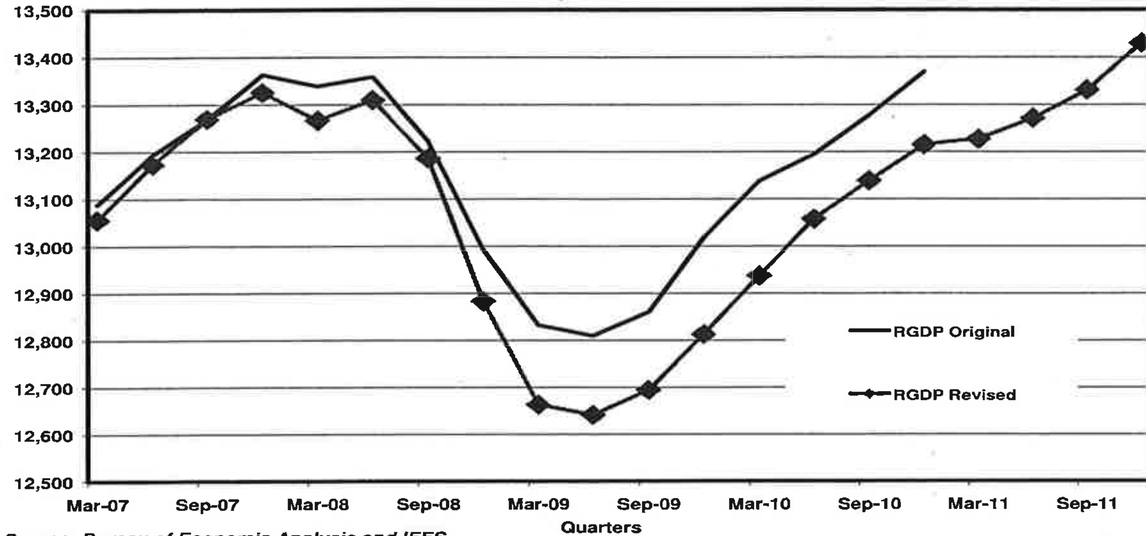
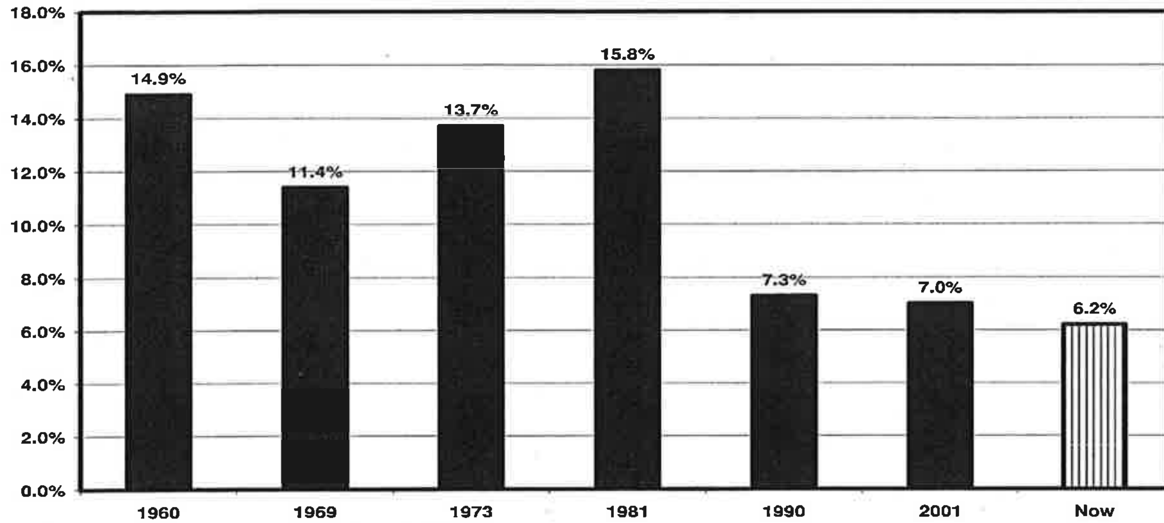
Figure 1
Mind the Gap
(Real GDP, level)



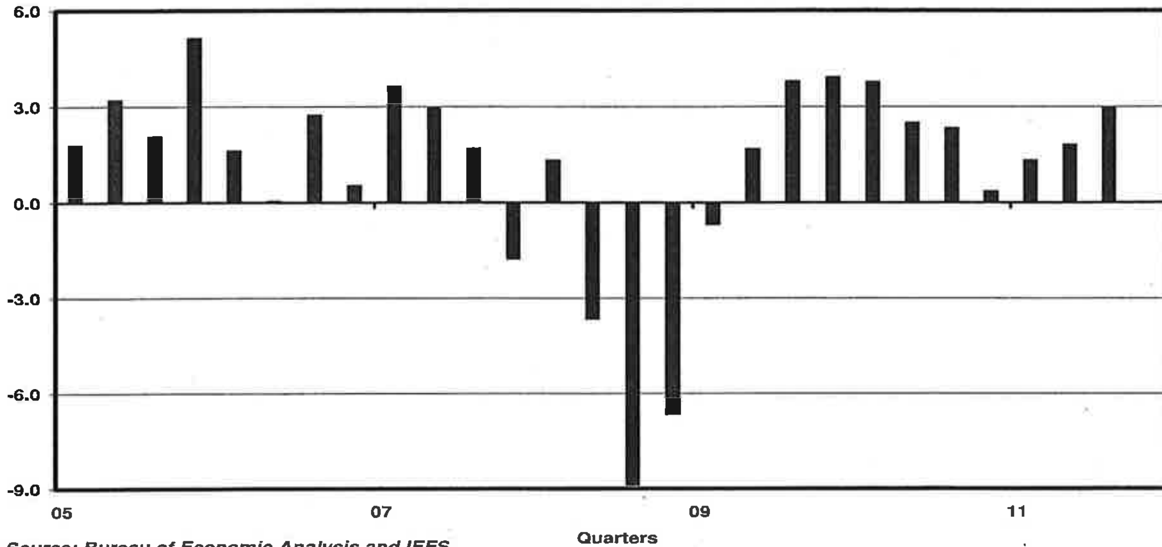
Source: Bureau of Economic Analysis and IEES

Though the pace of economic recoveries has downshifted significantly over the past 20 years, this recovery has been weaker even when compared to the previous two (in 1990s and 2001) which were similarly lackluster and slow. Prior to the recession of 1990, RGDP growth was in double-digits during the first ten quarters of each recovery, growing by a total of 14.9% after the recession of 1960, by 11.5% in early 1970, by 13.7% after the recession of 1973, and by 15.8% after the early 80s recession (Figure 2). In contrast, the economy grew by a feeble 7.3% in the 10-quarter span after the 1990s recession, by 7.0% after the recession of the early 2000s and only by 6.2% since the current recovery began. This is not surprising particularly in light of the fact that this recovery came in the heels of a housing and financial crisis and a balance sheet recession -- which takes a lot longer to repair than a garden-variety business cycle recession.



Source: Bureau of Economic Analysis and IEES

The good news is that 2011 ended on a strong note and most of the momentum has carried over in 2012. Growth came in at 3.0% in Q4 2011, which was revised upwards from a 2.8% early estimate (Figure 3). While this was the third largest increase in real GDP since the end of the "Great Recession," it is the biggest quarterly gain in 6 quarters. Improvements were broad-based with final demand firming up by 2.5% (q-o-q) and consumption spending edging up to 2.1%.

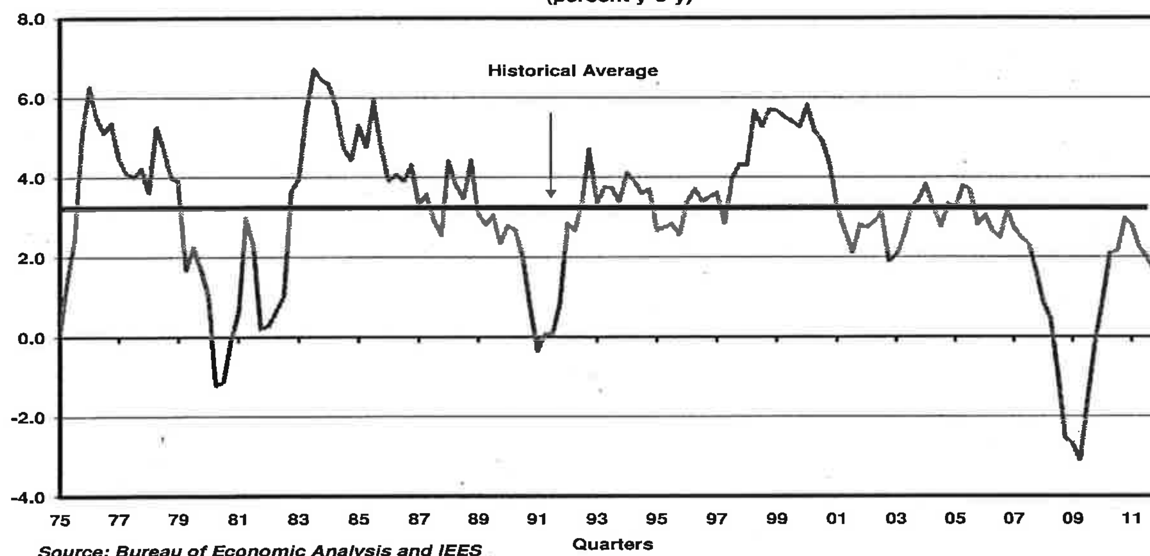


We expect U.S. real GDP growth to continue to expand during this year, though the cyclical recovery will be restrained especially in the fist half by higher energy prices and a "soft-landing" of emerging market economies. Developments in the Middle East (particularly escalating tensions with Iran) and further fallouts from the European debt crisis present additional downside risks to our forecasts. In absence of such adverse shocks, U.S. real GDP is expected to grow by 2.4% in 2012 and by 2.6% in 2013, well below the "average" post-recession levels. Based on a number of macroeconomic trends discussed below, we expect the recovery to gain breadth and pace over the forecast horizon, but continue to be hampered by structural factors (labor, deleveraging, budget deficits) and remain vulnerable to external shocks (oil, Eurozone crisis, global slowdown). In the long-run, our overall assessment of the U.S. economy based on our econometric models is positive with long-run real GDP growth at roughly 2.5-2.7%.

Consumption Spending

Personal consumption expenditures make up the bulk of real economic activity, accounting for about 70% of real GDP. As such, any meaningful recovery would have to be supported, in part, by this component, given the sizable share of economic activity that this sector commands. Though holding steady at a 2.2% annual rate in 2011, real consumer spending during this recovery cycle is well below the historical average (roughly around 3.3% y-o-y) and far below the average post-recession rate (Figure 4).

Figure 4
U.S. Consumption Expenditures
(percent y-o-y)

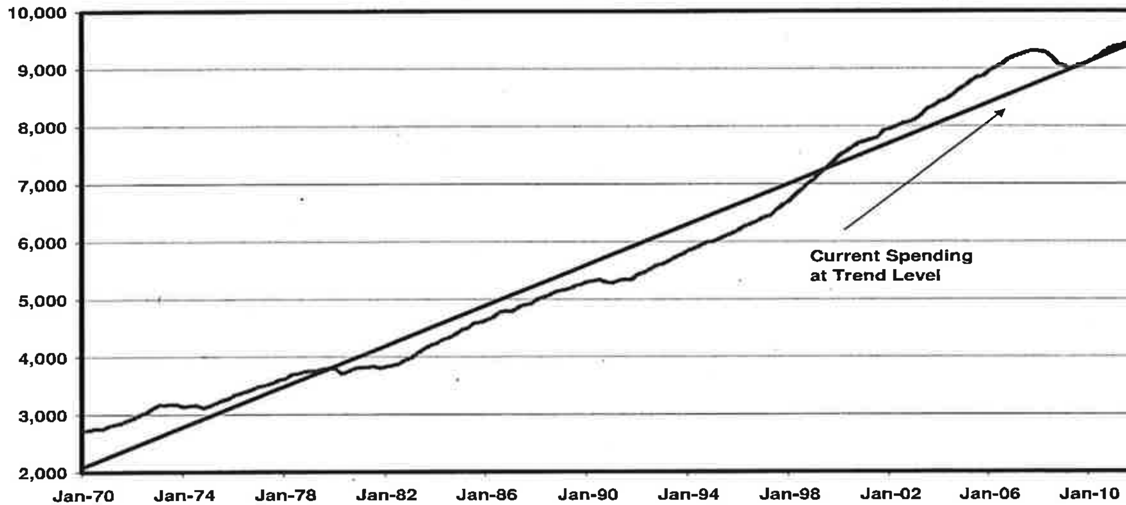


Source: Bureau of Economic Analysis and IEES

In fact, over the 10-quarter period since the official end of the "Great Recession," consumption has risen by a mere average annualized pace of 1.5%, coming below the 2.9% rate of 2001 and the 2.5% in the early 1990s, and falling far short of the 4.5% pace of post-recession growth during the recoveries of 70s and 80s.

Consumer spending declined by an astounding -3.4% during the recession -- the largest drop in the post-war era. And while it has bounced back by a total of 5.4% since the trough of the recession, the gain is nonetheless tepid when compared to a double-digit pace set in earlier recoveries. More importantly, real consumer spending seems to have suffered a structural break from last decade's consumption boom and has now settled at a permanently lower rate which appears more in line with the historical trend (Figure 5). This indicates that the current rate of consumption spending will likely hold up over the forecast horizon and the excesses of the last decade will not be repeated.

Figure 5
Real Consumption Spending and Trend Level
(level, billions of dollars)



Source: Bureau of Economic Analysis and IEES

The sub-par performance in spending is expected given the formidable forces weighting on consumers. Sluggish income growth, a gruesome multi-year deleveraging process, the lingering effect of home wealth depreciation, and tight access to credit for many potential borrowers, have restrained consumer demand. As the financial and housing crisis decimated household wealth, consumers began to pay down debt and boost savings at the highest rates in three decades.

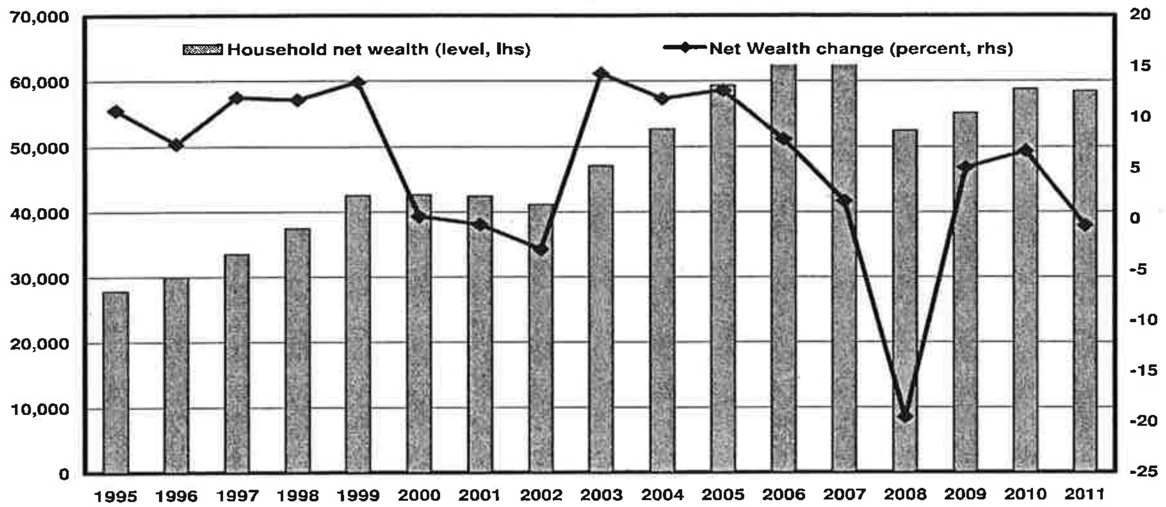
Income growth has been another soft spot for consumers; real disposable income grew only by 0.6% over 2011. Though wage and salary growth has picked up during recent months, reflecting continued improvements in the labor markets, private sector average hourly earnings have risen just 1.6% over the past year and real disposable income on a per capita basis is essentially flat. The current rise in gasoline prices is taking another sizable chunk out of disposable income, further eroding purchasing power. In general, every sustained 1-cent increase in gasoline prices, costs around $1.05 billion in additional spending, which means that the recent 73-cent run-up in gasoline prices since the start of the year will roughly translate into an additional decrease of $76.6 billion in household spending.

