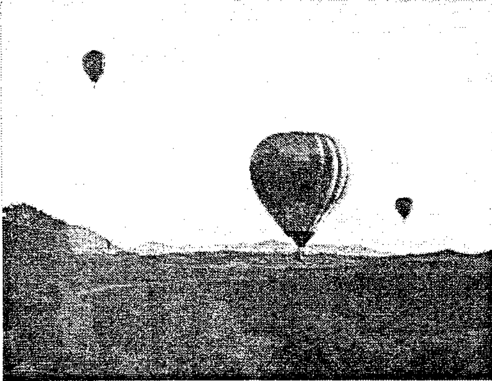
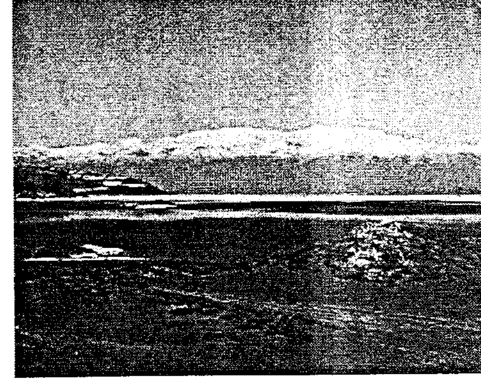
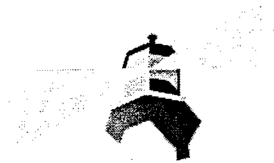
A Revenue Forecast

County of Riverside, May 2013







Beacon Economics

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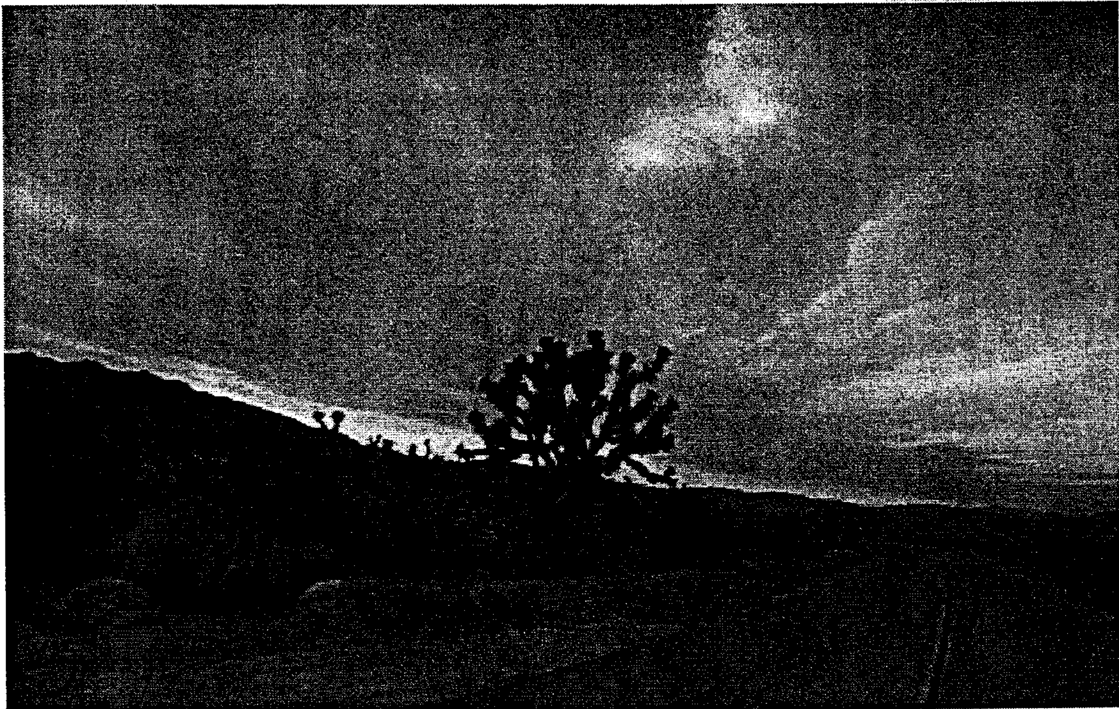


Introduction

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 2017–18.

In this edition, Beacon Economics' forecast incorporates updated figures on assessed valuation (AV) in Riverside County for 2012-13 as disclosed by the County Assessor's Office. In addition, the sales tax revenue forecast takes into account several new incorporations in the county, including the cities of Jurupa Valley and Eastvale. This is a critical distinction because the County's sales tax receipts are based upon sales in the unincorporated areas of the county. As new cities incorporate, fewer dollars will flow to county coffers as these funds are redirected to the newly formed city governments. Sales taxes attributable to these recent incorporations have been netted out from the county's forecasted revenues. Over the short run, this forecast is more optimistic than in our previous forecast, and confirms our earlier forecast that the worst is behind the County of Riverside. In this report we detail the current forecast and the major drivers of these results.

County of Riverside Revenue Forecast ($ Millions)

Variable	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Assessed Valuation	205,187.69	204,888.51	208,888.53	216,722.84	226,599.27	237,393.49	249,014.81
Growth (%)	-1.4	-0.1	1.9	3.8	4.6	4.8	4.9
Property Tax Revenues	495.64	487.7	505.69	529.74	556.36	583.95	613.07
Growth (%)	-1.4	-1.6	3.7	4.8	5.0	5.0	5.0
Sales & Use Tax Revenues	26.63	25.91	27.41	29.67	32.12	34.46	36.88
Growth (%)	-6.2	-2.7	5.8	8.3	8.3	7.3	7.0
Proposition 172 Revenues	119.09	127.13	134.58	142.83	154.46	167.02	178.74
Growth (%)	8.2	6.8	5.9	6.1	8.1	8.1	7.0
Transfer Tax Revenues	9.37	11.09	13.45	14.99	16.2	17.17	18.14
Growth (%)	-6.0	18.4	21.3	11.4	8.1	6.0	5.6

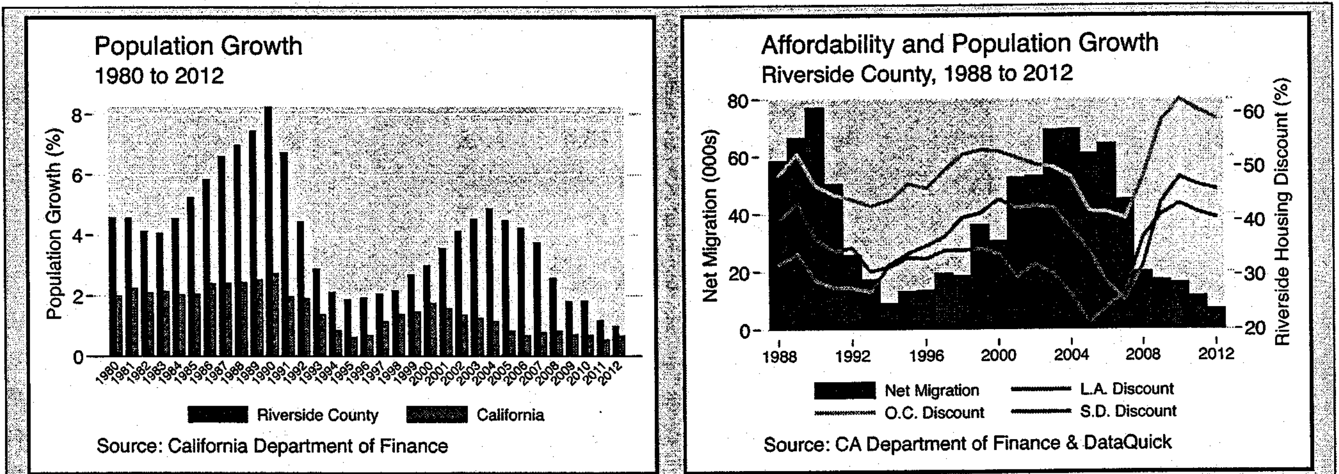
Source: Forecasts by Beacon Economics

Assessed Valuation

The Riverside County Assessor's Office recently announced that the AV roll for the 2012–13 fiscal year declined by 0.15%. This was much lower than the 2.0% to 2.5% decline that had been envisioned by the County during the first half of calendar year 2012. Indeed, this was even smaller than the 1.45% decline that Beacon Economics forecasted back in April 2012. Fortunately, this indicates that the worst is in fact behind Riverside County's property market.

In fact, recent developments in Riverside County have improved our economic outlook. One of the main drivers of our improved optimism has been the residential real estate market. According to the California Association of Realtors, home prices in the county increased by nearly 25% in March compared to the same period last year. Currently, the median price for existing single-family homes stands at $264,000. Since the market hit bottom in May 2009, home prices have increased nearly 50% and the recovery can be attributed to several factors.

First, the housing market is benefiting from improvements in the general economy. More local residents are able to find work throughout the County, region, and neighboring coastal job centers. As of March 2013, the unemployment rate in the Inland Southern California region dropped to 10.6%. Although the unemployment rate remains elevated compared to other areas, it is worth noting that just a year ago it stood at 12.5%, and at its peak was over 15%. This is significant progress in a relatively short period of time and great news for the local economy.



Source: California Department of Finance

Source: CA Department of Finance & DataQuick

Perhaps the main contributor to the housing recovery is the change in underlying fundamentals affecting the housing market throughout the state and nation. A recently released report by the California Association of Realtors notes that the share of distressed home sales has drastically decreased in the county. In March 2013, 37% of all sales in the county were those of distressed properties—well below the same period last year when distressed properties made up 59% of total sales. This represents a significant drop of more than 20 percentage points over the past 12 months alone. As distressed properties are funneled through the market, it decreases the downward pressure on prices since these distressed sales typically come with a discount over market values. In other words, when the share of equity sales (sales of home with equity) increases and represents a larger portion of total sales, prices are not dragged down by a large number of distressed sales.

Moreover, there are more fundamental issues at play like the supply and demand relationship for homes. Currently, there is a shortage of homes available for sale in the county, which also drives prices up. As of March 2013, the California Association of Realtors Unsold Inventory Index recorded 3.0 for Riverside County. This tells us that at the current pace of home sales, the number of homes available for sale would be exhausted in just three months. This is the lowest level of homes available for sale we have seen since 2006. With demand outpacing the supply of homes on the market coupled with prices that make sense with incomes, historically low mortgage interest rates, and a larger number of Inland Southern California residents finding work, prices have increased strongly in response.

The other factor driving AV is the commercial property market, which has also shown improvements in recent months. According to Reis Inc., industrial properties in the Inland Southern California region are in high demand. The vacancy rate for the region dropped to 12.8 in 2012 – a 0.7 percentage point drop from the preceding year. What's indicating the strength of the market is the ability for the region to absorb nearly 3.8 million square feet of existing space and 1.8 million square feet of completions in 2012. This has pushed rents up more than 2% for warehouse and distribution properties – which by far make up the largest share of the industrial market. Developers are taking notice of the recent trends. Currently, there is over 80,000,000 square feet of warehouse/distribution space in the pipeline in Riverside County. Once these planned projects come to fruition in the coming years, naturally, the AV in the County will increase accordingly.

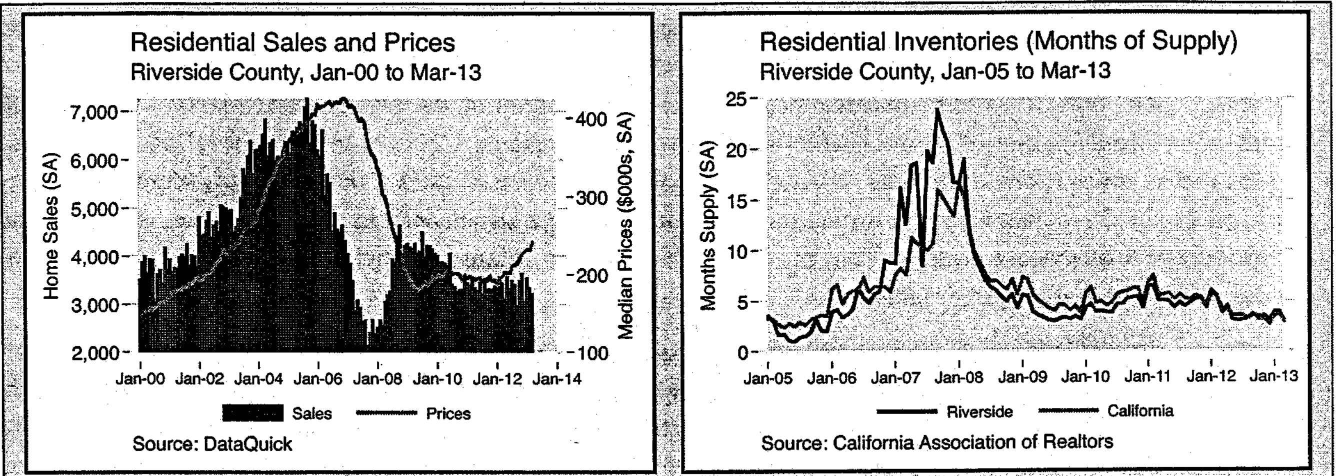
Inland Southern California Commercial Vacancies

Market	Q4-11 (%)	Q4-12 (%)	Change
Retail	10.6	10.0	-0.6
Office	24.5	24.3	-0.2
Industrial	12.8	12.1	-0.7

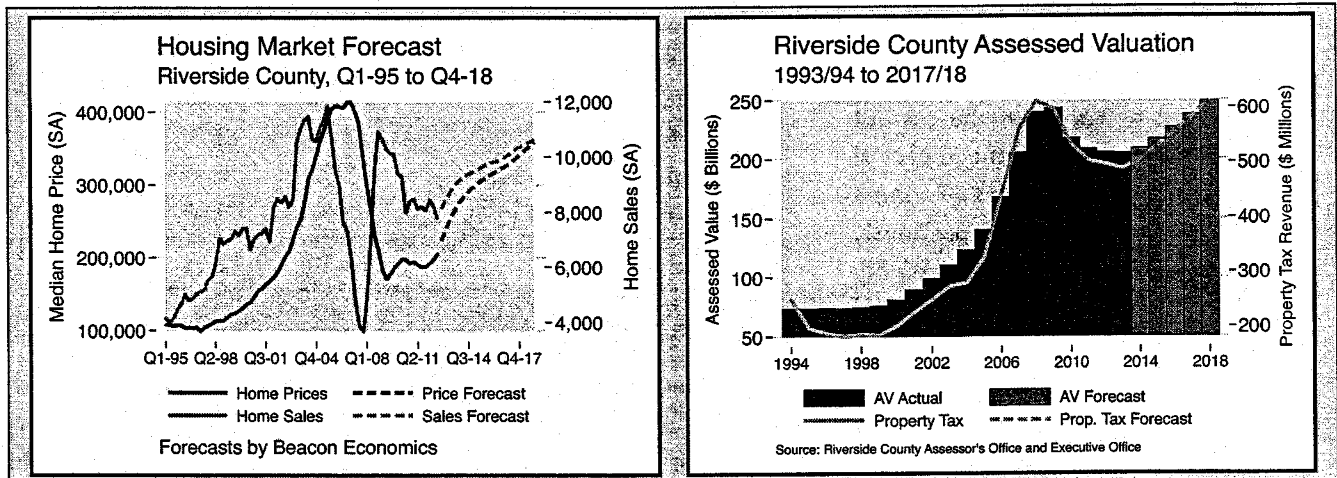
Source: Reis, Inc.

Retail properties in Inland Southern California are also showing decent strength. Vacancy rates have turned the corner and currently stand at 10% as of Q4 2012. Compared to the same period last year they have dropped more than half a percentage point. Although the vacancy rates remain relatively high compared to pre-recession levels, stabilization and retreat of vacancy rates are the first steps of the recovery. As the vacant inventory dwindles down, we should expect the rents to increase and eventually see an uptick in new construction. For now, things remain relatively quiet on the construction front. According to Reis Inc., there are only three construction projects in Riverside County totaling 205,000 square feet. However, things could pick up in the near future. Reis Inc. reports that there are over 12,500,000 feet square in planned and proposed projects in the pipeline. There are no guarantees that all projects will come to fruition but any completions will make a positive contribution to AV.

The multifamily housing market in Inland Southern California currently exhibits the lowest vacancy rate of all commercial properties at 4%. The rate has dropped nearly a percentage point since last year. Although the low vacancy rate certainly implies relative strength of the multifamily market in the region, it could be a bit misleading. The sector has benefited from decreased affordability of single-family homes prior to the Great Recession, as well as the flood of foreclosures post-recession that pushed many former homeowners into the rental market. As mentioned previously, the residential property market has stabilized and is gaining some steam which could potentially shift consumer preferences from apartments back to single-family homes.



If that shift begins to happen, it could put pressure on the rental market as vacancies open up and people move back to ownership housing. Of course, this will hinge critically on what happens with single-family units currently being held by investors as rentals, the pace at which mortgage lending increases, and what happens with housing tenure as a result. For example, if investors begin to turn their rental properties back over into ownership housing as prices increase, this could aid the apartment market by removing rental units from the supply mix. However, if these properties are maintained as rentals, that could create additional competitive pressure in the apartment market as folks transition back to ownership housing. Similarly, if there is a big increase in home ownership rates, this could mitigate demand for rental housing. Of course, in order for home ownership rates to rise, bank lending will have to increase much more than it has up to this point. Still, these developments will be critical to how the rental housing market—particularly on the apartment side—unfolds over the next few years.



Given the strength of the residential market recovery, it is not surprising construction of multi-family properties remains subdued. According to Reis Inc., there are only about 500 units under construction in Riverside County. Depending on how many of the nearly 12,000 planned units are completed, this sector could, nevertheless, provide an uptick to the AV in the coming years.

The weakest area of the commercial sector remains office buildings. Vacancy rates remain very elevated at 24.3%, as of Q4 2012. In addition, progress has been slow considering that a year ago the vacancy rate was 24.5%. One thing to remember is that this sector is relatively small compared to the number of residents that call the Inland Southern California region home. If we compare the office stock to the bellwether of the local property market we put its size in context. In Inland Southern California, office space inventory represents 1/20th of total industrial inventory. In Los Angeles metro, office space represents little less than half of all industrial stock. Considering the elevated vacancy rates and size of the market we don't expect this sector to contribute significantly to the AV increase, though we do not expect heavy downward pressure from the office market either because it represents a relatively small share of the overall commercial property market.

These improvements in the residential and commercial real estate markets have substantively altered our AV forecast, as well as the subsequent property tax revenues. Beacon Economics expects the AV to increase by nearly 2% in fiscal year 2013-14, which is slightly higher than our previous forecast. In the years that follow, we also expect the AV to increase at a rate faster than previously forecasted. Our new forecast indicates that the AV will reach pre-recession levels in fiscal year 2017-18. In addition, we expect property tax revenue to increase 3.7% in 2013-14.

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

Consumer and business spending in Riverside County is on the mend, as it has been since spending hit bottom in mid-2009. Overall, spending has been driven by improving economic conditions in the County, and more specifically by the housing market recovery as well as positive employment trends.

Sales Tax Revenue by Category
County of Riverside, Values in $ Millions

Category	Q4 2011	Q4 2012	% Change
Business/Industry	6.37	9.74	52.7
Autos/Transportation	9.29	10.54	13.4
General Consumer Goods	16.91	17.89	5.8
Restaurants/Hotels	7.32	7.65	4.5
Food/Drugs	3.95	3.96	0.1
Building/Construction	5.73	6.46	12.8
Fuel/Service Stations	8.97	9.66	7.7
Total	66.50	72.99	9.7

Source: HdL Companies

It's important to note that the current forecast takes into account the impact of the newly incorporated areas of Jurupa Valley and Eastvale, as well as previously incorporated cities of Menifee and Wildomar. 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 by Beacon Economics, the unincorporated areas of Riverside County have fallen from a peak of roughly 22.4% of the County's taxable sales base in 2008 (prior to the incorporations of Menifee and Wildomar) to roughly 20.8% subsequent to the incorporations of Eastvale in 2010 and Jurupa Valley in 2011. Therefore, Beacon Economics has performed a forecast of total taxable sales in Riverside County's unincorporated area out to 2017-18, after taking into account 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.

The forecast incorporates numerous economic indicators such as population growth, tourism, income growth, business spending and labor markets. One of the main drivers of the forecast is the labor market, which is gaining steam. Total nonfarm payroll in Inland Southern California increased by 2% or 22,800 jobs in March 2013 compared to the same period in the year before. The employment gains can be seen across most of the private sector. In fact, if we take off the jobs cuts in the government sector the region created more than 26,000 over the past 12 months. This represents a 3% increase, which is a significant improvement compared to the anemic growth rates seen a year ago, and is relatively faster than growth in the state overall, which posted a 2% increase over the same period.

The biggest contributor to employment gains over the past 12 months has been the leisure and hospitality sector – increasing their payrolls by nearly 9,400 jobs or 7.5%. Transportation and warehousing added 2,300 workers to their payrolls as well, whereas wholesale trade increased its workforce by 7.3% or 3,700. This is another great sign for the local economy considering the bellwether industries are showing strength. Education and health care also continued its uninterrupted upward trend by adding more than 6,000 workers to their payrolls.

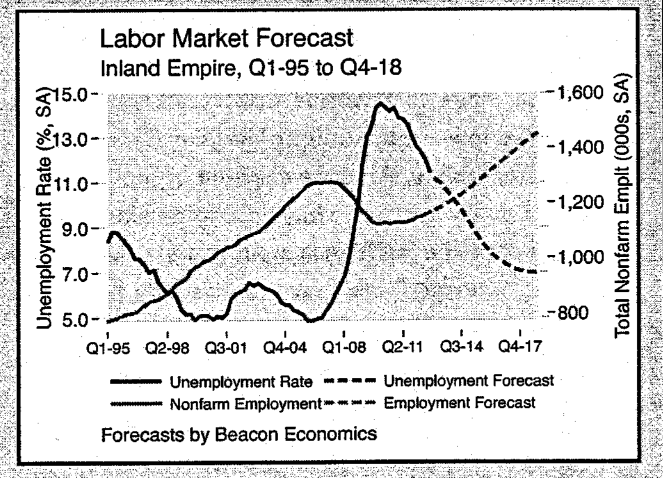
These accelerated growth rates, as well as positive revisions to the underlying data by the EDD (as part of their annual benchmark revision process) which added another 12,000 nonfarm jobs to those that had previously been reported, have improved our labor market outlook for 2013 and beyond. We expect nonfarm payrolls to increase by 3% in 2013, followed by 3.5% and 4.3%, in 2014 and 2015, respectively. In our last report we voiced our expectation that nonfarm employment in Inland Southern California was going to reach 1.2 million by mid-2014. Our current expectation is for the employment level to reach 1.2 million at the start of 2014.