Despite these concerns, it is worth noting that consumer expenditures have improved meaningfully compared to a year ago. In particular, Q4 2011 recorded a surge in purchases of motor vehicle sales which, after plunging to a recession low of 9.5 million (June 2009) now stand at 15 million (adjusted annual rate) -- the highest level since February 2008. Much of this reflected the unleashing of the pent-up demand from exceptionally weak sales in spring and summer

2011 due to the dampening effects of the earthquake in Japan on motor vehicle supply. Real retail sales grew by a solid 4.4% average pace in 2011, though the pace of improvement downshifted somewhat early in 2012. Consumer confidence has continued to improve over the past few months, and as of the latest reading is standing at the second highest level since before the financial crisis.

Consumer balance sheets are now healthier than at any point during the recovery. Household net worth grew by 19.2% over the past 2 years, rising from a trough of $49 trillion to the current level of $58.8 trillion (Figure 6). This was largely due to gains from investments in equity markets which regained renewed strength in the final quarter of 2011. Despite these improvements, household wealth remains $8.4 trillion below its pre-recession peak levels with financial assets around $3.0 trillion lower and the value of household real estate holdings an additional $6.7 trillion below peak levels. Household debt continues to decline reflecting continued contraction in mortgage debt which is only partially offset by a modest expansion in consumer credit. Household debt-to-service ratio has also fallen in tandem with reduced debt burdens and it now stands at the same level as in the mid-1990s.

Figure 6
Household Net Wealth
(billions of dollars and percent changes)



Source: Board of Governors of the Federal Reserve System and IEES

We expect consumption spending to continue to grow over the forecast period, albeit at a slower clip in the first half of the year than the most recent data suggests. On the plus side, gains in the labor market, the extension of tax-cuts and unemployment benefits, a lower debt to income ratio, and falling loan delinquency rates are expected to support consumer spending going forward. The pace of improvement however, will be restrained by persistently high energy prices, sluggish income growth, and continued weaknesses in the housing sector. Though some downside risks remain, especially with regards to oil prices, consumption should grow by around 2.1% this year and by an additional 2.3% in 2013.

Investment Spending and Production

Private investments, particularly investments by firms in Equipment and Software (E & S), have boosted growth over the past two

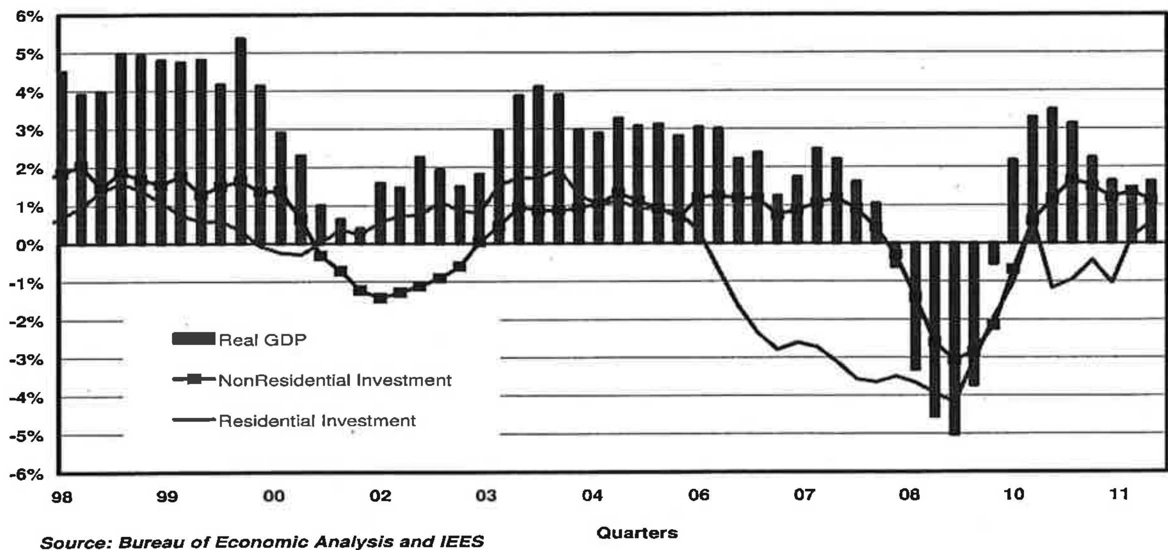
years -- adding around 1.9% to real GDP in 2010 and an additional 0.6% in 2011. In fact, business investments grew by a sharp 20.6% pace in Q4 2011, largely due to a build-up in inventory levels. Total private investment has risen by 19.5% since their trough in Q4 2009, though they still remain around -7.3% below their pre-recession peaks. Business fixed investment rose by a more robust 6.7% in 2011 compared to a 2.6% gain in 2010. This investment component, while remaining in positive territory, is expected to become a soft spot for real GDP growth in the first half of this year, particularly since shipments and orders were likely pulled forward into 2011 in order to take advantage of more generous tax treatments.

Outlays for equipment and software rose by a remarkable 16.4% in 2010 and a more subdued 10.2% pace in 2011 as firms replaced outdated capital and resumed capital spending that was deferred during the recession. Although spending for high-tech equipment and software has held up reasonably well, the latest data (Q4 2011) shows an appreciable slowdown in this trend. Investments in high-tech E & S are the only component of business investments that have fully recovered the losses inflicted by the recession and are currently around 3.3% above their pre-recession peaks. We expect this investment component to add to real GDP growth in 2012 as business sentiment and capital spending improve suggesting that firms may be more willing to expand production capacity and undertake new investments.

After plunging by an astounding -59% from its peak in 2005, real residential investments have finally increased for three consecutive quarters, posting an impressive 11.5% growth in Q4 2011. All told,

this sector has risen by 4.4% since its cycle-lows, in line with our last year's forecast (Figure 7). More encouragingly, home building has picked up at a consistent and steady pace, although the growth rates seem more impressive precisely because activity has resumed from an incredibly shrunken base. Though the current homebuilding activity is merely a shadow of its former self and it will be years before this sector returns to normal growth, gradual improvements in this component should be supportive of real GDP growth. In addition to new home construction, outlays on home improvements have also risen over the past few months as some remodeling projects are taken up after a near four-year inactivity in this front. We expect real residential investments to show gradual improvement over the forecast horizon, boosted primarily by construction of multi-family units.

Figure 7
Real GDP, NonResidential and Residential Investments
(percent, year-on-year change)



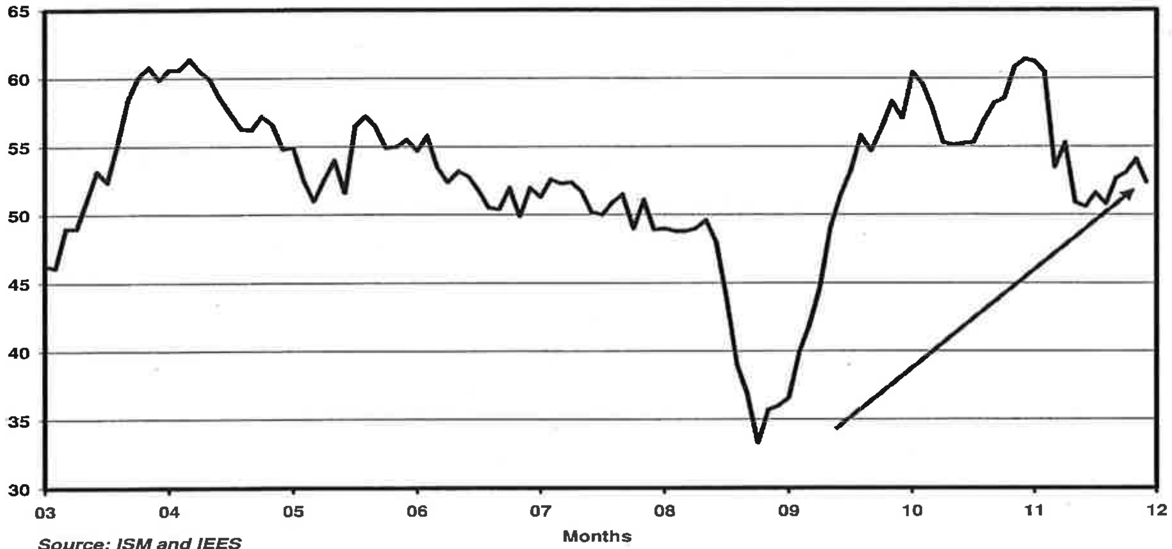
Source: Bureau of Economic Analysis and IEES

Non-residential investments, which comprises the larger portion of private investments and includes expenditures on structures (commercial buildings, retail stores, industrial plants, warehouses) and durable equipments (computers, information processing industrial and other equipments), rose by 8.7% in 2011, posting gains in every quarter of the year. Encouragingly, some of these gains were due to a robust pick-up in nonresidential structures which rose by 22.6% in Q2 2011 and by an additional 14.4% in Q3 2011. However, investments in structures slipped by -2.6% in the last quarter of 2011. Conditions in this sector continue to remain difficult: vacancy rates, though improved, are still high, property prices continue to remain low and financing for builders is still tight. Investments in mining and drilling facilities should resume after a drop in Q4 2011 supported by elevated energy prices and advances in technology for drilling and fracturing. Overall, we anticipate this investment component to post modest improvements for the balance of the year.

Production activity rose by an average annualized pace of 4.2% in 2011, below the brisk rate of 5.3% recorded in 2010. From the trough of June 2009, production has risen by an impressive 14.8% with capacity utilization improving from a low of 67.3% to a current 78.6% rate -- below the full-utilization level of 83%, but still a remarkable improvement. The latest data have softened a bit and point to a more moderate start of the year: the Institute for Supply Management (ISM) manufacturing survey fell back slightly in February after posting advances for four consecutive months (Figure 8). Nonetheless, the index is noticeably above the demarcation line of 50

that separates expansions from contractions, which means that production likely expanded early in the year albeit at a lower clip.

Figure 8
ISM Manufacturing Compsite Index
(level)



Source: ISM and IEES

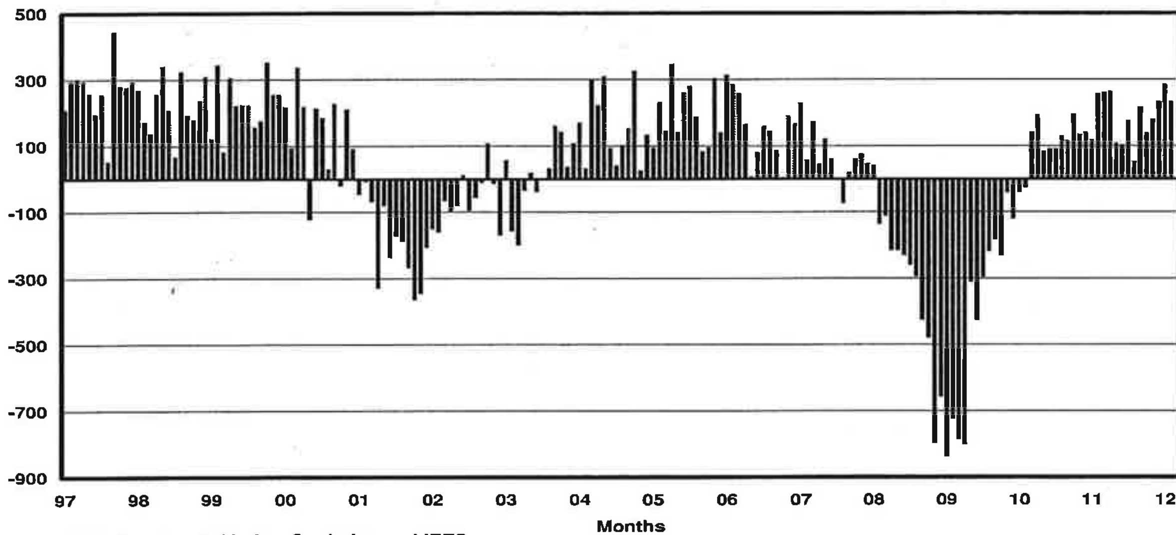
In addition, the non-manufacturing activity survey grew for the 26th consecutive month with the employment index soaring to its highest level in six years. We expect production activity in the manufacturing sector to continue to improve for the balance of the year, though the pace of increase will moderate slightly in the first half of the year. The service sector should continue to expand with further gains in employment which bodes well for the labor market.

Labor Market

One of the main reasons for renewed optimism in the new year is the brightened outlook for the labor market. After a gut-wrenching period of two straight years of job losses - which obliterated a total of 8.8 million jobs, and a frustratingly slow pace of job formation in

the subsequent two-year recovery, the pace of job growth has finally stepped up over the past three months. In fact, job creation has steadily edged up during the recovery averaging 132,000 jobs per month in 2010, 170,000 in 2011 and 259,000 in the first two months of 2012. Of course not everything went as smoothly as these figures would suggest: last year's job growth was similarly stellar in the first four months of the year (upwards 200,000 jobs per month) only to peter out to a mere 52,000 in mid-year as the economy seemed to tip ever closer to a double-dip recession (Figure 9). Nonetheless, Q4 2011 data showed continued improvement in employment numbers and the trend has spilled over and strengthened further in the current year.

Figure 9
Private Payrolls
(thousand of employees)



Source: Bureau of Labor Statistics and IEES

Improvements are broad-based: since the start of the recovery, the private sector has added a total of 3.9 million jobs, of which 2.1 million were in 2011. In fact, over 750,000 jobs were added during the past three months -- a sign that indicates momentum and strength.

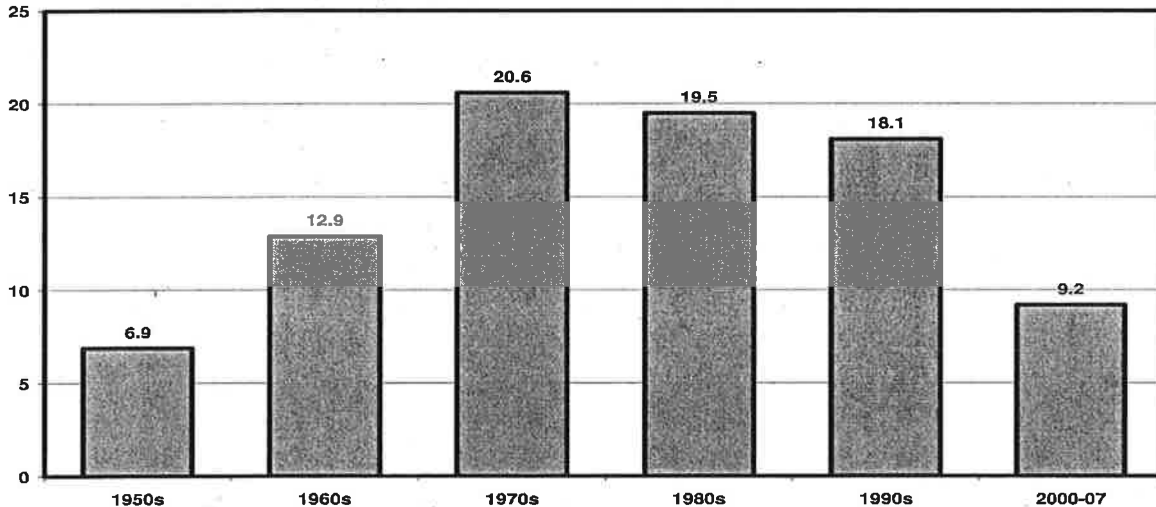
As of March 2012, the number of persons working part time for "economic reasons" declined to 8.1 million, roughly 1.3 million below the peak recorded one year earlier but still significantly above historical norms. The unemployment rate has fallen rapidly over the past 6 months -- declining from 9.1% in June 2011 down to 8.3% in March 2012. The number of long-term unemployed (those jobless for 27 weeks and over) has dropped to 5.4 million -- down from a cycle high of 6.7 million -- and now account for 42.6% of total unemployment.