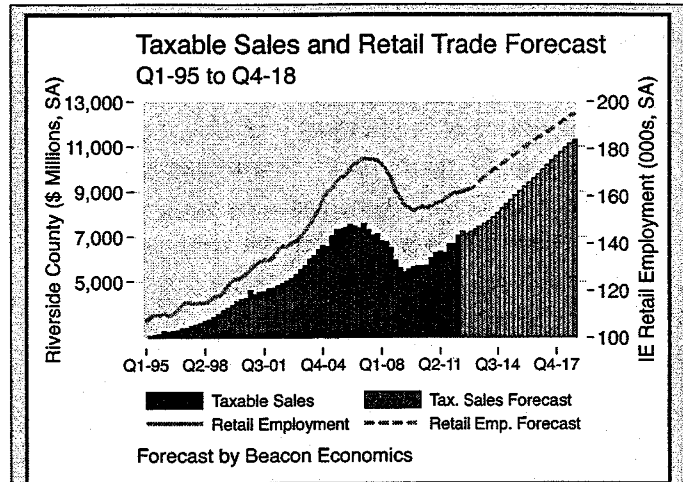
Labor Markets

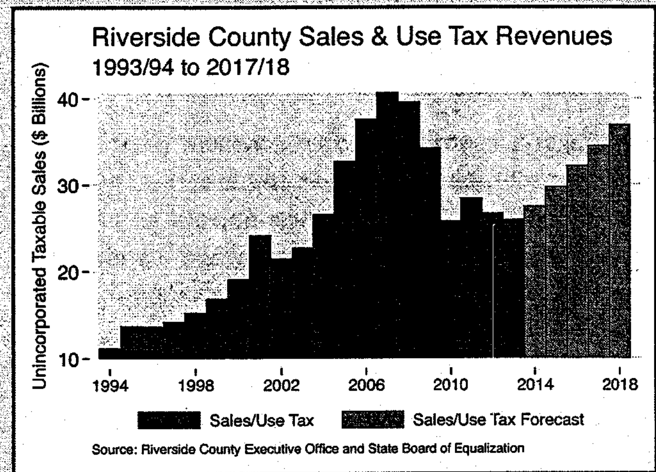
Inland Empire Employment

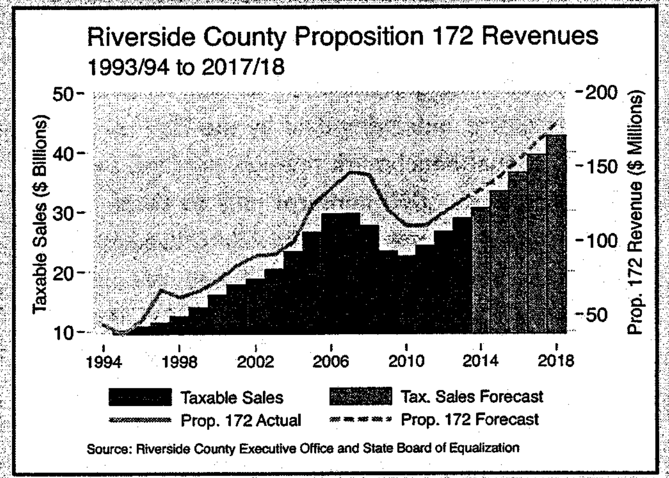
Industry	Job Growth Dec-09 to Mar-13	
	Jobs	%
Education/Health	16.2	12.1
Leisure and Hospitality	14.8	12.2
Retail Trade	8.9	5.8
Transport,Warehouse,Util.	6.8	10.3
Wholesale Trade	5.3	10.9
Other Services	4.4	11.7
Admin Support	3.6	4.7
Prof Sci and Tech	3.1	8.7
Manufacturing	1.2	1.4
Farm	0.7	5.0
Financial Activities	0.5	1.3
NR/Mining	0.1	9.8
Management	-0.2	−2.0
Information	-2.3	−16.7
Construction	-3.1	−5.0
Government	-13.3	−5.6
Total Private	59.4	6.7
Total Nonfarm	46.1	4.1

Source: Employment Development Department









Recent employment trends have had a positive impact on taxable sales. According to the Board of Equalization, taxable sales in Riverside County increased by 6.2% in 2012. Growth in taxable sales has translated to growth in sales tax revenues for the County. According to HdL Companies, sales tax revenues in Riverside County increased by 9.7% in 2012. Notably, growth was recorded across the board. Revenues from autos and transportation increased 13.4%, while building and construction increased 12.7%. Although business and industry is a relatively small category it, nevertheless, saw a very large increase of 50%. Such high growth rates are usually an anomaly and we should not expect it to be the norm, as this boost could potentially be attributed to energy projects currently taking place in the County. Thus, the tax effects will subside as these projects near completion.

Another aspect that has had a positive impact on the housing market, and consumer and business spending, is demographics. Most recent data by the California Department of Finance has revised down birth and migration statistics through out most of the state. However, even with this revision, Riverside County continues to attract the largest number of residents compared to the neighboring counties. In fact, Riverside County was the only county in Southern California that recorded positive net migration during 2012. That is, nearly 3,700 people within the United States decided to move to Riverside County above those that decided to leave the County last year. Given that relative affordability, the price discount of moving to Riverside County relative to buying a home along the coast, has not been this high in many years, and many are finding it attractive to move to Riverside County once again.

Incorporating positive net migration with a natural increase, the California Department of Finance estimates that population in Riverside increased by nearly 24,000 residents to around 2,244,000 in 2012. Additional residents are great news for the local economy be-

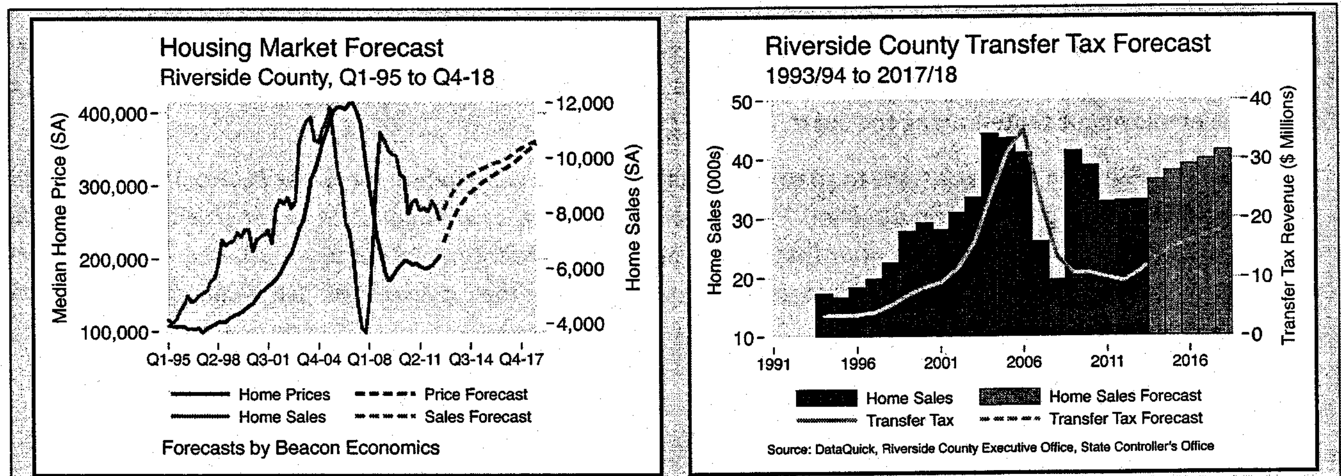
cause they drive up the base for consumer and business spending, as well as demand for housing, which translates into higher revenues for the County.

Beacon Economics expects taxable sales to continue its upward trend, increasing by about 6.6% in 2013 and reaching the pre-recession levels in the same year. In 2014 and 2015 we expect the growth rate to accelerate to 9% due to increased confidence and improved balance sheets of the consumer, as well as the end of sequestration cuts by the government and an adjustment by households to higher tax rates that accompanied the "fiscal cliff". The most recent advance estimate of GDP for Q1 2013 indicated that consumer spending remains healthy, as personal consumption expenditures rose by 3.2% at an annual rate. As expected, the main drag on the economy continues to be government spending.

In our last report we had forecasted a 2.5% decline in sales tax revenues for fiscal year 2012-13. However, due to slightly lower than expected sales tax revenues thus far we are expecting a slightly bigger decrease of 2.7%. In years that follow we expect the growth rate to gain steam – plus 5.8% in fiscal year 2013-14, and by 8% in 2014-15 and 2015-16, and 7% in 2016-17 and 2017-18. Since Proposition 172 revenues are generated from taxable sales in the state and county and were not affected by incorporations, the County did not have to make up ground. Thus, Beacon Economics forecasts that Proposition 172 revenues will increase 6.8% in the current fiscal year. In addition, we expect the County to exceed the pre-recession levels by fiscal year 2015-16.

Real Property Transfer Tax Revenues

Residential home sales in the County, the primary generator of real property transfer tax revenues, increased by roughly 1% in 2012. We expect sales to pick up in 2013 due to improving economic conditions already discussed. In addition, our expectation of continued positive net migration will increase demand for housing. In fact, one of the reasons for positive net migration is the affordability of the local housing market relative to the neighboring coastal counties. Residents from Los Angeles County, San Diego County and Orange County have traditionally opted for Inland Southern California when prices in the region create a discount-incentive relative to neighboring markets. As noted, this affordability is at a very high level by historical standards because prices in Riverside County fell faster than they did along the coast.



In addition to affordability, residents are able to take advantage of record low mortgage rates. Although credit-underwriting standards remain above pre-recession levels and growth in mortgage lending has been slow, as employment in the region gains steam more residents will be able to take advantage of these low rates. Positive net migration and relative affordability, combined with record low mortgage rates and an improving overall economy, have had a positive impact on home sales, which translate into additional transfer tax revenues for the County.

As a result, Beacon Economics is estimating that transfer tax revenues will increase by 18% in fiscal year 2012-13, due to both rising sales and higher transaction values. Our forecast for 2013-14 and 2014-15 calls for double-digit gains in transfer tax revenues of 21% and 11%, respectively. Thereafter, we expect the revenues to slow to a more sustainable single-digit growth rates.

Summary

Our view that Riverside County has turned the corner towards recovery in the wake of the Great Recession has been confirmed with recent data and is reflected in the current forecast. The region continues to expand employment levels, and 22,800 workers were able to find employment in the region over the past 12 months. More importantly, these gains were seen across the private sector.

Residential real estate has posted some impressive gains over the past year and has started to lead the recovery. Commercial real estate is also on the mend, although some sectors are doing much better than others. Industrial property market has shown its strength and we expect the demand for these properties to remain solid. Beacon Economics expects the AV to remain relatively flat in fiscal year 2013-14. In addition, we expect the AV to reach pre-recession levels in fiscal year 2017-18. We are estimating property tax revenues to decrease by 1.6% in the current fiscal year.

The increased pace of the recovery has helped boost consumer and business spending in the County. Beacon Economics expects taxable sales to continue its upward trend without interruptions, increase about 6.6% in 2013 and reach the pre-recession levels in the same year. Due to incorporations and slightly slower-than-expected actual sales tax revenue thus far, we are expecting a decrease of 2.7% in 2012-13. However, in the years to come we can expect the pace to pick up and increase 6% in 2013-14, and more than 7% thereafter.

Beacon Economics expects transfer tax revenue to rise during the current fiscal year. And, as the economic recovery gains traction, transfer tax revenues will pick up in 2013–14—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 where we were before the Great Recession, but the economy is certainly moving in the right direction. Property and transfer taxes are finally poised for growth in the coming fiscal year, and will continue to grow after that. Sales and use taxes will continue to move forward as the economy heals. Many tough decisions still remain for local policymakers, even as the cyclical effects are waning, but we're finally seeing 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.

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COUNTY OF RIVERSIDE

FORECASTS AND ECONOMIC OUTLOOK

for

COUNTY OF RIVERSIDE

April 2013

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A. RIVERSIDE BUDGETARY VARIABLES

A1. Property Tax Revenue

The Institute for Environmental and Economic Studies (IEES), at California State University Fullerton, analyzed secured property tax data provided by the County of Riverside on 903,604 property parcels for FY 2012-2013. The data provided to us excludes a number of items such as tax exemptions, fixtures, trees & vines, unsecured property, personal property as well as other data which are subject to time-recording and other accounting issues and differs to some extent from the data used by the Riverside County Assessor's office. Despite these differences, the data provided by the county and analyzed by the IEES is fairly inclusive and represents 94.0% of the county's assessed valuation.

Property Tax Projections

The Riverside County assessment roll appears to have bottomed out in FY 2012-2103 and is anticipated to grow over the forecast horizon. A number of positive trends in the real estate market have emerged; chief among these is the recent pick-up in property prices which is expected to finally begin to boost the assessment rolls for the county. In fact, after nearly four years of declines, the County Assessor's Office can finally begin to reverse the Proposition 8 temporary reductions on a number of properties. While a full Prop 8 reversal on all properties will likely stretch over a number of years, even a partial reversal will certainly provide a much-needed support for the county's assessment roll. In addition, with California

inflation (October 2011 to October 2012) exceeding 2%, the County Assessor was able to apply a 2% increase in property taxes to properties that are subject to the Proposition 13 assessed value. Another positive factor is the decline in foreclosures in the second half of 2012 and early in 2013 partly due to increases in property values and partly due to changes in procedures that initiate a foreclosure filing.

On a slightly more downbeat note, the Prop 8 reassessment of a number of commercial properties will continue into 2013 and 2014 due to a still-elevated number of a backlog of appeals, which will likely restrain to a certain extent the upward momentum of the assessment roll. While commercial property prices appear to have stabilized and even recovered from recession-depth values in a few segments of the market, reassessment appeals -- which take quite a long time to work through given the uniqueness of most commercial properties -- will likely continue to weigh on assessment rolls over the next 18 months.

It is important to note that even with the recent positive developments (reversal of Prop 8 values, over 2% CPI growth, improvement in home valuation, etc.) the county's assessment roll has undergone a permanent decline since the crisis as increases in foreclosures and distressed sales have prompted the reevaluation of over 200,000 of the county's properties (23% of total) to a lower base. New construction and the long awaited recovery in the housing market will certainly help reverse some of these losses, and while the county's assessment roll will certainly regain its pre-recession peak over the next few years as the recovery expands, it may not fully

reach the trajectory where it would have been had the crisis never happened.

Our forecasts are presented in Table 1. They are based on the total secured assessed roll and exclude unsecured property. The historical data for FY 2012-2013 are from the Assessor's Annual report, where secured property accounted for 96.2% (1,970,995,391/ $2,048,885,115 = 96.2%) of the total assessed roll. This means that our projections provide a close representation for the entire assessed (secured plus unsecured) roll.

Our projections are based on the parcel data from the county (on secured properties). The projections are based on econometric models that use a number of variables for forecasting purposes including data by type of property (903,604 parcels), failure to pay property tax installments, property subject to Proposition 8 temporary reductions, property assessed at the Proposition 13 value, and property tax data from neighboring counties.

The projected growth rates summarized in Table 1 are representative of the projected growth of the County's entire property tax revenue. We forecast an overall increase of 3.2% in 2013-2014 in the county's secured assessed valuation. This is partly due to the recent increases in property values (which will induce a reversal of the temporary Proposition 8 reductions on many residential properties and some commercial properties) and the 2%-factor of Proposition 13 which will be applied to properties not receiving a Proposition 8 reduction (generally, those properties with base-year pre-1999). Note that over 6,000 commercial properties (still tied up in the appeals

process) will likely receive a temporary Proposition 8 reduction (from previous fiscal years) due to the fact that the decline in commercial values lagged the drop in residential values and because of a backlog in Prop 8 re-assessment which are significantly more time consuming for commercial properties relative to residential properties.

Property values are expected to increase by a further 4.5% in FY 2014-2015 spurred primarily by continued increases in home valuation but still somewhat restrained by the reassessment of commercial property values triggered by appeals of the previous two years. For the remainder of the forecast horizon, property values are expected to pick up more robustly, as the real estate market continues to heal, the recovery gains more breadth and strength, and economic conditions normalize.

Table 1
Ad Valorem Property Taxes
Based on 96.2% of the Total Secured Property Tax Roll[a,b]

Fiscal Year	Commercial	Growth	Non-Commercial	Growth	Total	Growth
12-13	411,966,480	n/a	1,559,028,911	n/a	1,970,995,391	n/a
Forecast						
13-14	404,139,117	-1.9	1,629,185,212	4.5	2,033,324,329	3.2%
14-15	407,372,230	0.8	1,717,161,213	5.4	2,124,533,443	4.5%
15-16	420,408,141	3.2	1,827,059,531	6.4	2,247,467,672	5.8%
17-18	442,269,365	5.2	1,951,299,579	6.8	2,393,568,944	6.5%
18-19	470,574,604	6.4	2,091,793,149	7.2	2,562,367,753	7.1%

[a] Data provided by the County of Riverside representing 96.2% of Total Secured Assessed Valuation.
[b] Non-Commercial consists of Residential, Condominiums, Vacant Land, Apartments, Manufactured Homes, Agriculture and Timeshares.
[c] The growth rates are representative of the projected growth of the County's property tax revenue.

Detailed Analysis on Parcel Data

In FY 2012-2013, ad valorem secured property tax revenue for the 903,604 parcels provided to us by the County was $1,926,894,578 (see Table 2) (note: this excludes tax exemptions, fixtures, trees & vines, unsecured property, personal property, as well as data subject to recording and other accounting issues). This is lower than the revenue from the complete county property tax roll which amounted to $2,048,885,115 in FY 2012-2013 and is also below the secured county tax roll reported by the Assessor's Office in its Annual report ($ 1,970,995,391). Some of these discrepancies reflect timing lags between recording and reporting. Nonetheless, the majority of property tax revenue for the county comes from secured property (land and structures) ad valorem taxes (1% of total assessed valuation) accounting for 94.0% ($1,926,894,578 of $2,048,885,115) of the property tax revenue.

The parcels were classified into the following seven categories: Residential, Time Shares, Manufactured Homes, Vacant, Commercial, Agricultural and Unassigned Code (see Table 2 for more details). Note that the parcel data for FY 2012-2013 provided by the County differs from the parcel data provided to us for FY 2011-2012. Consequently, the historical data for the ad valorem taxes differ by over $13 million compared to the amount reported in our previous study in April 2012. The analysis below is based on the latest secured property tax data (FY 2012-2013) provided to us by the County.

Secured ad-valorem tax revenue for FY 2012-2013 from residential parcels (single and multifamily) totaled $1,299,932,064, which

accounts for 67.46% of all property taxes (Table 2). Commercial parcels account for the second largest share of over a quarter of ad-valorem tax revenue totaling $487,338,089. The remaining categories total $139,624,426 or 7.25% of property taxes in Riverside County.

Table 2
Ad Valorem Property Taxes[a]
Fiscal Year 2012-2013

Type of Parcel	Dollars	Share of Property Taxes
Residential[b]	1,299,932,064	67.46%
Time Shares[c]	6,825,234	0.35%
Manufactured Homes[d]	36,986,784	1.92%
Vacant[e]	50,324,969	2.61%
Commercial[f]	487,338,089	25.29%
Agricultural[g]	45,487,062	2.36%
Unassigned Code[h]	377	0.00%
Total	1,926,894,578	100.00%

[a] Data provided by the County of Riverside for 903,604 parcels.
[b] Single and multifamily
[c] Timeshare estates in a timeshare project pursuant to Section 2188.9 of the Revenue and Taxation Code.
[d] Factory built manufactured homes
[e] Vacant according to residential parcel codes
[f] Apartment buildings, commercial building on leased land, vacant commercial, special use and all other types of commercial property.
[g] Parcels under and not under an agricultural preserve act
[h] Unassigned code are parcels that were not assigned to residential, commercial or agricultural

The collapse of the real estate market during the crisis, its lingering effect, and an exceptionally slow recovery have had a detrimental effect on the county's assessment rolls over the past few years. Assessed valuations, as reported by the county's Assessor Office have now declined for four successive years. The official assessed rolls decreased by -0.15% in FY 2012-2013 following a decline of -1.45% in FY 2011-2012, a fall of -4.25% in FY 2010-2011, and a dramatic reduction of -10.5% in FY 2009-2010. In dollar terms, over the last three years, assessed valuations have declined by $9 billion

in FY 2010-2011, an additional $3 billion in FY 2011-2012 and a (relatively small) $0.4 billion in FY 2012-2013. These values still pale in comparison to the $25 billion decline recorded in FY 2009-2010 (the largest decline out of all counties in the state of California). From their peak of FY 2008-2009, assessment rolls have slumped by a jaw-dropping $37.5 billion (-16.1%) over the past four-years.

The -0.15% decrease in assessment roll in FY 2012-2013 was largely caused by a continued downward revision of assessment values in the county as housing and commercial real estate markets continued to experience strains early in 2012. This is largely due to the continued reassessments of properties, in line with Proposition 8, which requires the Assessor to apply the lower value of either the property's Factored-Base-Year Value (established under Proposition 13 -- with an increase of no more than 2%) or its market value as of the lien date (January 1). For FY 2012-2013, the Assessor's office reviewed almost 450,000 properties of which 447,953 received a Proposition 8 reduction. The average decrease was $122,532 for residential properties (compared to the base year) and $980,748 for commercial property. The total decrease in assessed valuation (per Proposition 8) for FY 2012-2013 was $45.2 billion, which slightly exceeds the decrease applied in the previous year. During the FY 2008-2009, Proposition 8 reductions amounted to slightly more than $16 billion, but these reductions have totaled more than $43 billion in FY 2010-2011, 2011-2012 and 2012-2013, largely reflecting weak real estate fundamentals and a lingering effect of the housing market collapse. Properties that were not eligible for a Proposition 8

reduction, experienced a 2.0% increase in assessed valuation in FY 2011-2012 (in line with Prop 13) as California CPI rose by 2.889% from October 2010-October 2011.

To better assess the challenges facing property owners in the county, we also analyzed property tax delinquencies based on the data provided by the county. There were 55,561 (6.15%) property owners delinquent on paying their property taxes (at least one installment) in FY 2011-2012 (the most recent data available). The number of property owners who paid one installment but were delinquent on the other installment was 11,118 (1.23%) and the number of owners delinquent on both was 44,443 (4.92%). Even though the number of parcels in FY 2011-2012 provided by the County differs from the previous fiscal year (which limits a direct comparison), it appears as though the number of delinquencies has decreased compared to a year ago when total delinquencies were 61,716 (6.83% of total) and the number of owners delinquent on both payment was 48,898 (5.41%).

The decrease in property tax delinquency rates is good news for the county. As the recovery expands and the labor market heals, the earning and income outlook for the county's residents improves, which means that more property owners will be able to afford property tax payments. In addition, the increase in property values gives more confidence to owners to hold on to their property. A drop in foreclosures also reduces delinquency rates. Property tax delinquencies should decline further over the forecast horizon as the recovery expands in the region and the economic rebound gathers strength and resiliency.

Non-Commercial Property

The median home price for existing single-family homes in Riverside County increased in the second half of 2012, ending the year around 23.5% higher than the December 2011 values, based on data from the California Association of Realtors (CAR). Market values for median homes are currently significantly above the $200,000 mark around which home prices fluctuated during much of 2011 and 2012, according to CAR. In February 2013, single family median home prices were $245,830, up by around 43.4% from their April 2009 crisis-low values. This shows that there has been a significant improvement in the residential market over the past few months. Nonetheless, while property values have increased substantially, they remain roughly around 43% below the peak of $431,713 recorded in June 2006.

Another sign that the non-commercial market is in much better shape compared to last year is that the number of foreclosures decreased dramatically in 2012 with additional declines occurring at the beginning of 2013. Foreclosure filings have declined because of a genuine improvement in the county's fundamentals (increasing employment, higher income, rising property values) and by changes in legislation (which took effect in January 2013 in California) which has significantly slowed down the foreclosure process and is expected to continue to do so in the near future. Nonetheless, the County still has the highest foreclosure rate in Southern California, and the second highest in the state of California. There were a total of 31,114 mortgage default notices, auction sale notices and bank repossessions in 2012 (representing a 24% decline from 2011 levels)

with 1 in 26 households in the county being in some phase of foreclosure. The current number of completed foreclosures likely underestimates the real number of properties that would have been foreclosed had the new legislation not come into effect.

The Riverside-San Bernardino-Ontario MSA still had 35.7% of homeowners with negative equity during the fourth quarter of 2012. This represents a significant decline compared to the 54.9% underwater mortgages recorded at the height of the crisis. While the number of property owners with negative equity has decreased dramatically, it is expected that some properties -- especially those that were delayed in the foreclosure process from the new legislation -- will still end up in foreclosure (or short sales) over the next few years.

Despite these important recent developments, the lingering effect of the severe collapse in home values during the crisis has continued to negatively impact the county's assessment roll. According to the Riverside County Assessor, in FY 2012-2013, 261,709 residential properties received a Proposition 8 reassessment, reducing the assessment roll by $32.1 billion. While the number of residential parcels receiving a Proposition 8 reassessment in FY 2012-2013 rose by 7.8% (up from 242,789 properties in FY 2011-2012), the reduction in assessed valuation is slightly below the $32.5 billion decline recorded in the previous fiscal year. There were also reductions in assessed values for condominiums ($3.7 billion), vacant land ($2.4 billion) and other property ($3.2 billion). The California Consumer Price Index rose by 2.889% from October 2010-October 2011. As such, the maximum allowable increase (as mandated by Proposition 13) in

assessed valuation for existing property owners in FY 2010-2012, was limited to 2% and most likely was only applied to houses purchased prior to 1999. The increase in the factor-base was roughly offset by Prop 8 reductions resulting in an overall flat (-0.21% decline) in secured property values in 2012-2013 (land and structure; secured property).

Property tax delinquencies for non-commercial property has improved significantly since the depth of the crisis, though it still remains elevated. We analyzed delinquencies on 861,503 parcels for non-commercial property provided by the county, which include residential, agricultural and unassigned parcels. Owners of residential parcels, who failed to make either one or both property tax installments, account for the largest amount of delinquencies. Single-family and multi-family delinquencies accounted for $33,451,370 (57.0%) of total delinquent non-commercial property taxes. Delinquencies for vacant land (residential, mountain, desert and manufacture homes) was $10,790,371 (18.4%) of total delinquencies. Delinquencies for agricultural property were $4,618,473 (11.2% of total) and for Condominiums or Planned Unit Developments were $3,134,139 (5.3% of total).

The Riverside County economy improved considerably in 2012 and this momentum is expected to carry forward during the forecast horizon. Market fundamentals have found new strength: nonfarm payroll employment has now increased for two consecutive years, housing affordability remains high (with 62% of families able to afford the median home price), unemployment continues to decline, the foreclosure

rate has dropped significantly, and there are now more equity sales than distressed sales. As such, non-commercial properties are expected to add to the county's assessment rolls over the next few years.