Temporary help services, which is a leading labor market indicator, has been on an upswing since the start of the recovery more than two and a half years ago. Average weekly hours have also picked up indicating an increased demand for existing labor which should eventually translate into new hiring. Government layoffs seem to have abated lately after shaving off a total of nearly -600,000 jobs since September 2008. More importantly, private employment has increased for 24 consecutive months, and though early in the recovery the pace of job formation was far below desired levels, the overall trend and recent improvements are certainly encouraging.

It is now clear that the U.S. labor market is in the midst of a cyclical recovery, which will continue to expand over the near term and gain more traction bringing forth a much needed healing in this sector. Nonetheless, there are formidable structural forces restraining the pace of a meaningful rebound in employment that will likely hamper job growth during this entire decade. First, the pace of job formation downshifted significantly over the last decade prior to the crisis: the U.S. economy added a total of 20.6 million jobs in

the 70s, 19.5 million in the 80s, 18.1 million in the 90s, but only 9.2 million during the 2000-2007 period -- roughly half the number of the previous decades (Figure 10). Second, each subsequent recovery in recent times has become more "jobless" than the previous one. Pre-1990s, labor markets took on average 6-8 months to recover after a rebound of real GDP to pre-recession levels. This was extended to 15 months after the 1990s recession and to 40 months in 2001. In this cycle, two and a half years after the end of the recession, the labor market regained less than half of the total employment lost during the crisis which means that this recovery will be even more snail-paced than the previous two.

Figure 10
Total Payroll Employment per Decade
(millions of employees, level)

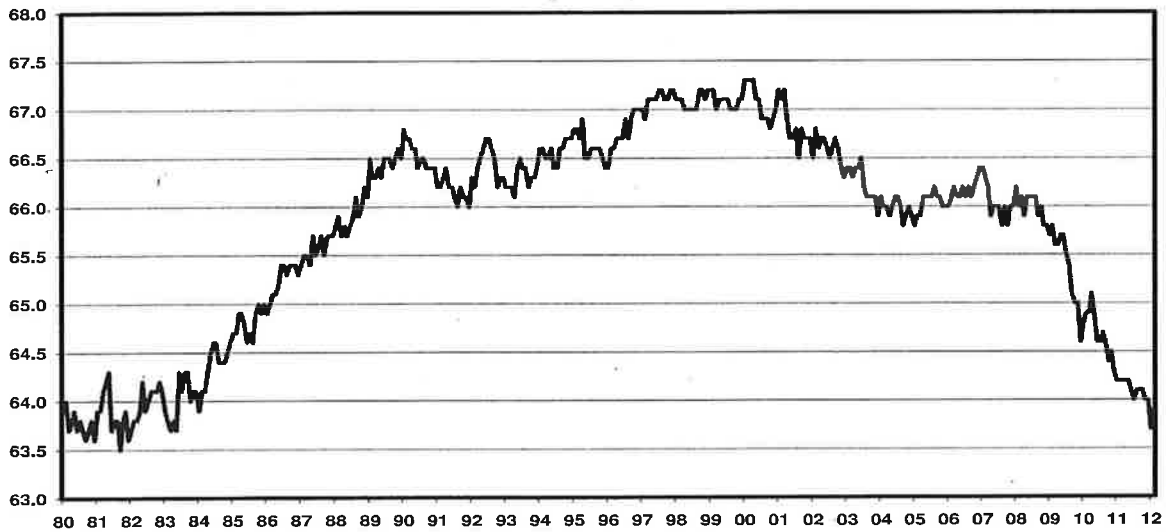


Source: Bureau of Labor Statistics and IEES

More concerning is a recent trend which points to a secular and consistent drop in labor force participation rates over the past decade, which has declined further after the crisis. The participation rate stands at 63.9%, significantly below the 66.4% rate recorded in

the years prior to the crisis. In fact, the labor participation rate is now at the same level as in 1983, when the labor force surged as women joined the workforce (Figure 11). Though the labor force tends to shrink somewhat after a recession as discouraged workers leave the market and rejoin when conditions are more favorable, this time around the decline seems to be more structural. Though it is tempting to ascribe this drop in labor force participation to the commencement of the retirement of the "baby boomers", it turns out that this demographic has actually increased participation rates since the crisis. A close inspection of the data reveals that this trend is largely due to two forces: the decline in participation rate of young adults (16-24 years old) and a discontinuation of the uptrend in female labor participation.

Figure 11
Labor Force Participation Rate
(percent)



Source: Bureau of Labor Statistics and IEES

Understanding the decline in labor force participation rates is important because it tends to obscure unemployment rate numbers. In

fact, there are reasons to be cautious about recent improvements in the unemployment rate which seem to be "out of sync" with economic activity: while the unemployment rate fell by a dramatic 0.8% in the past six months, real GDP rose by an exceptionally modest 2.1%. We suspect that the current unemployment rate paints a brighter picture than what is warranted by fundamentals which is partially due to the shrinking of the labor force and partially to seasonal adjustment patterns. Not surprisingly, if we hold labor force participation constant at pre-recession levels, even with the recent job growth, the unemployment rate turns out to be 11.2%!

Labor market issues are also more problematic after the Great Recession because of other undesirable features of the current cycle: the housing market collapse has further limited the mobility of the labor force adding an estimated 0.3%-0.5% to the unemployment rate, and the extension of unemployment benefits may have contributed an additional 0.2%-0.4% to that number. In addition, the quality of jobs added during the recovery is generally sub-par: retail trade, leisure and hospitality, temporary help and the home health-case industry account for over 40% of all the gains even though these sectors made up only 25% of all losses during the recession. These jobs tend to be generally low-paying and mostly part-time, which does not bode well for income growth and consumption spending going forward.

The outlook for the labor market is modestly optimistic. We expect job growth to continue over the forecast horizon, averaging around 165,000 jobs per month in 2012 and 180,000 jobs in 2013. Though robust, this rate is still not fast enough to quickly bring the

unemployment rate down to a level consistent with full employment (5% to 6% rate). The sheer size of job losses during the recession was so massive that even if the recovery was proceeding at a robust pace (300,000 jobs per month), it would take two and a half more years for the labor markets to normalize. If the pace of job creation was at a respectable 200,000 per month, the unemployment rate would reach a level consistent with full potential only by mid-2016. In total, the U.S. economy needs to add a total of 18.7 million jobs for the balance of the decade in order to keep up with the population increase and bring the unemployment rate to levels consistent with full employment. Our baseline scenario calls for job growth of 14.8 million during this time, which means that the unemployment rate will remain above full employment levels for quite some time. Short term, the unemployment rate is expected to remain elevated, reflecting the slow pace of job creation and an increase in labor force, averaging 8.4% in 2012 and 8.1% in 2013.

Real Estate Market

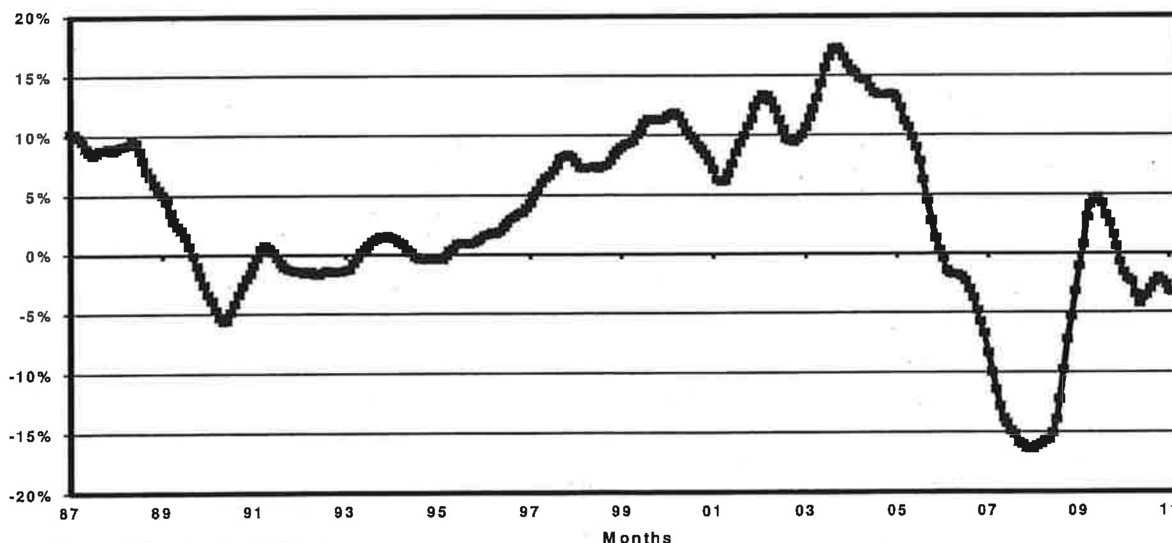
The national housing market has shown some signs of life lately particularly in the areas of sales and homebuilding activity. After slumping to a historical low of 478,000 units (annualized rate) in Spring 2009, housing starts have posted some gains and currently stand at 698,000 units. Most of this increase is due to a pickup in multifamily housing units, which has risen in response to increased demand for rental units and a rise in rental rates. Single-family home sales have also shown some tentative signs of improvement with

December and January breaking above 500,000 units (annualized rate) for the first time in almost two years, though this market is still a ways off from a normal recovery. A declining homeownership rate and slow pace of household formation indicate that demand for apartment rentals will continue to remain elevated: if recent trends hold up, we project the market will need close to 3 million additional apartment units over the next 4 years. This should boost investment in residential activity, which in turn is expected to contribute, albeit modestly, to real GDP growth.

Sales of existing homes have also picked up, growing by 8.8% in February compared to one year ago. This is largely supported by record-high home pricing affordability, low mortgage rates, some pent-up demand from the four-year slump and a more upbeat outlook on employment and income. Nonetheless, the uptick in home sales in still subdued and sales activity remains in a relatively low gear. We also suspect that some of this improvement may be due to seasonal factors and an unusually mild winter rather than a robust turnaround in fundamentals. New home sales have shown renewed weakness over the past two months, tumbling by -5.4% in January and by an additional -1.6% in February. New home sales activity recorded an all-time low in 2011, with only 302,000 units sold during the entire year. Despite this disheartening news, the latest data shows an 11.4% increase over the previous year, which indicates that sales are nonetheless firming up, even if the pace is irregular and still sluggish. More importantly, the inventory supply has dropped for 6 months which should support some construction activity in the near-term.

Despite these improvements in home sales and construction, prices have continued to trend lower reflecting continued pressure from existing oversupply, shadow inventory, and weak demand (Figure 12). Issues on the supply side are rather formidable: there are currently 3 million properties in various stages of distress. Of these, around 1.6 million are currently in the shadow inventory (6 months' supply), of which 800,000 units are seriously delinquent (3.1-months' supply), 410,000 are in some stage of foreclosure (1.6-months' supply) and 400,000 are already in REO (1.6-months' supply). Although there have been around 3 million distressed sales over the past two years, the shadow inventory in January 2012 is at the same level as in January 2009, indicating that distressed loans continue to weigh in the market. In addition, housing vacancies continue to remain elevated at 2.4% -- up from a historical average of 1.6%. As a result and in line with our forecasts, home prices have continued to decline, falling by

Figure 12
National House Prices: Case-Shiller Index
(percent y-o-y)



Source: Standard & Poor's

-3.1% in January 2012 compared to one year earlier. Excluding distressed sales, home prices are down -0.9% on a year-over-year basis.

Housing equity has shriveled to less than half its pre-crisis level, declining from a peak of $13.1 trillion to $6.1 trillion -- around the same levels as in 1999. Homeowner equity has shrunk from an average of 60% down to 38.4%. As of the latest data, 11.1 million or 22.8 percent of all residential properties with a mortgage are in negative equity with an additional 2.5 million borrowers having less than five percent equity (near-negative equity). Together, negative equity and near-negative equity mortgages accounted for 27.8% of all residential properties while the total mortgage debt outstanding on properties with negative equity stood at $2.8 trillion. The total amount of underwater debt in the U.S. is estimated to be around $750 billion, but persistent weakness in the housing market is expected to push this number higher in the short-term.

From the start of the financial crisis, a total of 3.3 million homes have been foreclosed, with around 860,000 having been completed in 2011. Around 1.4 million homes -- or 3.3% of all households with a mortgage -- were in foreclosure inventory in January 2012 compared to 1.5 million (3.6% of total) recorded one year ago. The share of mortgages severely delinquent (90+ days) fell to 7.2% in January 2012, down from 7.8% compared to one year ago.

The speed of foreclosures is expected to pick up this year after the recent settlement between the state attorneys and five major mortgage services to the tune of $25 billion. Of this amount, $20

billion will be used to provide financial relief for borrowers such as principal balance reduction and loan refinancing for underwater borrowers. An additional $5 billion will be paid in cash to the federal and state governments of which $3.5 billion will go to repay public funds lost as a result of servicer misconduct, while $1.5 billion will be used to provide cash payments to borrowers whose homes were sold or taken in foreclosure between January 1, 2008 and December 31, 2011.

The federal government has stepped up its efforts in an attempt to alleviate the housing crisis. Policy recommendations vary from loan modification programs to a wide-scale rental conversion program of government and bank-owned REOs. The administration is attempting to expand its Home Affordable Refinance Program (HARP) and Home Affordable Mortgage Program (HAMP) to incentivize private lenders to modify mortgages and reduce principal balances. The Treasury and the Federal Reserve are actively promoting a program that would sell large blocks of homes owned by Fannie Mae and Freddie Mac to investors that will convert these properties into rental units with the hope that this will drawdown the oversupplied stock of housing and increase inventory in the undersupplied rental market

The outlook for the housing market while more upbeat than at any point during the recovery is still guarded. The market is expected to continue to improve in 2012 and beyond, though the recovery will be sluggish and uneven especially over the next 6-8 quarters. On the positive side, home sales and home construction will continue to increase after having bottomed out in mid-2011. Housing starts are

expected to average around 705,000 in 2012 and 780,000 in 2013 and construction should contribute modestly to real GDP growth during the forecast horizon. Even with these gains however, homebuilding activity will remain a shadow of its former self for quite some time, at least until the inventory overhang of homes is reduced to normal levels. Our forecasts project that with the current low pace of household formation and a decline in homeownership, home vacancy rates will normalize towards their historical average only in mid-2017. This means that home prices will continue to remain depressed well into the middle of the decade. We expect home prices to post an additional 1-2% decline in 2012, stabilize at the bottom early in 2013, and post steady but modest gains from 2014 until 2018 when conditions in the housing market are expected to return to more normal levels.