The contribution of non-commercial property to the assessment roll in FY 2013-2014 depends largely on two factors: 1) housing values in the first three months of 2013, and 2) Prop 13 factor. With the recent rise in home prices, properties under Prop 8 (which make up roughly half of the assessment roll) will likely see an increase in their assessed valuation. The remaining (roughly) half of the roll, are subject to a maximum 2% increase (given that the California CPI-inflation factor rose by 3.081% from October 2011-October 2012). For the first time in over four years, the residential housing market in Riverside County is expected to contribute positively to assessment rolls in FY 2013-2014. Going forward, housing prices are projected to increase further which will raise assessed valuations and a trigger continued reversals of the Prop 8 reduction on many properties.

Commercial Property

The recovery in the commercial real estate market has begun to gain steam having initially lagged behind the upturn in the residential market. However, the pace of the revival in commercial real estate differs across the various segments that make up the broader market: industrial, apartment, office and retail markets.

In the industrial market, average asking lease rates in Riverside County increased to $0.39 in 2012 compared to $0.35 in 2011. Higher

average asking lease rates should reflect an increase in the demand for commercial property. While the vacancy rate for property below 100K decreased to 5.21% in 2012, the vacancy rate for property above 100K actually increased. However, large warehouses are seeing a decrease in supply coupled with an increase in lease rates. Since the county is heavily involved in logistics, the demand for industrial property should continue to increase.

The apartment market has seen a remarkable improvement, reflecting the broader national trend. Rents for Class A&B Apartments, have increased by 0.9% on a year-over-year basis due to an increased demand for rental property (relative to homeownership) and are now only -5.5% below their all-time highs recorded in Q1 2008.

The recovery in the retail market has been rather weak, though some signs of improvement have begun to materialize lately. Average asking lease rates stabilized in 2011 and 2012 to around $1.35 and are likely to remain relatively flat in 2013. Vacancy rates declined to 8.34% in 2012. As the recovery continues to gain more strength and traction in the county, we expect the retail market to show continued improvement over the next few years, albeit lagging behind industrial and apartment real estate sectors.

The office market is the weakest segment of the commercial real estate in the county. However, even here some signs of improvement have emerged: the market appears to have finally bottomed out and the vacancy rate has decreased to 15.67% in 2012 (but still remains elevated). In addition, average asking lease rates have increased slightly to $1.69 in 2012. The recovery in this sector is expected to

take a lot longer than other segments of the commercial real estate, given the still-high vacancy rates and soft demand for office space. A full-blown rebound in this market is not expected until mid-2016.

The uneven recovery across the commercial market can be attributed to a number of factors. During the recession, there was an excess supply of all types of commercial property. As the economic recovery gained momentum, consumer demand for goods and services has begun to pick up, steadily stimulating demand for commercial property. However, the sharp decline in the commercial market during the crisis continues to weigh on assessed valuation, despite recent improvements, as there are nearly 6,000 appeals from the previous two years, still pending reassessment valuation. The reassessment of commercial properties is complex and time consuming because, in contrast to the residential market, it requires a thorough study of the fundamentals of each property. We project that the reassessment appeals of commercial properties will likely continue over the next 18 months. The lagged effect of this complex reassessment process will restrain somewhat the pace of growth of the County's Assessment roll even as commercial real estate values continue to appreciate from current values.

The number of commercial properties receiving Proposition 8 reduction was 3,190 in FY 2012-2013, with a total overall reduction in assessed values of $3.1 billion. In comparison, there were a total of 2,535 commercial properties in FY 2011-2012 that received a Proposition 8 reduction for a total amount of $2.8 billion. Proposition 8 reductions for commercial properties in FY 2012-2013

were over twice as high compared to FY 2010-2011, when only 1,526 commercial properties had a reduction for a total of $1.8 billion. We expect the remaining 6,000 appeals to be worked out over the next six to eight quarters, which means that the lower reassessed values are likely to weigh on the assessment rolls in the near term.

The County provided data for 42,101 commercial parcels for FY 2012-2013. These consist of apartment buildings, commercial building on leased land, vacant commercial, special use, and other types. A number of properties defaulted on property tax payments in FY 2011-2012 but the number of delinquencies is lower than in FY 2010-2011. Failure to pay property taxes on vacant commercial properties in FY 2011-2012 (latest available data) was $5,486,579 (or 27.3% of all delinquent commercial properties). A further $2,118,469 (10.6% of all delinquent commercial property taxes) was on special use parcels. Apartment buildings accounted for 1,219,841 (6.07%) of all commercial delinquent taxes. Over the next few years, delinquencies on commercial properties are expected to decrease especially as the recovery expands at a more brisk pace.

Even though the fundamentals are improving, commercial properties are likely to contribute little to the assessment rolls over the next two years largely reflecting assessment appeals that will have to be resolved over this period. Assessed valuations for commercial property are expected to decrease in FY 2013-2014 and then increase slightly in 2014-2015 and more robustly in the longer term, reflecting the protracted reassessment process triggered by the appeals process. In the long-term, assessed valuation for commercial properties is

expected to post more robust growth rates as the recovery gains more traction and economic expansions picks up more robustly in the county with the growing distance from the Great Recession.

A2. Motor Vehicle Licensing Fee (in Lieu)

Motor Vehicle Licensing Fee (MVLF) revenue is based on assessed property values (Table 3). In FY 2005-06, the state converted MVLF revenue into property taxes in lieu of MVLF. This source of revenue is linked to assessed valuation. Nonetheless, there are significant deviations from the assessed valuation trend on a historical basis. For example, during FY 2005-06, there was an underestimate of MVLF for Riverside County. To correct for the underpayment, an additional payment was made in FY 2006-07, causing the MVLF revenue in FY 2006-07 to be higher than what the actual payment should have been. Thus while this source of revenue tends to grow and fall at a similar rate to assessed property taxes, the state adjustments for underpayments or overpayments frequently distorts the underlying trend for MVLF revenue and sometime by a large margin. There was a 1.1% increase in MVLF revenue during FY 2011-2012. In FY 2012-2013, MVLF revenue is projected to decrease slightly, reflecting the relatively flat assessed valuations for that fiscal year. In the long term, as the real estate market recovers and the economic recovery in the county gathers more speed, MVLF revenue will increase as assessed values rebound from depressed levels.

Table 3[a]

Fiscal Year	Motor Vehicle Licensing Fees Dollars	Growth
	Historical	
09-10	197,932,854	-10.7%
10-11	189,210,416	-4.4%
11-12	191,348,791	1.1%
	Forecast	
12-13	187,713,164	-1.9%
13-14	191,880,396	2.2%
14-15	203,776,981	6.2%
15-16	217,633,815	6.8%
16-17	234,826,887	7.9%
17-18	254,552,345	8.4%

[a] Data provided by the County of Riverside

A3. Taxable and Use Sales Riverside County

The taxable and sales data are from the County of Riverside which reports tax revenue derived from sales within the unincorporated areas. As the county continues to recover from the recession and the labor market heals, households' purchasing power is expected to increase which will begin to drive up purchases on goods and services.

Taxable and use sales tax revenue for the county experienced a large negative shock in 2011 and 2012, because of a loss of tax revenue from the incorporation of two areas, Jurupa Valley and Eastvale. Tax revenue from these two areas has been permanently lost and will no longer count towards the county's sales and use tax

revenue. Nonetheless, the overall impact from the incorporation of these two areas is far less than what it would otherwise been thanks, in large part, to a number of new energy projects that have recently emerged in the county. According to Hinderliter, de Llamas & Associates (HDL), the loss of tax revenue from the incorporation of Jurupa Valley and Eastvale was partially offset by a one time tax from solar projects undertaken by BrightSource. Consequently taxable sales for Riverside County in FY 2012-2013 are projected to increase by 1.2%. Taxable and use sales are expected to increase by 3.1% in FY 2013-2014 reflecting improved fundamentals as the recovery continues to expand. In the long-term, taxable sales are projected to increase more robustly, steadily picking up steam over the forecast horizon.

Table 4[a]

Fiscal Year	Taxable and Use Sales (dollars)	Growth
Historical		
09-10	25,755,828	-24.6%
10-11	28,192,647	9.5%
11-12	26,057,677	-7.6%
Forecast		
12-13	26,370,369	1.2%
13-14	27,187,851	3.1%
14-15	28,601,619	5.2%
15-16	30,231,911	5.7%
16-17	32,076,058	6.1%
17-18	34,289,306	6.9%

[a] Data provided by the HDL.
[b] Data for FY 10-11 include a projection for the last quarter as data are not available. Taxable sales from Eastvale are removed.
[c] Projections in FY 12-13 exclude taxable sales from Jurupa Valley and thus assume that Jurupa Valley will be allocated their tax revenue in FY 12-13.

A4. Proposition 172 Public Safety Sales Tax Projections

Proposition 172, the "Local Public Safety Protection and Improvement Act of 1993," was enacted in November 1993 and allocates a half-cent sales tax to public safety in cities and counties. The total sales tax revenue is distributed to cities in Riverside County as well as to the County. The state distribution of Proposition 172 revenue to Riverside County depends on the amount of taxable sales in

Riverside County and on the Riverside County's share of total tax revenue. Forecasts for the Public Safety Sales Tax are determined using the state formula and regression techniques. Estimates from this source of revenue are in Table 5. Given recent improvement in economic conditions in the county, the public safety sales tax projections are forecasted to increase by 6.3% in FY 2012-2013. In the long-run, the growth rate of this source of revenue for the County is expected to exceed 7%.

Table 5[a]

Fiscal Year	Proposition 172 Public Safety Sales Tax (in thousands)	Growth
	Historical	
09-10	110,069,225	-8.9%
10-11	114,898,083	4.4%
11-12	125,932,818	9.6%
	Forecast	
12-13	133,866,586	6.3%
13-14	141,630,847	5.8%
14-15	149,703,806	5.7%
15-16	159,584,257	6.6%
16-17	170,755,155	7.0%
17-18	183,561,792	7.5%

[a] Data are from the State Controller's Office and represent 95.5% of reported data.

A5. Documentary Transfer Tax

Documentary transfer tax is typically from a transfer of the ownership of real property and historical and projected values are in Table 6. The tax rate for the City of Riverside is $1.10 for every $500 of net consideration or value conveyed; the tax rate for all other cities and the unincorporated areas of the County of Riverside is $.55 for every $500 of net consideration or value conveyed. Documentary transfer tax is highly correlated with house sales, building permits, changes in interest rates which can trigger refinancing, changes in property values, changes in payroll employment, foreclosure rates, and other factors that cause a change in ownership. For FY 2012-2013, we project this source of revenue to grow by 6.4%. The decline in home sales, because of a tight home inventory, and a more protracted foreclosure process due to the newly enacted legislation will likely restrain the pace of growth in this source of revenue for the county in the near term. In the long term, document transfer tax revenue is expected to grow more robustly reflecting genuinely improved real estate fundamentals and stronger overall economic activity.

Table 6

Fiscal Year	Documentary Transfer Tax Dollars	Growth
Historical		
09-10	10,677,818	0.5%
10-11	9,958,654	-6.7%
11-12	9,365,385	-6.0%
Forecast		
12-13	9,964,770	6.4%
13-14	11,080,824	11.2%
14-15	12,909,160	16.5%
15-16	14,961,716	15.9%
16-17	17,729,634	18.5%
17-18	21,523,775	21.4%

[a] Data are from the Riverside County

B. RIVERSIDE COUNTY OVERVIEW FORECAST AND REPORT

The long awaited economic recovery has finally begun to gain breadth and strength in Riverside County. Without a doubt, the most positive sign is the surge in property values in mid-2012. In addition, a healthy improvement in labor market as seen by employment gains, a significant drop in the unemployment rate, and sharp reductions in the rate of foreclosures further emphasize that the country is poised for a period of economic growth. The housing sector is on the mend: housing affordability remains high (which boosts demand) while inventory levels are at cycle lows, both of which have

put significant upward pressure on home prices. While international trade was not as robust in 2012 as in the previous two years due to the recession in Europe and the slowdown in much of Asia, it still had a positive impact on the region.

In the next few years, the county's economic recovery should continue to expand, gaining strength and momentum with the growing distance from the Great Recession. The recovery in the county will continue to lag that of the Southern California neighboring counties in the short-term, but it is forecasted to gather more strength and surpass the neighboring counties over the long term. The labor market will continue to improve showing consistent gains in employment levels and a gradual decline in the unemployment rate. Household income will increase slowly in the next few years and more robustly in the long-term. As households' purchasing power increases, retail sales should also grow. High housing affordability and low home inventory, should support demand for housing, placing additional upward pressure on prices. Commercial property values will also increase but lag behind some of the initial gains that have materialized in the housing market. Global trade volumes should improve in 2013 compared to 2012 (though continue to remain below their 2010 and 2011 values), which will positively affect the county's economy given its heavy involvement in logistics, trade and transportation.

To analyze short-term economic conditions, the *Institute for Economic and Environmental Studies* (*IEES*) at California State University Fullerton has developed a leading economic indicator which has proven to be a reliable predictor of economic activity for the

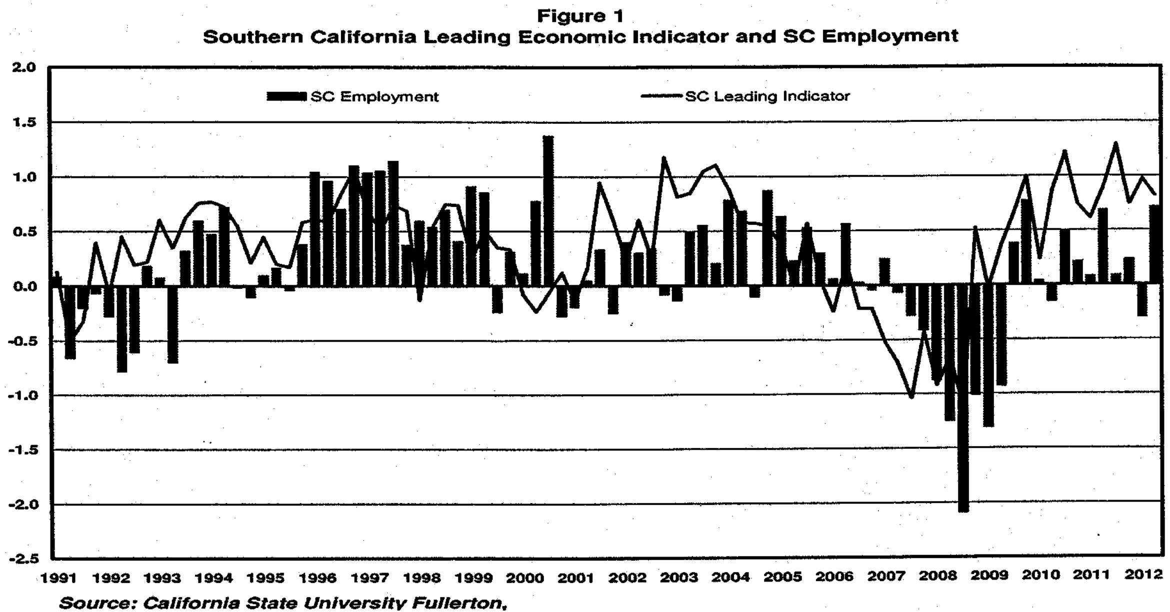
region over the near-term. Additionally, at the County level, employment and housing data provide important details on the overall regional economic conditions. The near-term and long-term economic outlook for Riverside County is discussed below using these measures, econometric models, and other data.

B1. NEAR TERM OUTLOOK AND FORECAST

The Southern California region which includes Los Angeles County, Orange County, Riverside County, San Bernardino County, Ventura County, and Imperial County represents a sizable economic geographic region. It generates a significant amount of goods and services and serves as an important hub for product transportation across the country and internationally. Economic growth in Riverside County is heavily dependent on the health of the region. To measure the short-term economic outlook for the Southern California region, the IEES has developed the *Southern California Leading Economic Indicator.* The *S.C. Leading Indicator* uses a combination of national and regional data to project economic activity in the region. At the national level, macroeconomic indicators used in the index include the interest rate spread, Standard & Poor's S&P500 stock index and money supply adjusted for inflation. Regional variables include nonfarm employment, the unemployment rate, building permits and the Pacific Region consumer confidence index. An increase (decrease) in the *S.C. Leading Indicator* implies an increase (decrease) in economic activity in the Southern California region in the next 3 to 6 months. The

indicator has been found to accurately predict turning points in economic activity for Southern California (Figure 1).

Figure 1
Southern California Leading Economic Indicator and SC Employment



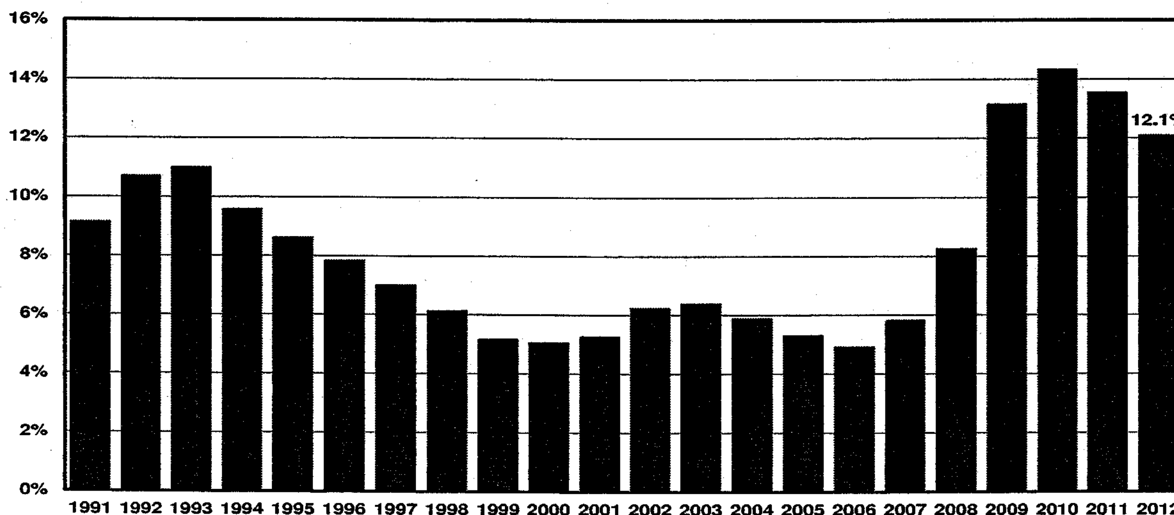
Source: California State University Fullerton.

The current 0.82% increase in the *S.C. Leading Indicator* suggests a continued improvement in economic activity in the Southern California region over the next 3 to 6 months. The *Indicator* has increased for thirteen consecutive quarters since its last decline in the third quarter of 2009. This suggests that economic activity in the Southern California region will continue to expand at a moderate pace in the first half of 2013. While the recovery in Riverside County lagged behind Southern California in the early post-recession stage, the County's outlook has brightened significantly and its economy will experience stronger growth this year and beyond.

Unemployment

At the core of a significantly more upbeat outlook for the county's economy is the turn-around in the labor market. Steady improvements in this market have driven the unemployment rate in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) down to 10.8% in February 2013 (latest available data). This development takes on an added significance because it marks the first time that the unemployment rate has dipped below 11% since December 2008. The unemployment rate in the MSA has been on a downward trend since the end of the recession and is now substantially below the cycle high of 15.1%. On an annual basis, the region's high unemployment rate has improved steadily over time: from 14.3% in 2010 to 13.6% in 2011 down to a 12.1% in 2012 (Figure 2).

Figure 2
Civilian Unemployment Rate
Riverside-San Bernardino-Ontario



Source: Employment Development Department

While the labor market in the Inland Empire continues to recover, unemployment still remains well above the 6%-rate experienced during the period from 1998-2007. Moreover, improvements in the county's

labor market lag behind (in both time and strength) the rest of the neighboring (primarily coastal) counties: in February 2013, the unemployment rate was 6.5% for Orange County, 10.3% for Los Angeles county, and 8.0% for San Diego county. Of course, stronger growth in neighboring counties implies a faster pace of job creation in these communities relative to the Inland Empire region. Nonetheless, the improved outlook in the broader Southern California region has been a significant boon for continued growth in the county's economy and employment levels.

Positive labor market developments have improved the ranking of the Riverside-San Bernardino MSA even at the national level: according to the most recent Bureau of Labor Statistics report of January 2013, relative to all other 372 Metropolitan Statistical Areas, the region has now slipped out of the top 10% ranking for highest unemployment rates. But when it comes to large MSAs with populations of 1 million and above, the Riverside-San Bernardino MSA has the second highest unemployment rate in the nation behind the Detroit-Warren-Livonia MSA. Since the unemployment numbers exclude people who are underemployed and "discouraged workers," when including these categories, the county's unemployment rate is a lot higher than the current official estimate -- standing at around 15%.

The labor market will continue to improve over the forecast horizon. A big plus for the county is that stronger growth in Southern California is spilling over to the county which is contributing to a stronger demand for labor and pushing down the unemployment rate. The county's unemployment rate will continue its

downward trend and may well decline to under double digits by the end of this year/early next year depending on the pace of the labor market expansion and job growth. As the labor market heals, discouraged workers who had left the labor force will re-enter the labor market which may keep the unemployment rate elevated even as employment levels rise. Nonetheless, the county's labor market is well on its way to a steady and sustained rebound after a prolonged crisis and an extremely sluggish early-phase recovery.

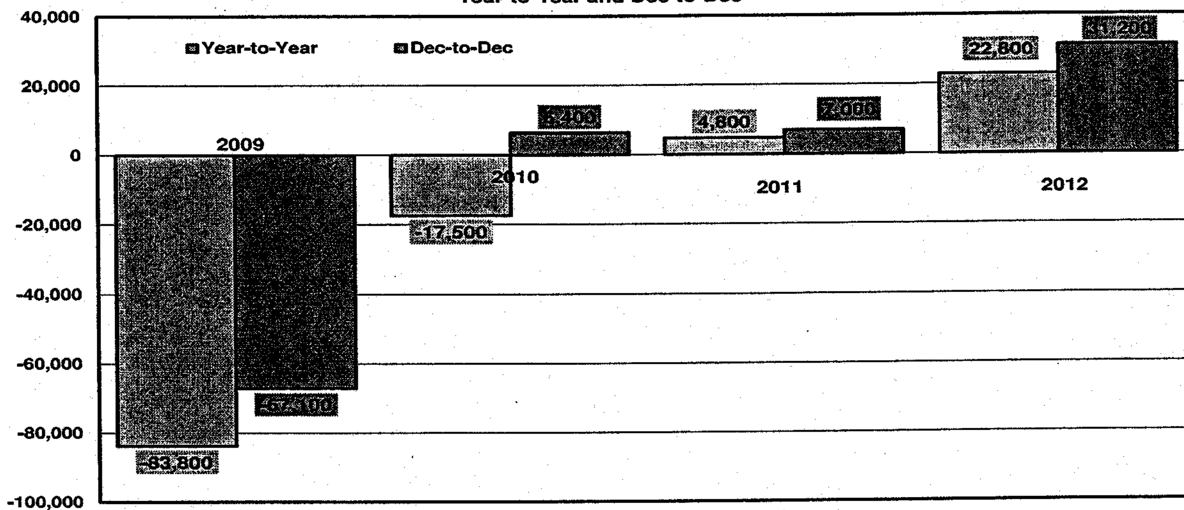
Payroll Employment

Strong gains in nonfarm payroll employment are another indication that the Riverside-San Bernardino MSA is well on its way to recovery. Nonfarm payroll employment increased in 2012 at a faster clip than in 2011 and 2010 as can be seen from Figure 3 which shows changes in nonfarm payrolls using both annualized average data (year-over-year changes) and December-to-December changes. Both measures are displayed because annual year-over-year changes based on annual average data tend to distort recent trends. Using the annual averaged data, nonfarm payroll increased by 22,800 jobs. However, based on December-to-December changes, the strength of the labor market is more apparent: total payrolls swelled by 31,200 jobs from December 2011 - December 2012. This trend has continued into 2013, with payroll numbers growing by an annualized pace of 26,100 in January and 27,500 in February 2013.

The improvement in the labor market, regardless of how it is calculated, is unmistaken: on a year-over-year basis, payroll

employment has risen for an impressive 20 consecutive months, starting in July 2011. Total employment gains over this period amount to 56,500 jobs -- roughly a third of the -175,100 jobs the region lost during the recession. Private payrolls show an even more dramatic improvement, having added a total of 62,900 since January 2010 (a 7.2% gain). Though still a ways off from its pre-recession level, the increase in employment rolls is certainly welcome as it will boost income and lead to increased consumer spending in the region.