The commercial real estate market also experienced increased activity especially in late 2011 which has spilled over in the current year. More than 13,000 commercial real estate properties were sold in 2011, totaling $250.8 billions in sales. Improvements are particularly impressive in the apartment and industrial real estate sector reflecting higher demand for rental units and a brisk pick-up in manufacturing and factory activity. Apartment vacancy rates dropped by 1.4% in 2011 and are now down to 5.2% -- the lowest level in more than 10 years. Vacancy rates for industrial space declined by 0.8% in 2011 driven by growth in manufacturing, retail and international trade. Industrial rents remain subdued however, reflecting the overbuilding that occurred in many markets over the last decade. Improvements in the office market have been less

dramatic but absorption has remained in positive territory while vacancy rates remain elevated at 17.3%. Retail space picked up steam in the second half of 2011, likely reflecting seasonal trends related to the holiday season. Rent growth for this sector also increased in Q4 2011 for the first time since 2008 and net absorption rose by 3.18 million units.

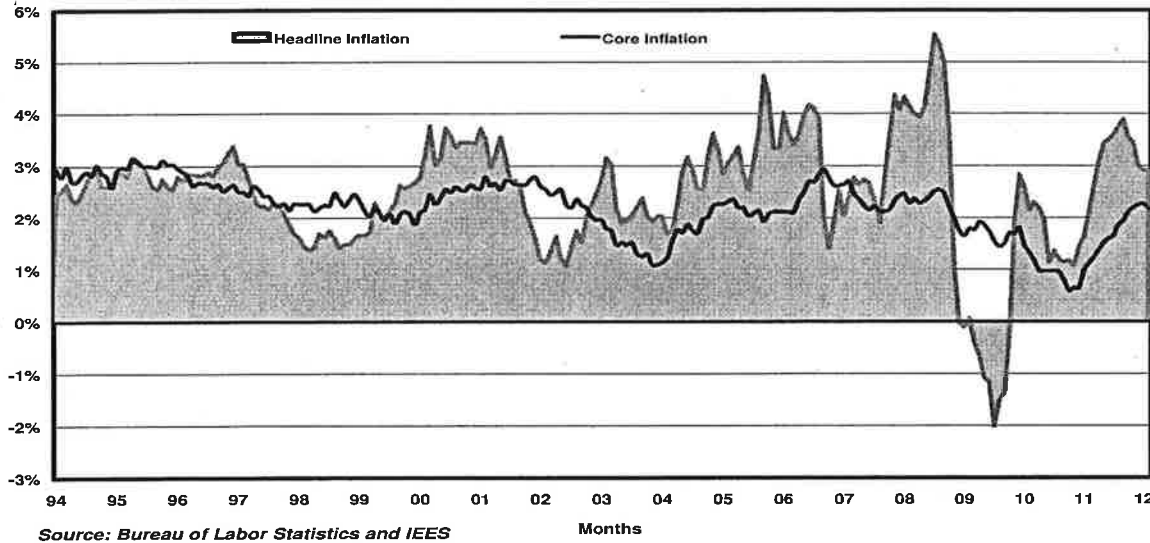
Going forward, this sector is expected to continue to improve. Sales should increase, activity is expected to expand (particularly in class A apartments), and vacancy rates should trend lower. Commercial property prices seem to have bottomed out in Q1 2011 after declining by a total of -48% from their record-highs of September 2007. Prices have trended upwards over the past few months and while we expect this trend to continue in the current year, the pace of improvement will remain subpar.

C2. INFLATION

Inflation surged in the first half of 2011 as higher global commodity prices spiked, but the pace of acceleration was more subdued in the second half following the decrease in crude oil prices. Headline consumer price index (CPI), which includes both food and energy prices rose by an average annualized pace of 3.1% in 2011, a sharp increase from the 1.6% rate recorded in 2010 (Figure 13). Similarly, core inflation (which excludes volatile prices such as food and energy) rose 1.7% in 2011 compared to a 1.0% annualized rate in 2010, reflecting modest but continued improvement in the economy

amidst massive amounts of liquidity. The employment cost index for wages and salaries remained subdued edging up by an average 1.7% pace in 2011 from a 1.6% rate in 2010. Energy prices fell back in the second half of 2011 after soaring to an almost 30% increase in the first half.

Figure 13
U.S. Headline vs Core Inflation
(percent, year-on-year change)



Source: Bureau of Labor Statistics and IEES

Inflationary pressures are building up again early in 2012 reflecting higher energy prices, though the data has yet to fully capture the impact of the most recent increase. Headline inflation rose by 0.4% from January to February 2012, while core inflation ticked up by 0.1%. More alarmingly, the index for consumer energy prices is on the rise again, climbing by 3.2% from January to February. On a year-over-year basis, energy prices are up a shocking 12.4%, largely due to increases in crude oil and gasoline prices. Food prices have also risen persistently over the past year, but the rate of increase has slowed down markedly since late 2011.

Despite these developments, we expect inflation to remain contained over the forecast horizon, though at more elevated levels than in pervious years. One of the main reasons behind a stable inflation outlook is that despite recent improvements, there is still ample slack in the economy and it will take a while before growth runs up against resource constraints which tend to drive up prices. Capacity utilization -- though remarkably improved compared to its crisis-lows -- is still around 5-6% points below the full utilization rate. Survey-based inflation expectations also seem well anchored and generally confirm our outlook: the 12-month ahead inflation rate, according to the Michigan Survey, was 3.3% as of its latest reading whereas long-term inflation (5 to 10 years) is expected to remain stable at around 2.9%.

We expect headline inflation to increase by 2.6% in 2012 and by 2.7% in 2013. Longer term, however, given the overly accommodative monetary policy of the last four years, the risks for a surge in inflation are non-negligible. Whether an escalation in prices is ultimately avoided will depend on the ability of the Federal Reserve to reduce excess liquidity in a timely manner.

Oil Prices

Oil prices are on the march again early in 2012, after a sharp increase in the first half of 2011 and a subsequent retreat later in the year amidst fears of a global recession. Brent oil prices have risen by 18% in the first three months of this year, pushing gasoline prices up by an average of $0.65 during this time.

Escalations in oil prices are due to a number of factors with some weighting more than others. Buoyed enthusiasm about a sustained global recovery may have boosted demand up a notch, but not enough to justify the recent run up in oil prices. Supply disruptions and geopolitical concerns seem to be the more important driver behind higher oil prices: the world oil supply seems to have lost around 1.1 million barrels of oil per day over the past few months stemming from mechanical issues in the North Sea, a pipeline dispute in South Sudan, and from the implementation of sanctions on Iran. Oil inventories in advanced economies are at a five-year low, and the spare capacity in OPEC countries (particularly in Saudi Arabia) appears thin. More alarming is the escalating tensions with Iran: if the Strait of Hormuz is closed (even temporarily), oil prices are expected to escalate given that around 20% of the world oil supply passes through the Strait on a daily basis.

Oil supply shocks are more harmful to growth than demand shocks. Having said this, while we forecast oil prices to remain elevated, we do not envision a flare-up in geopolitical tensions to the scale that would propel oil prices to record-levels. The U.S. economy is also better insulated from oil shocks now compared to the 1970s, given improvements in energy efficiency over the past 30 years. Moreover, the U.S. recovery is currently at a more advanced stage, gaining momentum and resilience, and will likely withstand higher oil prices in the short-term.

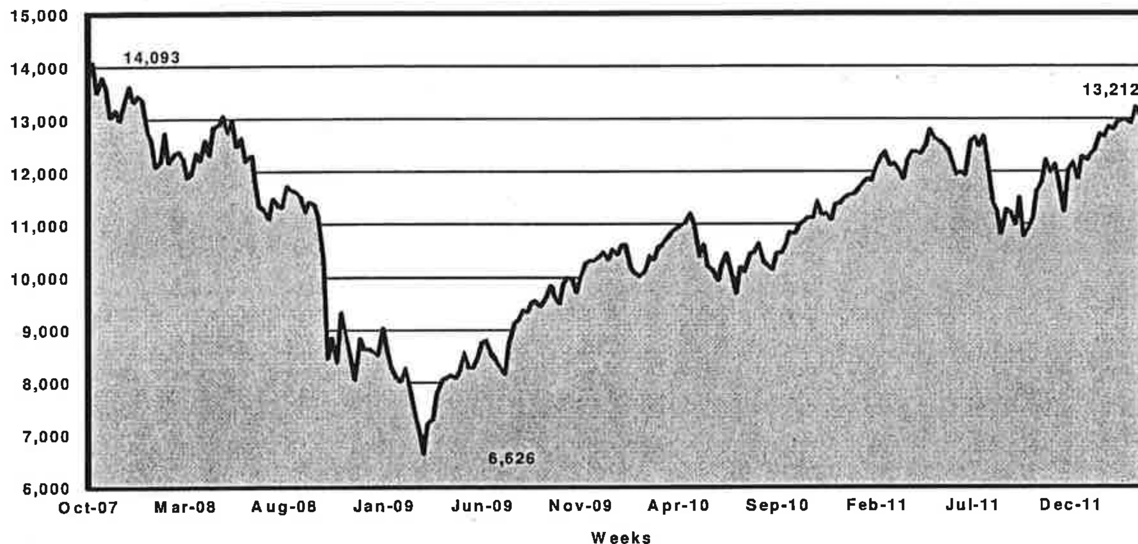
Short term, recent increases in oil prices present risks for U.S. real GDP growth, particularly in the first half of 2012. A

sustained $10 increase in oil prices normally shaves off roughly 0.2% from U.S. growth. Crude oil prices have risen as much as $20 per barrel so far this year, which if sustained should dent U.S. RGDP growth by around 0.4% in 2012-- a slowdown to be sure, but not enough to push the economy back into another recession.

C3. FINANCIAL AND GOVERNMENT SECTORS

Financial Markets

Year 2011 proved to be a wild ride for financial markets (Figure 14). Equity markets started the year quite well posting sizable gains in the first quarter due to strong earning reports, improved corporate profits, and an optimistic outlook on the pace of the global recovery. By mid-summer optimism was replaced by widespread panic brought on by the onslaught of negative macroeconomic news, the wrangling over the U.S. debt ceiling, the ensuing disappointing deal, and the subsequent U.S. credit-rating downgrade. The most damaging effect came from the escalation of the Eurozone debt crisis which sent investors from euphoria (when a solution seemed to be imminent) to outright panic (when policymakers could not agree on a containment path) from one hour to the next. Market volatility shot up: from August until mid-October, the Dow moved by more than 200 points in one day on 16 occasions, which amounts to 40% of the time. By October 2011, S&P500 had tanked by -17% from the cycle peak of May, entirely erasing all gains for the year.



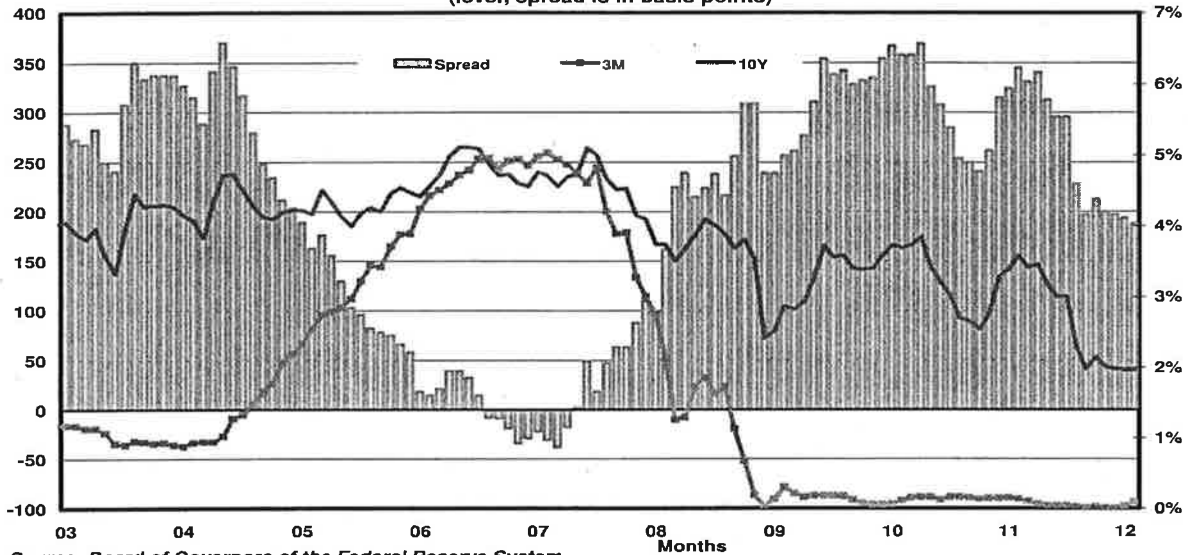
The last two months of 2011 and particularly the start of 2012 have been much kinder to equity markets. The S&P 500 has posted a stellar 26% increase from October lows -- of which 10.7% came in the first three months of 2012. In fact, equity indices now stand at their highest level since the onset of the financial crisis; S&P 500 is now only -11% below its all time-highs. Much of this is due to an improved economic outlook and a quelling of investors' fears on the fate of the Eurozone: better-than-expected economic data in the U.S. has reinforced the consensus view that the U.S. recovery will continue to expand, while the aggressive response from the European Central Bank (ECB) to shore up the European banking system and a successful restructuring of the Greek debt have eased concerns (at least for the time being) of a calamity from Europe.

Despite these developments, we expect financial markets to remain highly sensitive to news regarding developments in Europe,

macroeconomic data releases, and global outlook for economic growth -- particularly on the cooling of the Chinese economy. Equity markets are also expected to exhibit enhanced volatility and near-panics should any of the risk factors we have enumerated flare up and threaten the baseline case of a continued recovery in the U.S., a soft-landing for the Chinese economy and contained risks from Europe.

Yields on short-maturity rates have remained flat over the course of the year reflecting a holding pattern in the projected trajectory of policy rates. However, yields on longer-maturity Treasury bonds rose by more than 30 basis points since the start of the year, suggesting an upbeat outlook and a continued U.S. expansion. The spread between the 10-year and 3-month rates has increased sharply over the past two months, indicating renewed optimism about domestic growth prospects (Figure 15). Short rates are expected to move in tandem with policy rates, maintaining their current levels for the duration of 2012 and 2013. Long-term bond yields are expected to nudge upwards as recovery expands and inflationary pressures continue to build.

Figure 15
U.S. Yield Curve
(level; spread is in basis points)



Source: Board of Governors of the Federal Reserve System

The banking sector came under renewed pressure early in the second half of 2011 as fears intensified on their exposure to European sovereign debt and a looming fallout from Europe. European banks presented a particularly worrisome threat given that they were woefully undercapitalized and heavily exposed to peripheral Euro debt. French banks are estimated to have an overall exposure of around €550 billion (30% of GDP), German banks have around €420 billion (13% of GDP), and the UK around €260 billion (10% of GDP). Though calculations on losses from potential charge-offs vary widely, a complete restructuring of at-risk sovereign debt may cost the European banking sector as much as $350 billion in potential mark-to-market write downs.

The U.S. banking system did not fare much better at this time: U.S. bank shares fell precipitously in mid-2011 when the risk of a European break-up seemed all too real and the fragile recovery inched

closer to a double-dip recession. Despite the fact that direct U.S. bank exposure to Eurozone sovereign debt is limited (around $150 billion, or 1% of GDP), the U.S. and European banking systems are closely interconnected with U.S. banks' exposure to their European counterparties totaling a whooping 12% of GDP. Some U.S. banks also remained significantly exposed to legal risks stemming from their mortgage lending operations and foreclosure practices.