Figure 3
Nonfarm Payroll Employment
Year-to-Year and Dec-to-Dec



Source: Employment Development

All major sectors with exception of Government added jobs in 2012. Leisure & Hospitality led the pack with a combined total of 8,800 jobs, followed by trade (both retail and wholesale) with 8,500 and Education & Health Services with an additional 7,400 jobs. Transportation, Warehousing, and Utilities added a healthy 3,800 new jobs. Even Construction (which suffered tremendous losses during the crisis) added an additional 500 jobs in 2012, following an initial

1,000 jobs added in 2011, as the long-awaited revival in the Inland Empire real estate market continues to take hold. Construction employment for the two-county regions is still a shadow of its former self: from September 2006 until January 2011, this sector shed a total of -74,600 jobs shrinking from a high of 130,200 to a mere 55,000. Since then, employment in this sector had increased by a total of 2,800 jobs (as of February 2013). More encouragingly, employment in the Manufacturing sector has risen by a total of 1,500 jobs since the end of the recession. The only weak spot over the past year was the Federal Government sector: its employment levels declined by a total of -300 jobs due to layoffs. State and Local Government added only 100 jobs in 2012.

The pick-up in construction, manufacturing and real estate-related work is important for the county because much of the regional economic growth prior to the crisis was related to these sectors. The Inland Empire added a total of 282,500 jobs from 2000-2007 (mostly in construction, real estate, and manufacturing)-- nearly 42% of California's 685,300 jobs -- but most of these jobs disappeared during recession. With the population in the county projected to increase more rapidly than the rest of Southern California, job-creation needs to pick up significantly over the next 10 years in order to accommodate an increasing labor force. Some sectors (construction, manufacturing) will continue to suffer: even with recent gains in construction employment, the number of jobs in this sector remain well below the pre-recession levels. Nonetheless, we project gains in construction employment to be quite noteworthy over the next couple of

years spurred primarily by low home inventory and increased demand for warehousing in the region.

The global economic recovery softened in 2012, which brought forth a deceleration in U.S. merchandise exports to the world. U.S. exports rose only by 4.5% in 2012 -- far short of the stellar double-digit pace in 2010 and 2011. Exports from California to the world increased only by 1.6%. International trade is important to the county because of its geographic location: Riverside county serves as the main distribution center for roughly 75-80% of goods for the region's main two ports (the Los Angeles Port and Long Beach Port). Higher fuel prices and a drop in demand from some Asian countries for California exports dampened somewhat the county's employment gains in merchandise transports and logistics in 2012. International trade should continue to support the local economy in 2013 at around the same moderate pace as in 2012 given the current ongoing recession in the Eurozone and slower growth in emerging economies.

Our outlook for the county's labor market is for continued steady improvement over the forecast horizon. The strength and pace of job gains is expected to accelerate by the end of this year and into 2014 and 2015. A number of sectors should continue to expand employment over the next few years, with the majority of jobs likely to be created in Professional and Business Services, Health and Education, and Trade, Transportation and Utilities. We expect a continued moderate pick-up in manufacturing jobs in the county given the recent positive developments in this sector. Construction employment should also expand as the turn-around in housing after a deep 6-year long

recession ultimately gives way to a pick-up in residential construction.

The Housing Sector

Perhaps the best news for the county's economic outlook is the nascent rebound of the housing sector. Improvements are broad-based, but the first indication is the dramatic increase in home prices. According to the data from the California Association of Realtors (CAR), median home prices of existing single-family homes have increased for 12 successive months on a year-over-year basis, exceeding double digits since July 2012. As such, median home prices of existing single-family homes are now considerably higher than the roughly $200,000-level experienced in 2010 and 2011 after the housing plunge and during a prolonged period of stagnation. The County stands to benefit from home price appreciation due to imminent increases in property taxes on a large number of parcels resulting from a reversal of Proposition 8 temporary reductions.

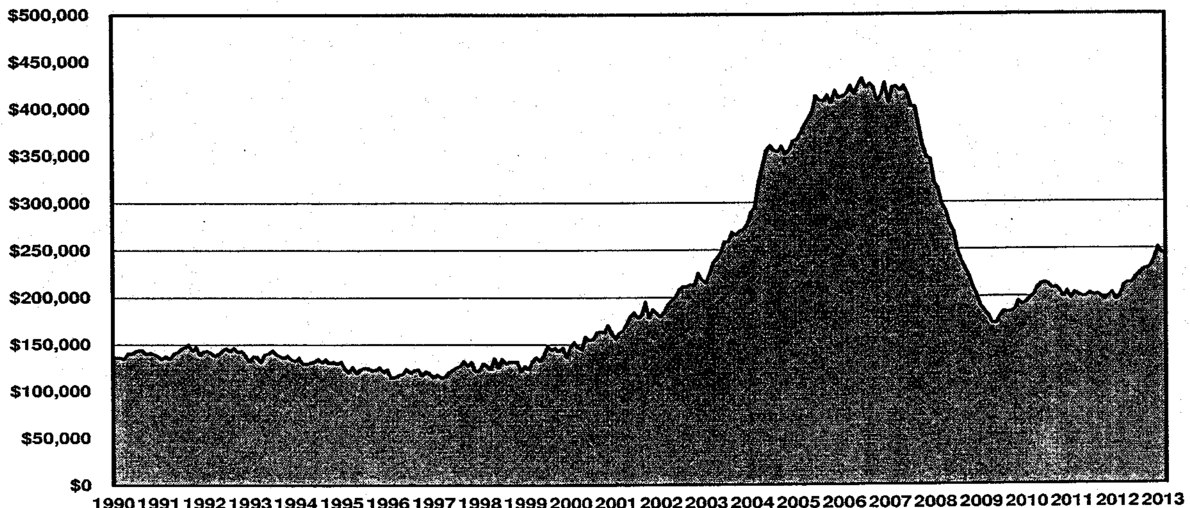
The increase in house prices is impressive because it is self-sustained: prices also rose in 2010 as a result of the government tax credit, but took another setback when this credit expired. The CAR median home price was $245,830 in February 2013 -- a staggering 43.4% higher than the cycle low of $171,480 recorded in April 2009. CAR median home prices in the first two months of 2013 are about 23% higher than the $200,000 level that prevailed for most of 2010 and 2011. While the housing market is clearly on the mend, it should be

noted that the most recent median price of $245,830 is still well below the record high of $431,713 in June 2006 (Figure 4).

Prices of new attached homes and detached homes have also moved up in 2012. For new attached homes, the price exceeded $210,000 in each quarter of 2012, finishing 2012 strongly at $229,720, up 3.8% compared to the previous year. New detached homes ended the fourth quarter of 2012 at $306,750 which is 4.8% higher compared to the previous year.

Despite the recent surge in housing prices, housing affordability in Riverside county remains near record levels: 62% in the fourth

Figure 4
Median Price of Existing Detached Homes
Riverside County



Source: California Association of Realtors

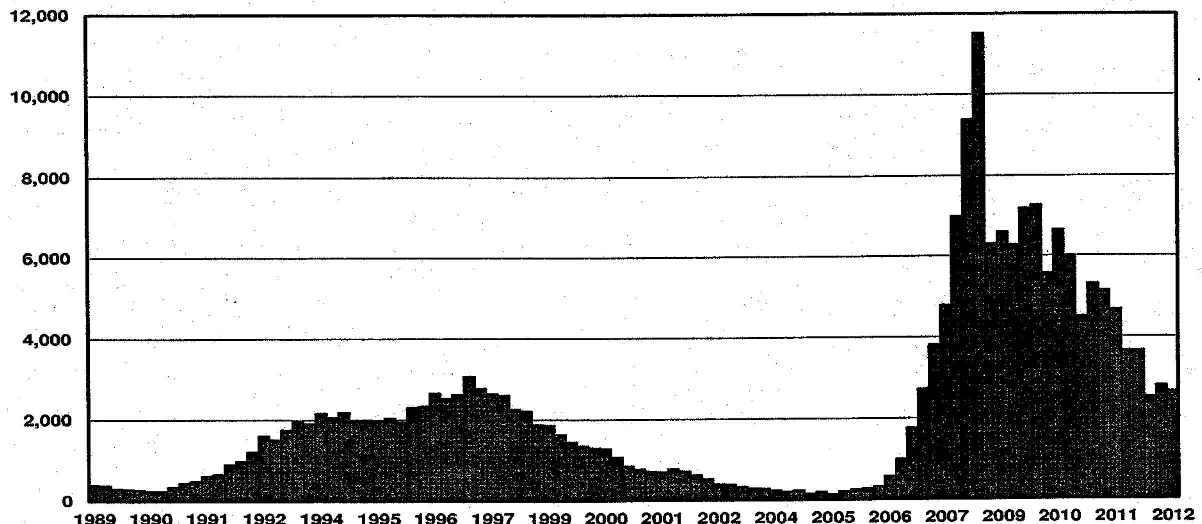
quarter of 2012 which means that 62% of residents are able to afford the median priced home. In contrast, when housing prices were at their peak, income was grossly misaligned with only 32% of the borrowers able to afford the median home price. Improved housing

affordability bodes well for the housing market and the region's growth prospects in the long-term.

The housing sector remains a crucial part of the county's economy. The three-year home price collapse which began in June 2007 led to the most devastating loss in real estate value in the history of the county. The decline in median house prices continued for 22 consecutive months. On a year-over-year basis, the free-fall lasted a total of 31 months. Housing prices had declined by 60% from June 2006 to April 2009. The sharp fall in housing prices had devastating consequences for the county: it shattered homeowner equity, devastated property tax revenues and decimated employment in construction and the real estate industry. As such, the recent housing rebound is particularly important for the county's economic prospects both in the short-term and long-term.

Foreclosure filings during the fourth quarter of 2012 were 2,652, which represents a decrease of -27.5% compared to the fourth quarter of 2012 and a -77.0% from a record-high of 11,523 in the fourth quarter of 2008 (Figure 5). Mortgage default notices, auction sale notices and bank repossessions totaled 31,114 in 2012, a sharp decline (-24%) compared to the previous year, according to RealtyTrac. Nonetheless, the county still ranks second in the state in terms of foreclosures. The data show that 1 in 26 households are in some phase of foreclosure. The foreclosure situation improved further in February 2013 with a total of 1,660 mortgage default notices, auction sale notices and bank repossessions. The large drop in foreclosures is largely attributed to the recent notable improvements in home

values, new foreclosure legislation (which has slowed down the foreclosure process), and a growing trend which shows lenders increasingly opting for short-sales rather than foreclosures.