Sentiment for the banking sector has improved considerably since December 2011. A European banking collapse appears to have been forestalled thanks to aggressive actions by the European Central Bank which is expected to inject a total of €1 trillion via the Long Term Refinancing Operations (LTRO) in the banking sector. The LTRO is a refinancing program with maturity of up to three-years, which should provide banks with low-cost financing until early 2015. In the U.S., the recent settlement of the state attorneys with five mortgage servicers has removed some of the uncertainty related to the settlement costs. In addition, 15 out of the 19 largest financial institutions passed the Fed's stress test which assumed a much darker scenario where the unemployment rate shoots up to 13% and house prices collapse by an additional 21% from their current levels. According to the results of the test, even with this dire backdrop under which the banking system is slammed with $534 billion of losses over a two-year period, most banks would emerge with adequate capital thus successfully weathering the storm.

Going forward, we expect the banking sector to show meaningful signs of improvement and continue to heal. Bank credit expanded

modestly in the second half of 2011, its first increase since the first half of 2008, prior to the financial crisis. This trend is expected to continue into the current year as credit quality for most loans improves and economic activity continues to expand at a moderate pace. Aggregate delinquencies and charge-offs should also decline further, though they are expected to remain elevated compared to their pre-crisis levels. We also anticipate a slow but steady unwinding of the cash stockpiling by the banking sector as capital accumulation transitions into capital deployment, leading to consolidations and new acquisitions. Capital markets are expected to remain strong, but this may moderate to a certain extent due to regulatory pressures from the recently enacted financial reform. In general, the financial sector is likely to remain remarkably sensitive with respect to adverse developments in the Eurozone, a potential larger-than-expected global slowdown, and geopolitical risks (related particularly to Iran) which may cause an abrupt escalation in oil prices that could derail the fragile recovery.

The Government Sector

Fiscal Policy

The outlook for fiscal policy presents one of the biggest risks to future economic activity. The issue is that policymakers need to strike a fine balance: try to reduce the ballooning fiscal deficit (which has now grown to unsustainable levels) while keeping the fragile recovery intact. This is a formidable challenge even in normal times; in election years this task becomes virtually

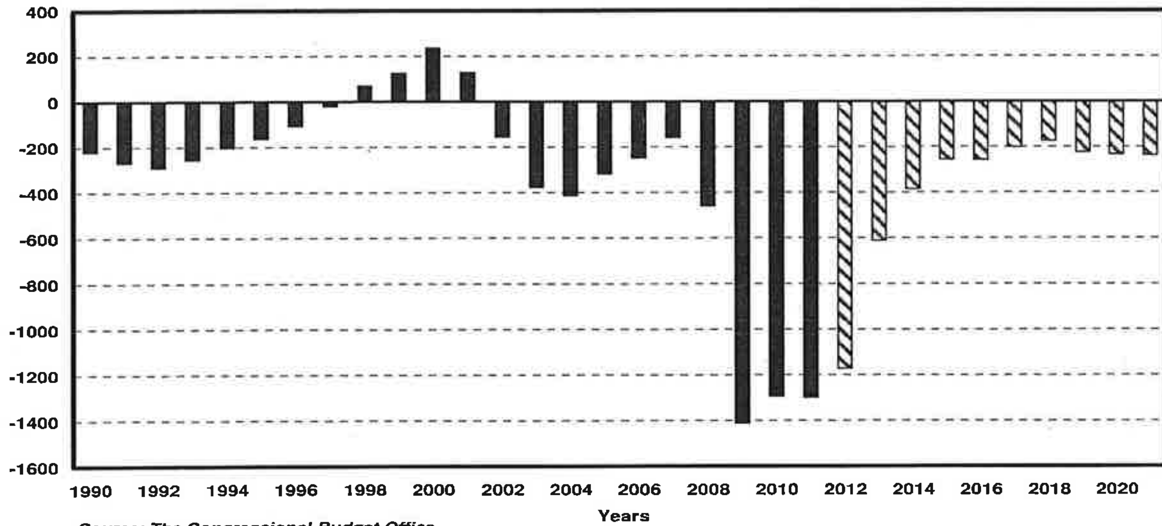
impossible, which is the reason why we don't expect any major changes to occur to the fiscal outlook until after the election.

The problem with more fiscal support is two-fold: first, with benefit of hindsight, fiscal stimulus so far has turned out to be too expensive, too ill-targeted, and too transitory. The American Recovery and Reinvestment Act (ARRA), which infused an unprecedented $787 billion into the economy, boosted economic activity by less than it was expected and should become a drag on the economy in 2012 as many programs wind down. The $858 billion tax compromise of December 2010 likely bolstered U.S. real GDP growth in 2011, partly at the expense of 2012. The "cash-for-clunkers" program and the homebuyer tax credit appear to have brought forward the demand for cars and housing, with sales taking another setback when the programs were terminated. The extension of payroll tax cuts and unemployment benefits approved by Congress in February 2012 to the tune of $144 billion will most likely end up in additional gasoline expenditures given recent escalations in oil prices rather than provide additional boost for retail spending.

The second concern with increased government spending has to do with its finances: government books are in shambles and without a credible long-term commitment to draconian spending cuts and entitlement reforms, persistent budget deficits will have a detrimental impact on long-term growth. According to the Congressional Budget Office (CBO), the budget deficit was $1.3 trillion in FY 2011 (8.5% of nominal GDP), roughly the same as the $1.3 trillion in FY 2010 (8.9% of GDP) and slightly below the $1.43 trillion recorded in FY 2011 (9.5% of GDP) (Figure 16). The deficit narrowed somewhat in

the first quarter of 2012 and is projected to grow by $1.1 trillion in FY 2012 -- lower than during the past three years but much higher than the historical average. Left untouched, the U.S. national debt will be twice the size of U.S. real GDP by 2035. No economy can stay afloat with that much red ink.

Figure 16
US Budget Deficit: Historical and Projected
(level, billions)



Source: The Congressional Budget Office

Of course, near-term fiscal austerity presents challenges for economic growth particularly in the current cycle of a sluggish and below-par recovery. The fading of the ARRA and additional spending cuts, agreed to during the August budget negotiations, will likely subtract between 0.6-0.8 percentage points from real GDP growth in 2012. Moreover, the Budget Control Act of August 2012 specified $917 billion of cuts over 10 years and an additional $1.2 trillion of cuts (over the 2013-2021 period) to be decided by the Joint Select Committee on Deficit Reduction (super-committee). The failure of the super-committee to come to some sort of agreement over the specific

measures that would yield the necessary $1.2 trillion cuts would trigger across-the-board spending cuts during the 2012-2021 period split equally between security and non-security programs.

The fiscal drag is slated to be dramatically more severe in 2013 with the expiration of the Bush era tax cuts, the termination of the current payroll tax cuts and unemployment benefits, and the automatic across-the-board spending cuts of the Budget Control Act. If current law does not change and these deficit-reduction measures are allowed to take full effect, U.S. real GDP growth will likely be reduced by around 2.1 percentage points in 2013. In fact, the CBO projects that under the current law, U.S. real GDP will grow by a meager 1.1% in 2013, largely because of the draconian spending cuts and tax increases which are expected to significantly restrain growth. However, the CBO estimates that if all current tax cuts and provisions are extended then the budget deficit over the 2013-2022 period will be much higher -- averaging 5.4% of GDP instead of 1.5% if tax cuts are terminated. Under this alternate scenario, debt held by the public will rise to an unsustainable 97% of GDP by 2022 - the highest level since right after World War II.

Our baseline scenario assumes that some but not all tax cuts will be allowed to expire, which means that the budget and growth outlook will likely be somewhere between the CBO's baseline scenario (when all tax cuts expire) and an alternate scenario (when all tax cuts are extended). Nonetheless, the U.S. faces formidable budgetary challenges in the longer term driven primarily by structural underlying forces, such as rising health care costs and an ageing

population. Even if current law remains in effect and all tax cuts are terminated, spending for entitlement programs (Social Security, Medicare, and Medicaid) will push the budget deficits to unsustainable levels. High levels of debt, if persistent, will crowd out private investments, diminish investor confidence, lead to sharp increases in interest rates, destabilize financial markets and severely reduce long-run economic growth and standards of living.

It is therefore essential that policymakers begin to address the U.S. long-term fiscal challenges soon by restructuring federal tax policies, prioritizing spending, and reforming entitlement programs. This would mean a radical reform of the tax system - which should broadens the base, lower the marginal tax rates on individuals and corporations, change the mix of taxation away from labor and capital and towards consumption, and eliminate loopholes. Compared to other advanced economies, the U.S. taxes labor and capital too much and consumption too little which creates unnecessary distortions in the labor markets and reduces growth. On the entitlement side, bold steps should be taken to increase the eligibility age for Social Security and Medicare, remove the contribution cap, means-testing the programs, and converting the matching-funds Medicaid system to the cheaper state "block grants." This would simultaneously address long-standing fiscal deficits while at the same time ensuring the solvency of the entitlement programs.

A "grand bargain" of this scale may be hard to come by especially in an election year. In its absence, policymakers could agree on smaller steps that would support the recovery in the short term while

paving the way for long-term deficit reductions. For example, if tax cuts are to be continued, it is helpful to have them last for a longer stretch - say a 5-year horizon, which could arguably help reduce uncertainty for businesses when planning hiring or expansions. The same goes for easing and/or streamlining regulations. More importantly, doing the small things such as ending gridlock and paralysis while removing policy uncertainty should go a long way in restoring some of the much needed confidence in the economy.

State and Local Governments

State and local governments remain under significant fiscal stemming from low tax revenues, the fading of the support from the federal government, and continued weakness in the housing sector. Though state and local government revenues rose by 5.5% in Q3 2011 compared to the previous year, the increase was partially offset by a reduction in federal stimulus grants. Local governments are faring worse than state governments given that the vast majority of their funding comes from property tax receipts which have been generally flat over the past two years. In addition, local governments have experienced a decline in grants-in-aid from their state governments. Employment at the state and local level has declined by a total of 641,000 since the start of the recession, of which 421,000 jobs were lost since Q2 2010 when the private sector employment started to expand. The pace of job losses has moderated in the first three months of 2012 especially at the state level, though layoffs are expected to

continue at the local level as property tax receipts remain depressed and state aid declines.

The impending sequestration under the Budget Act of 2011 will weigh heavily on state and local governments, amounting to a reduction of more than $6 billion in program aid to states and their municipalities. Though state tax revenues are expected to increase in 2012 due to an improving economic outlook, local tax receipts should decline yet again, largely reflecting the weakness in the housing sector which depresses property tax revenues (three-quarters of local government funding comes from this revenue source). The prospects appear even bleaker in the long-term with state and local governments facing unfunded pension and healthcare liabilities estimated to be a staggering $3 trillion.

The Federal Reserve

Faced with sluggish growth and frequent near-recession slumps the Federal Reserve (Fed) has continued to pursue an extremely accommodative monetary policy. The Fed has held the target federal funds rate at the zero-bound since the onset of the financial crisis in late 2008. It has gone even further in terms of reassuring the markets of its low interest rate policy: in August 2013 at the height of the Eurozone crisis and the U.S. budget downgrade it pledged to keep interest rates at "exceptionally low levels at least through mid-2013." The time-frame for a low interest rate environment was extended further in January 2012, with the Fed expecting economic conditions to warrant low rates until end-2014. As a future guidance for interest-

rate policy, the Fed released for the first time in January 2012, its Economic Projections which included the FOMC participant's projections of the likely path of interest rates over the medium-term.

The Fed has also pursued other venues (notably quantitative easing) which were established at the height of the financial crisis to prevent a systemic collapse of financial markets, but that were subsequently repeated to support the fragile recovery. From December 2008 through March 2010, the Fed embarked on its first quantitative easing efforts (QE I) purchasing a staggering $1.7 trillion in longer-term Treasury, agency and mortgaged-backed securities (MBS), which lowered the cost of debt by reducing long-term interest rates. Despite these extraordinary measures, the sluggish pace of economic recovery prompted the Fed to commence a second round of quantitative easing (QE II). In early November 2010, the Fed resumed its purchases of long-term Treasury securities with a targeted amount of $600 billion. The program ended in June 2011 by which time the Fed balance sheet had swollen to $2.7 trillion. In August 2011, in response to a darkened domestic and global outlook, the Fed embarked on "operation twist" - a QE-lite type program which lengthens the average maturity of its balance sheet by selling short-term issues and replacing them with long-term bonds. As of January 2012, the Fed holds approximately $1.6 trillion in Treasury securities and $853 billion in MBS.

We expect the Fed to keep rates on hold through much of 2013 and then begin to tighten in early 2014 (a bit sooner than the FOMC estimates). Though the sluggish pace of job formation seems to have spurred fresh concerns from policymakers at the Fed, we believe that

further quantitative easing is unlikely unless the Eurozone crisis worsens dramatically, job growth grinds to a halt and the Chinese economy experiences a hard-landing. We subscribe a low probability to all these events, and expect the Fed to remain alert to changing macroeconomic conditions, but on pause with regards to further easing. In the long-run, as the financial sector continues to stabilize and the broader economy improves, the Fed needs to carefully recalibrate its policy to simultaneously maintain a stable inflation rate while supporting economic growth.

C4. GLOBAL ENVIRONMENT

The outlook for the global economy has downshifted markedly in recent months. Concerns abound in both emerging and advanced economies, with an impending slowdown of the Chinese economy and continued sovereign-debt stress from the Eurozone largely dominating the outlook for the global economy. Conditions have deteriorated somewhat in emerging market economies since the second half of 2011 as domestic policy aimed at combating inflation and overheating and weakness in export volumes due to the crisis in Europe began to weigh on growth. The Chinese economy grew by a respectable 9.2% in 2011, but the rate of growth has slowed down appreciably in the current year and is expected to cool further in 2012 and 2013. More concerning, Chinese policy makers sharply downgraded the country's growth prospect for 2012 to 7.5% from an initial estimate of 8%, a move that spooked the markets and sparked concerns about a severe slowdown in the global economy. Elsewhere in the emerging world, growth has slowed down

markedly: Brazil grew by a feeble 2.7% in 2011 after a robust 7.5% in 2010, India's economy expanded by 7.4% last year compared to a stellar 9.9% in 2010, and South Korea grew by 3.6% in 2011 -- nearly half of the 6.2% pace recorded a year earlier.

The slowdown in emerging economies is expected to continue in the current year and into 2012, as weakness from Europe, and a slow recovery in the U.S. and Japan will continue to place additional strains on emerging market exports. Nonetheless, we expect emerging markets to grow over the forecast horizon given their strong domestic fundamentals, sound finances and generally healthy fiscal outlook. The Chinese economy is expected to experience a "soft-landing" and should grow at a pace above 8%, despite recent downshift in official growth estimates. The reversal of monetary policy tightening policy in Brazil, China, Indonesia and Thailand in response to a weakening global outlook should prove support growth in these countries. However, growth in emerging markets will come in at a lower clip than during the last two years given weaker export volumes to Europe, a still-high inflation rate, and efforts to rein in bank lending in China and the surging property market. Overall, we expect emerging economies to grow at a pace of 5.7% in 2012 -- below the 6.2% rate posted in 2011 and the 7.3% rate in 2010.

The main threat to the global outlook over the next six quarters comes from Europe. Though no longer on the verge of a devastating catastrophe which threatened the very existence of the single-currency market, the Eurozone debt crisis is far from over. All told, outstanding government debt for PIIGS countries (Portugal, Italy,

Ireland, Greece and Spain) totals around €3.3 trillion with Spain and Italy combining for a gigantic €2.5 trillion. Gross CDS exposure to PIIGS countries totals an eye-popping €500 billion, while net exposure is a more manageable €40 billion. More worryingly, fourth quarter real GDP contracted in the Eurozone and the current quarter is expected to show an additional roughly-equal size decline. We expect the single-currency region to experience a mild recession until mid-2012, followed by an exceptionally weak pick-up in economic activity over the next few years.

On the positive side, European policymakers have taken important steps in improving the debt sustainability of the highly indebted countries thus assuring the existence of the single-market, at least in the short term. First, European leaders agreed to abandon their initial insistence that private bond holders of sovereign debt be forced to take haircuts on future bailouts, which improved demand for Italian, Spanish and Portuguese bonds and lowered sovereign debt yields. Second, the ECBs Long Term Refinancing Operations (LRTO) provided a much needed low-cost financing for undercapitalized European banks by infusing nearly €1 trillion in the banking sector. Third, the successful restructuring of Greek debt which triggered a "credit event" and the subsequent CDS payouts in the estimates amount of $3.2 billion, restored some faith in the functioning of the CDS market for sovereign bonds.

Despite these positive developments, the Eurozone debt crisis is not fully resolved. Actions by the ECB has calmed the markets and provided some much needed time for policymakers in the highly indebted

countries to implement structural reforms that would reduce debt ratios. These reforms however, are subject to complex negotiations and a long-winded political process. Even if they are fully implemented, it may take years before their beneficial impact are fully exposed, which means that the European sovereign debt issues will likely remain a concern for the global economy in the foreseeable future.

Going forward, the global economy to expand by a tepid pace of 3.5% in 2012, slightly below the 3.8% rate of 2011 and far below the 5.2% rate recorded in 2010. The bulk of growth should continue to come from emerging economies with advanced economies edging forward at modest rates. In the short- and medium-term, the advanced and developing world will likely contend with different issues going forward. In developing nations, primary causes for concern in the near-term are high inflation, potential asset price and real estate bubbles, a sudden acceleration of influx in capital flows, and currency-related issues. In the developed world, the main headwinds will be high unemployment, a deteriorating housing sector, concerns about the stability of the financial sector, and issues related to fiscal deficits and overall crushing debt burdens. The Eurozone sovereign debt crisis is expected to weigh heavily on the global outlook and on the region's prospects over the forecast horizon.

A slowing of the world economy means lower U.S. exports, which in turn, adversely impacts U.S. growth. Exports grew by a robust 11.3% in 2010 as trade volumes expanded, but the pace of growth was more muted in 2011 coming at 6.7%. As of Q4 2011, exports are just shy of their

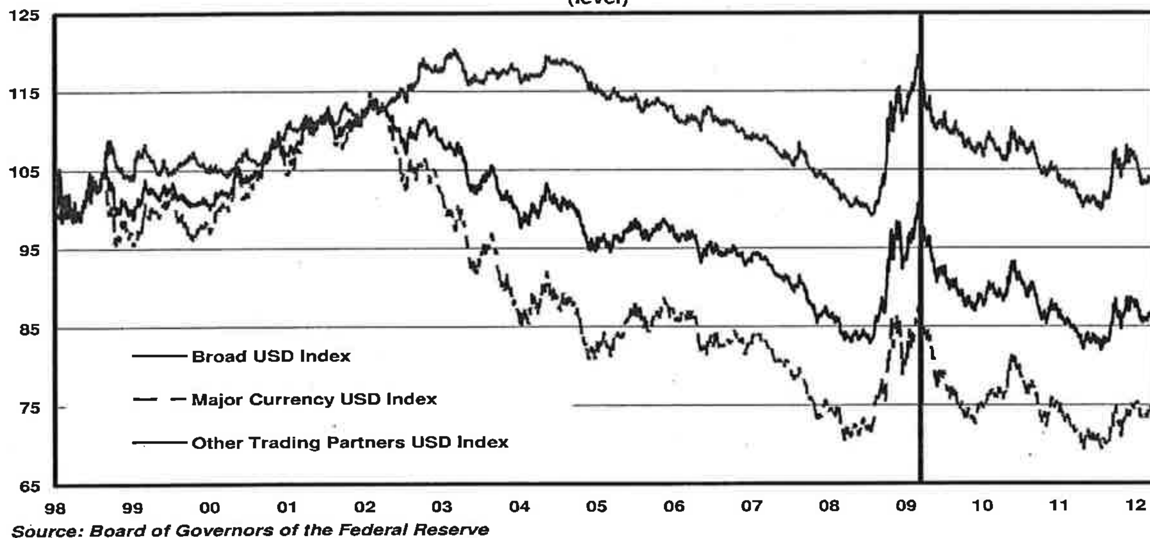
2008 record-levels, contributing 1.3% to real GDP growth in 2010 and an additional 0.8% in 2011. Imports have also increased recovering nearly 90% of their pre-recession levels, boosted primarily by increased demand for capital goods, motor vehicles and parts, and industrial supplies. Export growth is expected to downshift in 2012 due to a slowdown in emerging markets and continued weakness from Europe: more than a quarter of U.S. exports go to the EU, 28% to Asia and close to 15% to Central and South America.

The U.S. current account deficit has reflected broader trade patterns. After declining from a high of $853 billion (6.4% of GDP) in the third quarter of 2006 to $337 billion (2.9% of GDP) in the second quarter of 2009, the current account balance has widened slightly to -$503 billion (3.3% of GDP). Our forecasts indicate that while the U.S. current account will remain negative over the next 5 years, the overall trend points to lower deficits with some short-term trend reversals.

The U.S. dollar fell in the first half of 2011 especially against emerging currencies as these countries experienced strong capital inflows due to robust economic performance (Figure 17). The trend however reversed sharply in the second half of the year as the escalation of the Eurozone crisis and concerns about a global slowdown prompted investors to seek the relative safety of U.S. Treasuries. Most notably, the Chinese yuan appreciated by 5.1% against the U.S. dollar in 2011 with the real effective exchange rate index rising to an all-time high. The dollar has remained largely flat against major trading partners in 2012, though it is expected to strengthen during

the first half of the year particularly against the euro as the European debt crisis continues to weigh on the single-currency. Barring a full-fledged crisis from Europe, the U.S. dollar should depreciate slightly in the second half of 2012, as fundamental forces resume and place further downward pressure in an effort to restore global imbalances.

Figure 17
US Dollar Indices
(level)



Source: Board of Governors of the Federal Reserve

In the medium term, as the global recovery expands, the dollar will likely face renewed pressure. The biggest threat is the extremely accommodative stance of monetary policy which has infused a massive amount of liquidity in the financial system. In the long term, unsustainable levels of government deficits, large external imbalances, and the potential abandonment of the dollar peg from export-driven emerging economies, present formidable challenges for the U.S. dollar.

C5. Projections of Key National Economic Variables

Table 8a
National Economic Variables
Real Gross Domestic Product and Components
(percent)

Year	RGDP	Consumption	Residential Investment	Non Residential Investment	Exports	Imports
			Historical			
2009	-3.5	-1.9	-22.2	-17.8	-9.4	-13.6
2010	3.0	2.0	-4.3	4.4	11.3	12.5
2011	1.7	2.2	-1.3	8.7	6.8	4.9
			Forecast			
2012	2.4	2.1	8.6	8.3	5.9	6.2
2013	2.6	2.3	11.3	9.2	8.8	7.2
2014	3.3	2.8	10.7	6.3	10.1	8.4
2015	3.0	3.0	8.4	5.5	9.1	5.1
2016	2.7	2.9	6.3	2.8	8.5	4.1
2017	2.7	2.7	7.8	4.3	6.8	4.7

Table 8b
National Economic Variables
Inflation and Labor Market
(percent)

Year	Headline CPI	Core CPI	Wages & Salaries Employment Cost	Unemployment	Payroll Employment	Labor Productivity
			Historical			
2009	-0.3	1.7	1.6	9.3	-4.4	2.4
2010	1.6	1.0	1.6	9.6	-0.7	4.0
2011	3.1	1.7	1.7	8.9	1.2	0.6
			Forecast			
2012	2.6	2.1	2.1	8.4	1.6	0.7
2013	2.7	2.2	2.5	8.1	1.8	1.1
2014	3.0	2.4	3.1	7.6	2.0	1.7
2015	3.3	2.3	3.0	6.6	1.6	2.0
2016	2.9	2.0	2.8	6.2	1.2	2.2
2017	3.0	2.1	2.9	5.9	1.3	2.1

Table 8c
National Economic Variables
Financial Assets, Current Account, Exchange Rate
(percent)

Year	Federal Funds	3 Month T-bill	10-Year Note	30-year Mortgage	Current Account % of GDP	US Dollar Index percent change
Historical						
2009	0.16	0.15	3.26	5.04	-2.7	5.8
2010	0.18	0.14	3.21	4.69	-3.3	-3.6
2011	0.10	0.05	2.79	4.46	-3.2	-4.6
Forecast						
2012	0.16	0.11	2.32	4.13	-3.3	-1.8
2013	0.24	0.22	2.56	4.48	-2.7	-2.7
2014	0.82	0.93	3.12	5.01	-2.9	-4.3
2015	1.47	1.55	4.01	5.25	-2.5	-1.3
2016	2.56	2.33	4.45	5.36	-2.4	-2.2
2017	3.11	2.98	5.06	6.03	-1.9	-1.8

Attachment E Economic Report from Beacon Economics

A Revenue Forecast

County of Riverside, April 2012

BEACON ECONOMICS

This publication was created for:

The Riverside County Executive Office

Riverside County is the fourth largest county in the state, stretching nearly 200 miles across and comprising over 7,200 square miles of fertile river valleys, low deserts, mountains, foothills, and rolling plains. Riverside County shares borders with densely populated Los Angeles, Imperial, Orange, San Diego, and San Bernardino counties...extending from within 14 miles of the Pacific Ocean to the Colorado River.

This publication was prepared by:

Beacon Economics, LLC

Christopher Thornberg
Founding Partner
5777 W. Century Blvd., Suite 895
Los Angeles, California 90045
310.571.3399
Chris@BeaconEcon.com

Jordan G. Levine
Economist & Director of Economic Research
5777 W. Century Blvd., Suite 895
Los Angeles, California 90045
424.646.4652
Jordan@BeaconEcon.com

For further information about Beacon Economics, please contact:

Victoria Pike Bond
Director of Communications
Beacon Economics, LLC
415.457.6030
Victoria@BeaconEcon.com

Or visit our website at www.BeaconEcon.com.

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Introduction

Beacon Economics, LLC has undertaken a forecast of the assessed valuation and property tax, sales and use taxes, Proposition 172 revenues, and real property transfer tax revenues in the County of Riverside over the next five years.

As in previous editions, the forecast presented here uses standard time-series econometric techniques based on historical correlations and future trends. Beacon Economics' approach to forecasting follows a layered approach. National policy changes and external shocks are built into a U.S. model of a variety of indicators, including GDP, production, demographics, interest rates, government spending, taxes, savings, income growth, and real estate. A California model is then developed that incorporates macro trends at the national level with trends in the local labor market, including demographics, real estate, and business activity indicators.

Taking into account these state and national forecasts, a regional model is set up for the Inland Empire that uses the macro trends along with a variety of specific regional data to create a Riverside County forecast. This local forecast provides a broad outlook for the region's employment by industry along with the unemployment rate, consumer spending and income trends, population and components of change, residential real estate and construction, and nonresidential real estate and construction. Thus, in our regional assessment, we draw on detailed forecasts of the nation, state, and broader Inland Empire to provide a forecast of the activity and revenues that can be expected by the County of Riverside out to 2016–17.

In this edition, Beacon Economics' forecast incorporates an additional feature: the Riverside County Assessor's Office was consulted during the construction of our assessed valuation (AV) forecast model so that Beacon Economics might leverage their insights and their ground-level view of property values in Riverside County in 2012–13 when determining the likely drivers for future AV growth. This included a discussion of both residential and commercial properties as well as valuation appeals and reassessments. In addition, several new incorporations in the county, including the cities of Jurupa Valley and Eastvale, will mean that fewer dollars will flow to county coffers as these funds are redirected to the newly formed city governments. This report and forecast includes the effect of these recent incorporations, which have been netted out from the county's forecasted revenues.

Over the short run, this forecast shows that the worst is behind the County of Riverside. Still, it will take several years for the region to return to peak revenues, which means that there are still tough choices ahead for local policymakers. In this report we detail the current forecast and the major drivers of these results.

County of Riverside Revenue Forecast ($ Millions)

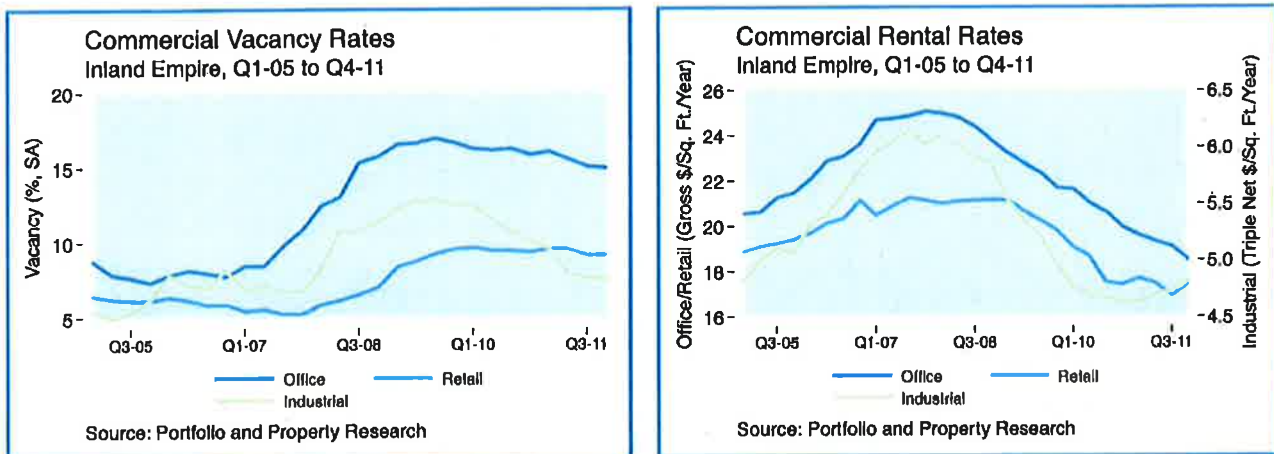
Variable	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Assessed Valuation	217,439.6	208,205.3	205,187.7	201,083.9	201,929.7	207,454.0	216,574.0	229,491.8
Property Tax Revenues	531.2	502.9	495.6	485.7	487.8	501.1	523.1	554.4
Sales & Use Tax Revenues	25.8	28.4	26.5	28.3	31.1	34.0	38.4	43.4
Transfer Tax Revenues	10.7	10.0	8.6	9.7	11.2	12.5	13.6	14.4
Proposition 172 Revenues	110.2	110.1	108.5	120.3	132.4	145.2	162.2	181.6

Source: Forecasts by Beacon Economics

Assessed Valuation

Currently, the Riverside County Assessor's Office is expecting that the AV roll for the 2012–13 fiscal year will decline by between 2.0% and 2.5%. Assuming that this is the case, the total AV in Riverside County will fall 17.2% from its peak in 2008–09. Indications from the local assessor are that the commercial portion of the property tax roll, which is roughly $49 billion of the total AV in the county, is expected to remain roughly flat over last fiscal year, though there are outstanding appeals and other issues that could alter this figure slightly. Indeed, values have started to edge back upward for large industrial properties, and large multifamily apartments have seen some improvement as well.

Beacon Economics regularly tracks the performance of commercial property buildings available for lease in the Inland Empire, and our figures corroborate what the assessor's office is seeing on the ground. Although the broader region has not come rocketing back to pre-recession peaks, it's clear that the commercial leasing market has started to tighten. For example, vacancy rates for office, retail, and industrial/warehouse buildings have all peaked and started to decline. Unsurprisingly, given the surge in exports since the Great Recession ended in 2009, industrial vacancy rates have been trending downward for almost two years, at a much steeper pace than in either the office or retail markets. Still, these sectors have also started to turn around. The improvement has been slow, but both office and retail vacancy rates have dipped from the highs reached during the downturn.

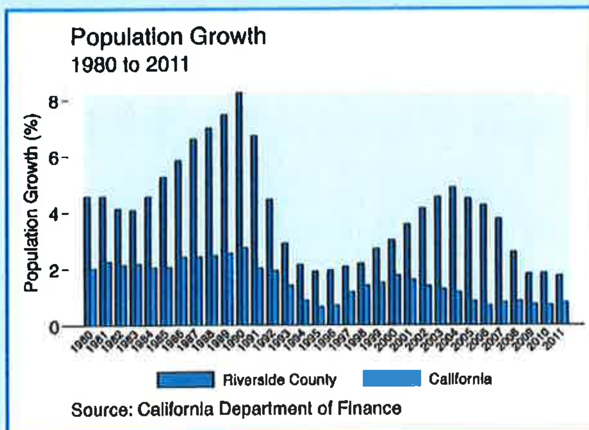


The reduction in vacancy rates has begun to put some upward pressure on rents—at least in the industrial and retail sectors. Unfortunately, the office market is currently maintaining a vacancy rate in excess of 15%, which may keep rent growth tepid until vacancies fall further. However, rising rents for industrial and retail space, combined with falling vacancy rates, suggest that cap rates are improving. This should create some modest upward pressure on the commercial AV roll in coming years.

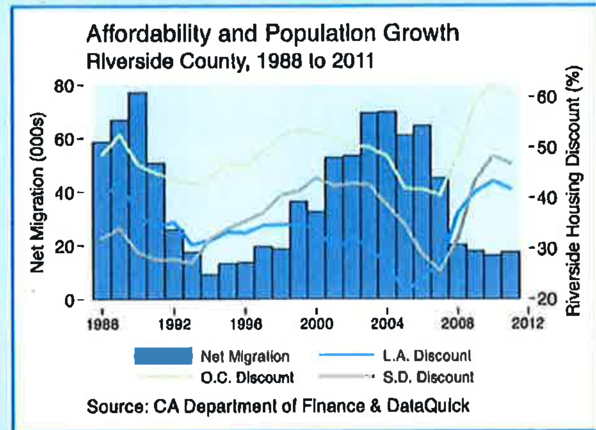
According to the assessor's office, much of the downward pressure is stemming from the residential sector. Prices and sales faltered during the first part of 2011, though they have largely stabilized since then. During the first half of 2011, home sales dropped from roughly 3,500 per month into the low 3,200s. At the same time, median prices dipped, tumbling from almost $200,000 to just $190,000 in August 2011. However, since then, home sales have been gradually trending upward and median prices have climbed back to hover around $195,000.

Fundamentals: Housing Affordability and Population Growth

Housing fundamentals show several encouraging signs, especially with regard to Riverside's AV base. First, let's consider population growth. Prior to the housing bubble, the Inland Empire (including Riverside County) was one of the fastest-growing regions in California—outpacing the state overall in every single year since 1980, usually by a factor of two. In large part, this was driven by the relative affordably of the area in comparison with the nearby coastal employment centers of Los Angeles, Orange County, and San Diego. However, during the housing bubble, prices increased more in Riverside than they did in these surrounding metropolitan areas, which eroded much of the affordability that Riverside had previously offered prospective residents.



Source: California Department of Finance



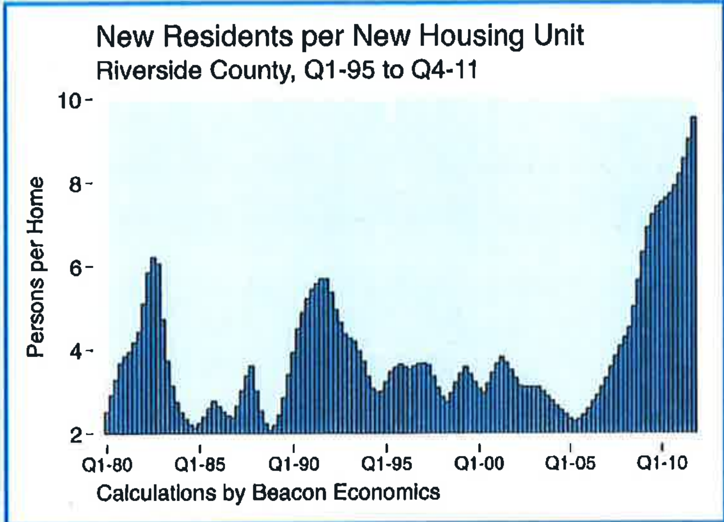
Source: CA Department of Finance & DataQuick

Now that prices have fallen farther in Riverside County than in these other markets, the relative affordability of the local economy is almost as high as it has ever been. This should rekindle that old incentive for more migration to Riverside County in coming years, which will create additional demand for homes and drive either new home construction or price appreciation for existing homes (with a mix of both being the most likely outcome).

Our estimates show that the recent volatility in the housing market in Riverside County and across the state is a function of the cyclical fluctuations associated with the re-starting of foreclosure processes after the "robo-signing" debacle. Looking at the fundamentals—affordable prices relative to incomes, historically low interest rates, and an undersupply of housing in the state and in Riverside County—Beacon Economics predicts that the worst is behind us with respect to the housing market. The AV roll should stabilize in 2013–14 and should increase slowly thereafter as Prop. 13 effects begin to take over. Indeed, even defaults and foreclosures, which indicate the amount of stress in the local housing market, have been trending downward steadily in Riverside County.

For the purposes of this forecast, we are utilizing the lower-end estimate of AV decline from the assessor's office (-2.0%) as our estimate of AV change in 2012–13. In the subsequent years, our forecast of property values for both commercial and residential property is driven by employment and labor market expectations, population growth, home prices and sales, new construction, and other structural drivers of property values.

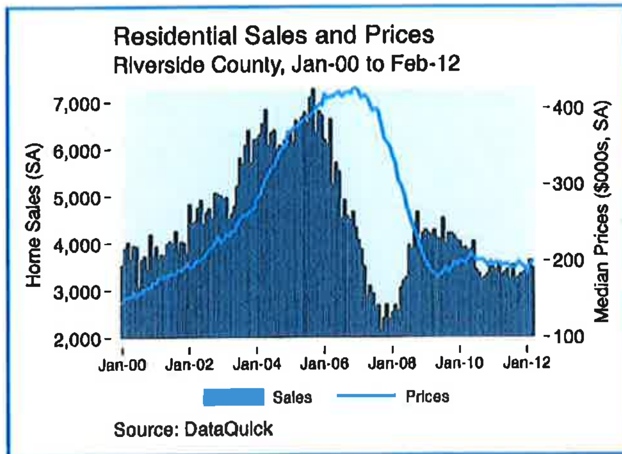
Fundamentals: Housing Vacancies and New Construction

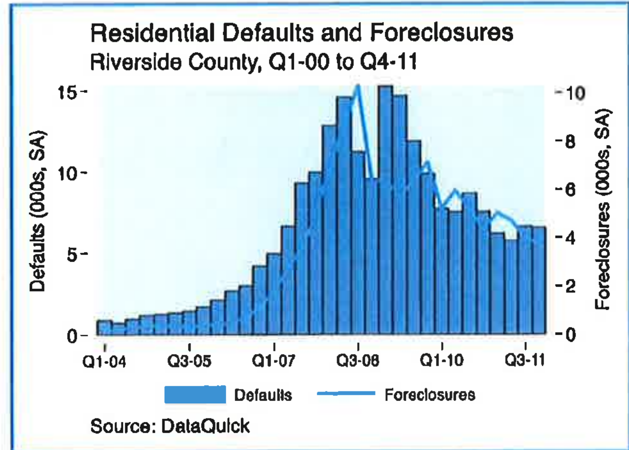


There is still not enough housing in Riverside County, despite the surge in building that took place during the housing bubble. According to the California Department of Finance (DOF), Riverside County currently has a housing vacancy rate of 14%, which is higher than the statewide average of 8%. Nonetheless, with the current pace of construction (which remains very slow), the stock of vacant housing units will erode as the economy heals. During the bubble, homebuilders were putting up one new housing unit for every two new residents in Riverside. Currently, this number has ballooned to just one new housing unit for every 10 new residents, which suggests that either household size will start to increase or new construction will have to resume at some point to address the lack of available housing from a macro perspective.

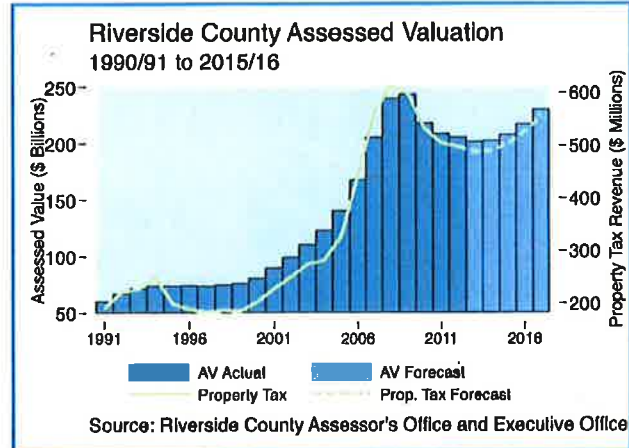
Beacon Economics expects that both residential and commercial construction will begin to pick up during the second half of 2012. Multifamily housing in particular is expected to do well, given the shift among many Riverside County residents from ownership to rental housing and the consequent bump in rents that has accompanied that trend. Much of the nonresidential construction activity will remain on the alterations/additions side of the equation for 2012, though by 2013, Beacon Economics expects to see increased permitting for new commercial buildings as well.

According to our calculations, which draw on information from the local assessor's office, the economy still has a long way to go. Beacon Economics expects that home prices and sales will remain fairly flat during the next six months as the economy continues to get back on its feet. However, population growth in the region and the increases in affordability will contribute to price appreciation as well as to new construction and home sales. Specifically, expect prices to stay around $195,000 through the end of 2012, and to subsequently increase at a modest pace that tracks increases in income (3% to 5%).





The current forecast shows AV declining this year, in keeping with the assessor's expectations of the residential market. However, Beacon Economics expects that the county will see a return to growth in its property tax roll in 2013–14: Prop. 13 increases will start to kick in, new residential and commercial properties will be built, new residents will move in, and existing residents will form new households. Specifically, Beacon Economics is calling for growth of 0.5% in 2013–14, with AV picking up steam in later years, rising 2.5% in 2014–15, 4.8% in 2015–16, and by 5.5% in 2016–17.



Taxable Sales, Sales/Use Tax, and Prop. 172 Revenues

Unlike the property market, consumer spending in Riverside County has taken a less ambiguous turn toward recovery. In fact, according to data from the State Board of Equalization and HdL Companies, growth in taxable sales actually accelerated during the fourth quarter of 2010. This is due in large part to a gradually healing economy.

It's important to note that the current forecast takes into account the impact of the newly incorporated areas of Jurupa Valley and Eastvale. Since these have become incorporated cities within Riverside County, some resources, such as sales tax revenues, will be affected when these areas receive their sales tax revenues directly. According to estimates from HdL Companies, these newly incorporated areas represent roughly 3.7% of the total sales tax generated within the county and roughly 25% of the General Fund's sales tax base. Therefore, Beacon Economics has performed a forecast of total taxable sales in Riverside County's unincorporated area out to 2016-17, and then netted out this percentage of revenues that will now be directed towards Eastvale and Jurupa Valley. It is expected that this will provide a more accurate picture of the sales tax revenues available for the county's budget.

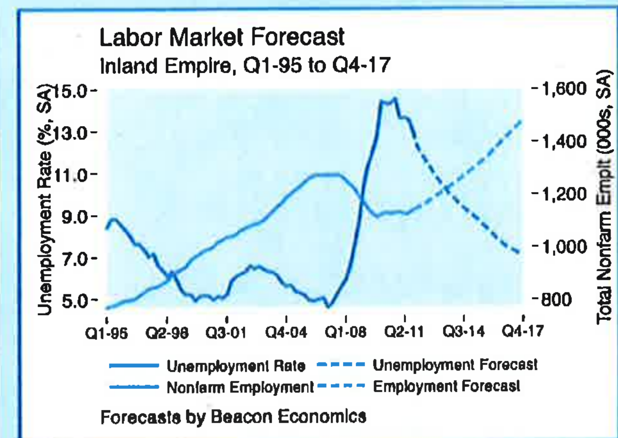
However, it is important to point out that despite this one-time reduction in the sales tax base associated with these new incorporations, the unincorporated areas of Riverside County have consistently outpaced the incorporated areas in the county. The unincorporated areas grew faster during the expansion than the incorporated areas of the county, and since hitting bottom, growth in the unincorporated areas has outstripped the county's incorporated areas consistently as well. Thus, although we expect this incorporation phenomenon to have a downward influence on sales tax revenues over the short run, the unincorporated areas are expected to continue outperforming the rest of the county once these one-time reductions in the sales tax base are absorbed.

Labor Markets

Inland Empire Employment

Industry	Job Growth Dec-09 to Feb-12 Jobs	%
Admin Support	12.3	16.4
Education/Health	6.6	4.9
Leisure and Hospitality	5.7	4.7
Manufacturing	3.9	4.6
Transport,Warehouse,Util.	3.6	5.4
Wholesale Trade	2.8	5.8
Prof Sci and Tech	2.7	7.5
Farm	2.1	14.4
Retail Trade	2.0	1.3
Other Services	1.6	4.4
Management	0.2	2.3
NR/Mining	-0.0	−0.5
Information	-0.3	−2.3
Government	-2.9	−1.3
Financial Activities	-3.0	−7.3
Construction	-3.4	−5.4
Total Nonfarm	31.7	2.9

Source: Employment Development Department



In addition, although not the sole determinant of our forecast, which includes a variety of economic indicators from population growth, tourism, income growth, and business spending, recently revised labor market statistics show that total nonfarm employment in the Inland Empire hit bottom in December 2009, and had a lackluster year in 2010, adding relatively few jobs. However, during the second half of 2011, local employment growth picked up in earnest. Since reaching bottom, the region has now added back almost 32,000 jobs, or 2.9% of its employment base. Importantly, this labor market recovery has begun to broaden out to a variety of important sectors. Administrative support has seen the largest job growth, both in terms of the number of jobs and on a percentage basis. This sector is an important bellwether for a labor market recovery because it includes temporary workers—employers have traditionally preferred to hire temporary workers during times of economic uncertainty, waiting to see whether the uptick in demand following a deep recession will be sustained.

Riverside County Taxable Sales Growth (%)

Fiscal Year	Unincorporated Areas	Incorporated Areas	Difference
	Historical		
2000-01	15.7%	10.6%	5.1%
2001-02	−3.1%	5.2%	−8.3%
2002-03	9.9%	8.8%	1.1%
2003-04	16.7%	14.6%	2.0%
2004-05	21.4%	13.7%	7.7%
2005-06	14.7%	11.3%	3.3%
2006-07	−0.2%	0.2%	−0.4%
2007-08	−5.6%	−6.7%	1.1%
2008-09	−14.8%	−15.3%	0.5%
2009-10	−10.1%	−3.8%	−6.3%
2010-11	8.8%	7.5%	1.4%
	Forecast		
2011-12*	−12.5%	8.8%	−21.3%
2012-13	13.9%	11.4%	2.5%
2013-14	9.9%	9.6%	0.2%
2014-15	9.4%	9.2%	0.2%
2015-16	12.9%	11.6%	1.3%
2016-17	13.0%	11.8%	1.2%

Source: California State Board of Equalization
*Note: Decline in 2011-12 driven by new incorporations

Fortunately, these gains in temporary hiring have given way to permanent job growth in other sectors. Manufacturing, wholesale trade, and transportation and warehousing have all posted solid growth since hitting bottom, aided in part by a weak dollar and strong export performance at the ports of Los Angeles and Long Beach. Given that the dollar remains weak relative to historical norms and that our major trading partners have begun economic expansions as well, exports (and thus employment growth in these sectors) are expected to remain robust during the coming years.

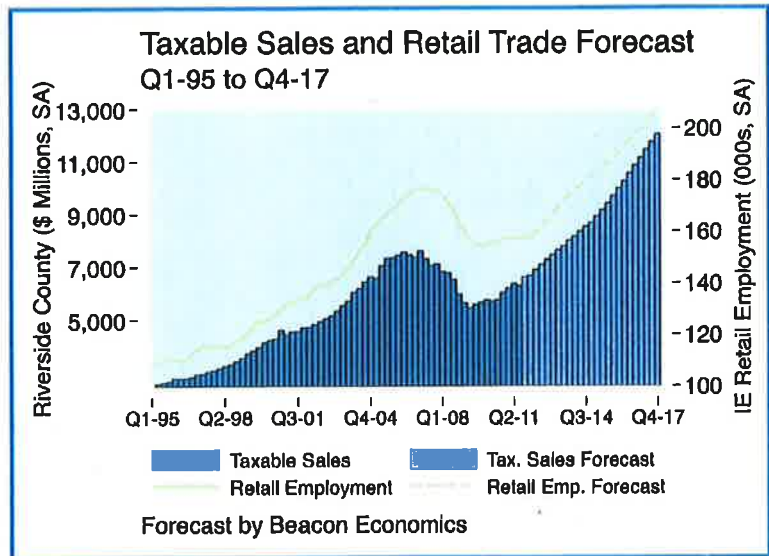
However, consumer-oriented sectors have also posted solid job growth. Leisure and hospitality has added 5,700 jobs since December 2009, and retail trade has expanded by 2,000 positions. After several years of decline, spending by Riverside County residents has led to increased demand for retail, hotel, and restaurant workers. Several sectors, including construction, government, and financial activities, continue to face difficulty, but recently these losses have been more than offset by expansions in other parts of the economy.

Sales Tax Revenue by Category
County of Riverside

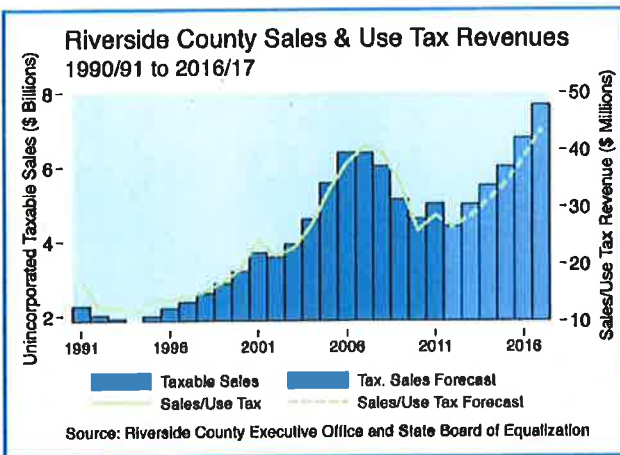
Category	Q4-10	Q4-11	% Change
Autos\Transportation	8,018,564	8,902,223	11.0
Building\Construction	5,262,239	5,477,948	4.1
Business\Industry	6,580,826	6,442,812	−2.1
Food\Drugs	3,855,418	4,066,648	5.5
Fuel\Service Stations	7,507,658	8,599,537	14.5
General Consumer Goods	19,494,228	20,338,826	4.3
Restaurants\Hotels	6,603,377	7,201,528	9.1
Transfers & Unidentified	-1,679	-4,051	−141.3
County & State Pool	6,034,267	8,702,786	44.2
Total	63,354,898	69,728,256	10.1

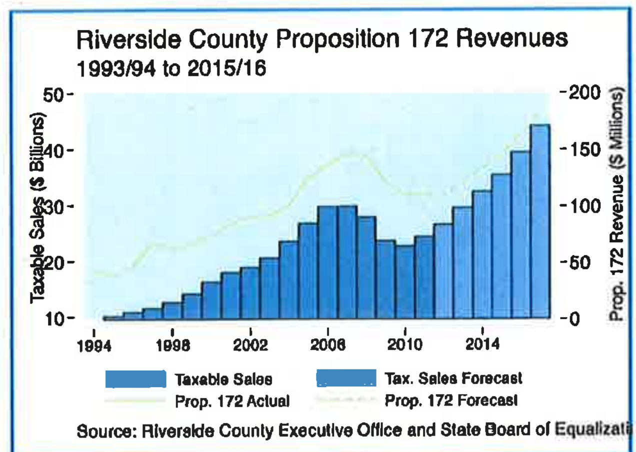
Source: HdL Companies

Beacon Economics is forecasting that the labor market recovery in the Inland Empire will continue throughout 2012 and beyond. The unemployment rate in the region has already dipped from a peak of 14.8% in November 2010 to 12.2% in February 2012. We expect the unemployment rate to continue to fall, dropping to 11.1% by the end of 2012 and into the single digits by late 2013. Nonfarm employment is expected to continue to expand as well, gaining momentum later in 2012. By mid-2013, the region's employment base will hit 1.2 million again, and it is forecasted to breach 1.3 million by 2015.



The improvement in the labor market has certainly played a part in the rebound in consumer spending that Riverside County is currently experiencing. According to HdL Companies, sales tax revenues increased by 10.1% during the final quarter of 2011. This follows a third quarter where sales tax receipts grew by more than 9% on a year-over-year basis. Importantly, this recovery has also been broad-based across various segments of the economy. Auto dealerships saw the largest increase at the end of the year, rising by 11%, but restaurants and hotels also reported strong growth during the fourth quarter. Gas stations also posted double-digit growth, which was not surprising given the spike in gas prices during the final months of 2011. Even more importantly, all other categories of spending (with the exception of the business and industry category) saw positive growth during the fourth quarter.





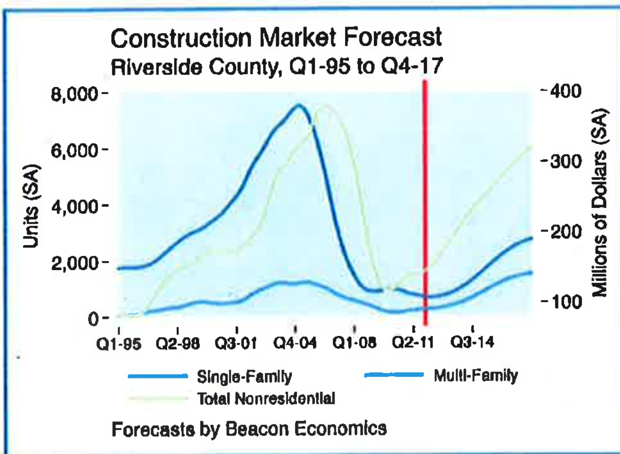
In total, Riverside County experienced a 28.5% decline in taxable sales from the peak in the first quarter of 2007 to the trough in the second quarter of 2009. However, since then the county has posted two years of uninterrupted growth in taxable sales on a year-over-year basis. Real GDP in the United States remained positive in the final quarter of the year,

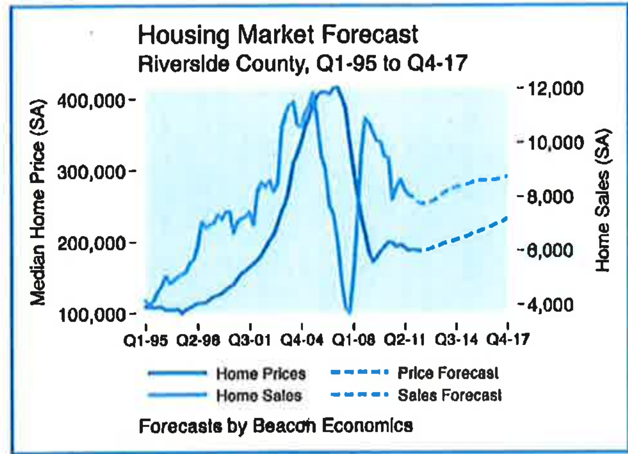
driven in large part by consumer spending. With the labor markets gaining steam and the local unemployment rate declining, Beacon Economics is forecasting that taxable sales will continue to do well—hitting the pre-recession peak in mid-2013 and slowing slightly thereafter as several federal income tax cuts are slated to expire. As the economy picks up in 2014 and 2015, we expect growth in spending to accelerate again as well.

As a result of the redirection of funds, Beacon Economics is forecasting that sales tax revenues in the County of Riverside will take a hit in 2011-12, but continue to improve thereafter as the economic recovery will overtake the new incorporations in 2012-13. We currently estimate that Riverside County will end the 2011-12 fiscal year down roughly 6.8% in sales tax revenues (which is roughly where they are tracking through the first half of FY2011-12), and due entirely to the incorporation effect, which is a one-time event. However, as the economy continues to heal, the sales tax base (even after losing these newly incorporated cities) will begin to grow again in 2012-13. We expect growth next fiscal year to be modest as the federal tax cuts expire, thereby reducing disposable income growth for a period of 9-15 months. However, as the economy gains steam in 2014 and beyond, Beacon Economics expects that sales tax revenue will begin to pick up steam as well, exceeding its pre-recession peak of $41 million by 2016-17. Given that Prop. 172 revenues are generated from the taxable sales in the state, Beacon Economics forecasts that Prop. 172 revenues will follow a similar path over this course of time, though they will be relatively flat during the current fiscal year.

Real Property Transfer Tax Revenues

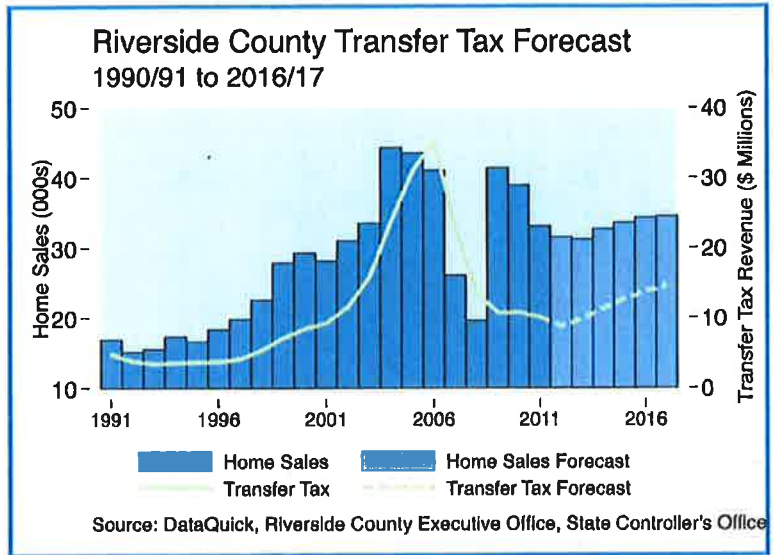
As noted, the first half of 2011 saw both home sales and prices stumble slightly. However, over the past six months, home sales have gradually increased and prices are back to around $195,000. One interesting feature of the Great Recession is that household growth slowed dramatically during this time. Due to the weak labor markets and the high levels of unemployment, many younger residents and recent graduates were forced to live at home with their parents. In addition, many older residents moved in with their children as the economy deteriorated. Some families even joined together to split the cost of housing, putting additional downward pressure on new household formation.





However, as the labor markets improve and these folks gradually get back to work, they will be looking to form new households. This will be aided by both low mortgage interest rates, which are as good as they've been in years, and home prices that are back in line with incomes from a historical standpoint.

Defaults and foreclosures, though trending downward solidly, remain elevated compared with "normal" times, and unemployment remains high as well. We are expecting that home sales activity will remain modest, but as the economy continues to improve, sales will begin to increase during the second half of 2012. As a result, Beacon Economics is forecasting that transfer tax revenues will decline by roughly 13% during 2011–12, but will begin to increase in 2012–13 as sales pick up during the second half of the current year. As the economy gets back to equilibrium, home sales are expected to level off at around 8,800 per quarter. At that time (around 2015–16), we expect transfer tax revenue growth to dip back into the single digits and continue to expand at its historical average pace of 5% to 8%.



Summary

Overall, Riverside County has clearly turned the corner toward recovery in the wake of the Great Recession. Employment growth has returned, and the region has added more than 2.5% to its employment base. The commercial markets appear to have hit bottom and vacancies have begun to edge downward. The residential side of the market has also found bottom, though improvement has been slow. Based on our discussions with the County's Assessor's Office, and taking into consideration the weakness in the local residential markets during the first half of 2011, Beacon Economics forecasts that AV will be down again in 2012–13. However, we expect the property tax roll to begin increasing again in 2013–14—modestly at first as Prop. 13 increases begin to kick in and picking up steam after that.

The rebounding economy has also helped to boost consumer spending in the region. Sales tax revenues have already started to bounce back, and even after accounting for the newly incorporated cities within the county, which will have a negative impact on sales tax revenues during the current fiscal year, Beacon Economics is forecasting that both sales tax revenues and Prop. 172 revenue will continue to increase in 2012-13 and beyond.

Home sales have remained tepid, but we have observed modest increases in Riverside County over the last six months. Beacon Economics expects transfer tax revenue to fall during the current fiscal year. However, as the economic recovery gains traction, transfer tax revenues will pick up in 2012–13—new households will be formed, the population will expand, and the area will once again attract new residents moving inland in search of affordable homes with access to the large employment centers along the coast.

The County of Riverside still has a ways to go to get back to peak, but the economy is certainly moving in the right direction. Property and transfer taxes will experience additional declines this year, but will return to growth after that. Sales and use taxes will continue to move forward as the economy heals. Many tough decisions still remain for local policymakers, but we're finally beginning to see a light at the end of the tunnel.

About Beacon Economics

Beacon Economics is an independent economic research and consulting firm with offices in Los Angeles and the San Francisco Bay Area. The firm's internationally recognized forecasters were among the first and most accurate predictors of the meltdown in the U.S. mortgage market—and among a relatively small handful of researchers who correctly calculated the depth and breadth of the financial and economic crisis that followed. The firm focuses on providing objective, fact-based economic studies and analytics, long- and short-term economic forecasts, public policy analysis, and balanced counsel to those making financial, business, and economic decisions. Beacon Economics has served as the lead economic advisor to the California State Controller since 2008 and its Founding Partner is Chair of the Controller's Council of Economic Advisors.

Services

- Economic & Revenue Forecasting
- Business, Industry, & Market Analysis
- Economic Development Analysis
- Ports & Infrastructure Analysis
- Public Speaking
- Expert Testimony

Contacts

- **Sherif Hanna**
  Managing Partner
  (424) 646-4656
  Sherif@BeaconEcon.com
- **Victoria Pike Bond**
  Director of Communications
  (415) 457-6030
  Victoria@BeaconEcon.com

Attachment F Quarterly Fleet Vehicle Report

Units Sold by Departments 01/01/2012 to 03/31/2012	
NAME	**Total**
BUILDING AND SAFETY	1
COMMUNITY HEALTH AGENCY	2
DISTRICT ATTORNEY	1
DPSS	1
EDA-ADMINISTRATION	5
HUMAN RESOURCES	1
PROBATION	1
PURCHASING AND FLEET SERVICES	2
RCRMC	1
SHERIFF	18
TLMA CODE ENFORCEMENT	2
Grand Total	**35**
Units at Auction House Pending Sale	
NAME	**Total**
AGRICULTURAL COMMISSIONER	2
COMMUNITY HEALTH AGENCY	2
DISTRICT ATTORNEY	4
DPSS	3
EDA-ADMINISTRATION	12
PROBATION	1
RIVERSIDE DISPATCH	1
SHERIFF	15
Grand Total	**40**