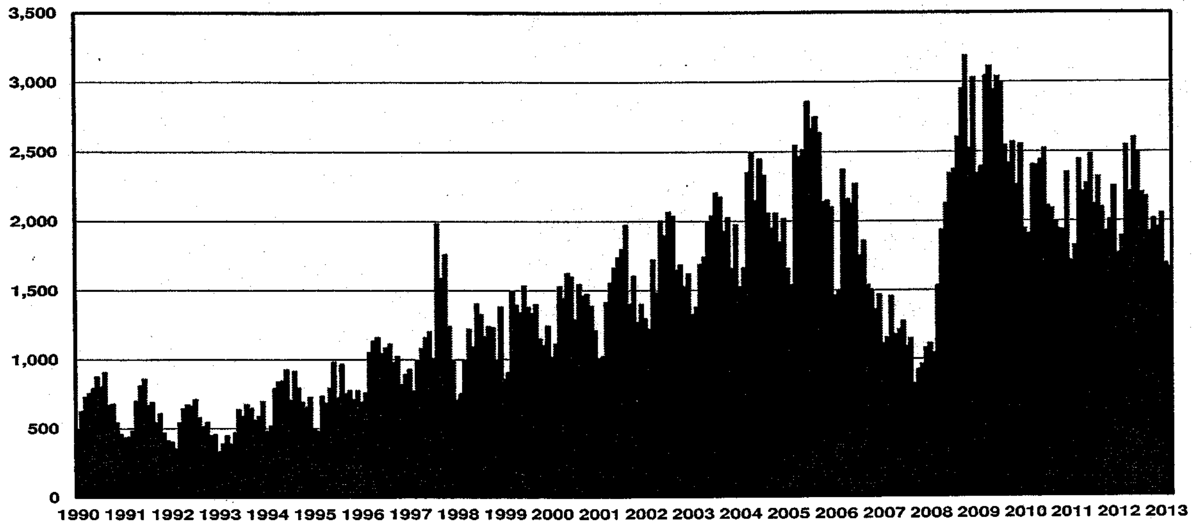


Source: Real Estate Research Council

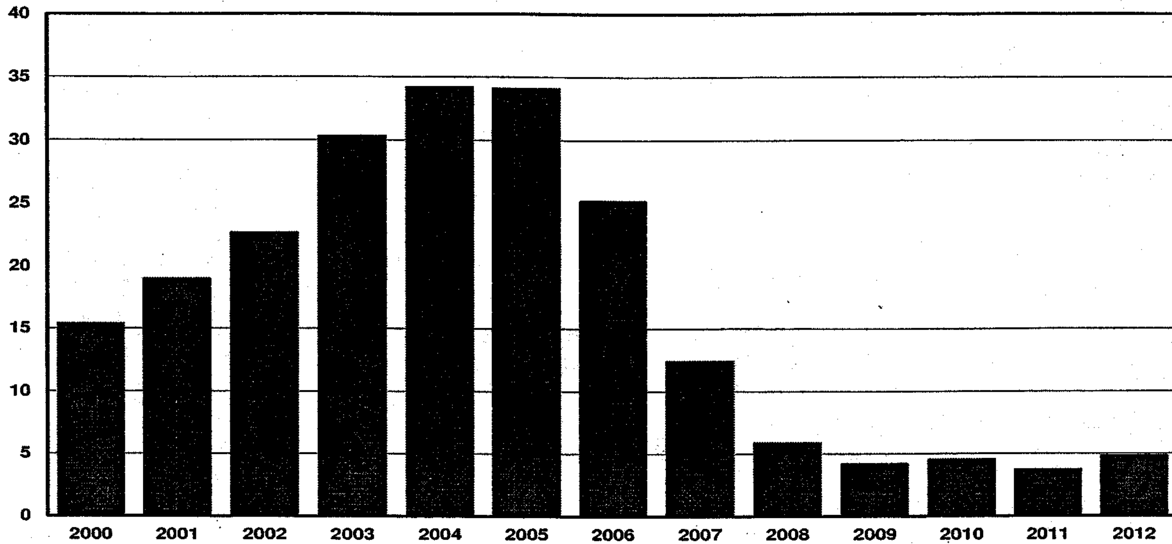
Foreclosures in the county are expected to decline over the forecast horizon and continue to be spread out over a number of years. Much of this decline is due to the new legislation (dubbed "the Homeowners Bill of Rights") which took effect in California at the start of the current year. The new law imposes fines of up to $7,500 per loan for filing multiple unverified foreclosure documents, includes a prohibition on so-called dual tracking, and requires a single point of contact for borrowers facing foreclosure. As a result, the early-year foreclosures filings for the county were at the lowest levels since the start of the housing crisis. And though in Q4 2012, the Riverside-San Bernardino-Ontario MSA still had 35.7% of

homeowners underwater, the continued gain in home values as the housing market recovery strengthens is expected to materially improve these figures over the next few years. Tougher foreclosure rules, a preference for short-sales on the part of the lenders, higher employment levels, continued declines in unemployment rates, and a moderate pick-up in income should lead to a further reduction in foreclosure rates for the county.

Home sales on the other hand have been rather soft in 2012, growing by only 0.7% (on an annual basis) compared to 2011 based on data from CAR (see Figure 6). However, since mid-2012 single family sales have been on a clear downtrend (on a year-over-year) basis, declining for seven straight months. In February 2013, sales dropped by -12% compared to a year ago. Yet, home sales are down not because of weak demand but because of extremely low supply: low existing home inventory and a slowdown in the foreclosure process, have significantly reduced the supply of homes in the county. This also partially explains the recent surge in home prices. More encouragingly, the share of equity and distressed sales for the Inland Empire has changed dramatically in recent months. As of February 2013, equity sales account for over 60% of all single-family homes sales with the remaining 40% being distressed sales. This represents significant progress given that distressed sales accounted for the majority of sales in 2012.



An inventory shortfall, pent-up demand, and an overall revival of the housing sector, have led to a sizable increase in building permits for Riverside County. Annual new housing permits (single and multi-family) increased by 29.5% to 4,857 in 2012 compared to 2011 (see Figure 7). This is a welcome turn-around for the county, though it is important to note that activity is picking up from extremely depressed levels. Residential building permits are expected to continue to increase over the forecast horizon, gathering more speed in 2014, 2015 and 2016 as the recovery in the county gains more traction.



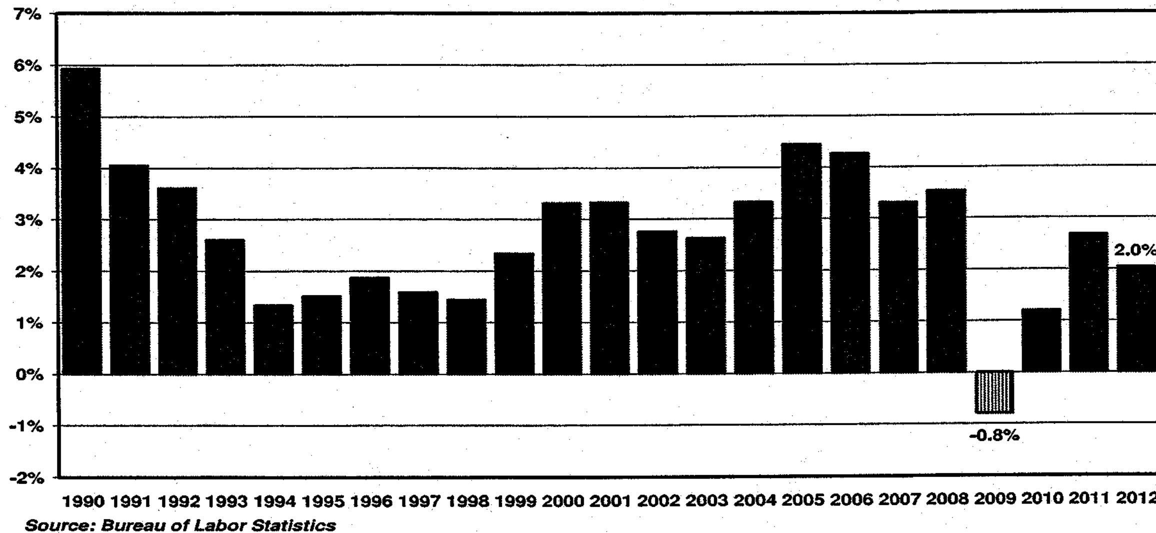
Inflation

Inflation has remained relatively contained over the past few years given the large margin of slack in the economy. Riverside County headline inflation (which includes food and energy prices) as measured by the consumer price index for the Los Angeles-Riverside-Orange Counties, increased by 2.0% in 2012 (Figure 8). This is the third year in which prices have increased and follows the 2.7% growth in 2011 and the more moderate 1.2% increase in 2010. Inflation remains in check, below the 3.3% to 4.5% range that prevailed from 2004 through 2008. Of some concern is the recent sustained increase in rental prices in the region which are part of the overall consumer price basket.

The strengthening of momentum in the region's economic recovery and higher rental and house prices are expected to push up inflation

in the next few years. This upward pressure on prices will be partially offset by relatively weak wage and income growth. While we project a steady increase in inflation over the forecast horizon, we expect inflation expectations to remain well-anchored in the long-run.

Figure 8
Los Angeles-Riverside-Orange County
Consumer Price Index



Source: Bureau of Labor Statistics

Summary

After a deep plunge which devastated the county's economy and a prolonged stagnant recovery, Riverside County is finally on a strong, sustained path to a much-awaited economic rebound. The momentum has gathered some speed since mid-2012 with steady employment gains and renewed optimism for housing, construction, manufacturing and logistics which constitute the county's strengths. The unemployment rate has declined significantly since the recession-highs and should continue to decrease in the next few years. Employment levels have increased for two successive years with this trend continuing into the start of 2013. Prices of residential property have rebounded solidly

from their overly-depressed levels and parts of the commercial real estate sector are also showing meaningful signs of improvement. On the downside, finances at the state and local level, though improved compared to the previous years, are still strained. This will likely hamper but not derail the county's recovery. Additionally, any pick-up in international trade will be beneficial to the large logistics sector in the county.

B2. LONG TERM OUTLOOK AND FORECAST

The recent momentum in the economic recovery in the county has significantly improved the near-term outlook, which bodes well for the county in the long-term. The county's long-term prospects remain bright, boosted primarily by its favorable location (near two major ports), advanced infrastructure, projected increases in population, and abundant relatively inexpensive land. While it's true that the climb from the deep recession plunge will be quite uphill, recent trends indicate that the county is on its way to recovery and its long term prospects are particularly favorable.

Riverside County is beginning to overcome some of the tough near-term challenges especially as property values increase and labor markets heal. With higher property values, the County Assessor's Office can begin to reverse the Proposition 8 reduction in assessment of residential and commercial property values. This will increase the county's assessment rolls and its property tax revenues, which were hard hit during the crisis.

As it heals, the county will not return to its over-extended and (arguably) unsustained levels of investment and construction that prevailed during 2004-2007, driven primarily by the housing bubble. Instead, the climb back should be more organically driven this time around, with home prices better aligned with the county's median income, education and demographic trends. At the height of the economic expansion, new residential and commercial construction increased substantially, generating sizable (and ultimately unsustainable) employment gains in construction and the real estate sector. Many of these jobs were relatively high paying, stimulating demand for both residential and commercial property as well as boosting consumer spending. In contrast, while the county's payroll employment has increased over the past two years, many of the newly created jobs are low paying. In addition, many construction jobs (and some manufacturing jobs) may not return. Nonetheless, the newly emerging economy will likely be less prone to boom-bust cycles than the one that prevailed during the boom years from 2000-2007.

The long term prospects for Riverside County are very encouraging. The availability of relatively affordable land should stimulate residential construction and in particular commercial construction. Other major advantages for the County are its location near the major ports, large storage facilities, affordable housing and relatively low rental rates. As Southern California emerges from the recession, the county is in a great position to take advantage of the increased demand for labor as many local workers are well trained in specialized areas such as logistics, construction and manufacturing.

Affordable housing remains a major attraction for households wishing to reside in Southern California and particularly for the projected 78 million "baby boomers" who will retire over the next two decades. The built-out coastal communities offer little affordable housing and will not be able to accommodate the influx of households into the region. As some of these households move into the Inland Empire, this will boost the long-term demand for housing and demand for goods and services.

The county's central location, proximity to the ports of Long Beach and Los Angeles, and relatively affordable and large storage facilities, mean that the county will remain an ideal region for transportation and distribution of goods. The logistics sector will provide employment, some high paying jobs, and a source of tax revenue for the county, especially in the presence of an increasingly competitive global market and expanding trade volumes. As the Southern California region grows, Riverside County will be able to attract new business because of the relatively low cost of office, industrial, retail real estate and its logistics. The county will also benefit from having a stock of affordable housing to accommodate a growing and skilled labor force.

B3. PROJECTIONS OF RIVERSIDE COUNTY MAIN ECONOMIC VARIABLES

Table 7 (continued on next page)
Riverside County Forecasts[1]

Year	Payroll Employment[1]	Unemployment[1]	Single Family Median House Prices[2]
Historical			
2010	-1.5%	14.3%	$206,179
2011	0.4%	13.6%	$200,550
2012	2.0%	12.1%	$222,240
Forecast			
2013	1.8%	10.2%	$234,685
2014	2.2%	9.4%	$249,001
2015	2.5%	8.3%	$266,680
2016	2.6%	7.4%	$288,548
2017	2.2%	6.7%	$310,478
2018	2.0%	6.5%	$333,764

1. *Source: Employment Development Department*
2. *Source: California Association of Realtors*. The data includes the 2011 revisions from the increased sample of transactions.

Table 7 (continued)

Year	California Consumer Price Index[1]	Consumer Price Index Los Angeles-Riverside-Orange Counties[2]	Building Permits (in 1,000s)[3]
Historical			
2010	1.3%	1.2%	4.6
2011	2.6%	2.7%	3.8
2012	2.2%	2.0%	4.9
Forecast			
2013	2.0%	1.7%	6.1
2014	2.7%	2.4%	7.5
2015	3.0%	2.6%	10.2
2016	2.8%	2.8%	11.3
2017	2.9%	3.0%	8.7
2018	2.6%	2.9%	7.9

1. All items with base period 1982-84=100,
Source: California Department of Finance
2. All items with base period 1982-84=100.
Source: Bureau of Labor Statistics
3. *Source: Construction Industry Research Board*

C. U.S. MACROECONOMIC OVERVIEW FORECAST AND REPORT

"We have deep depth" -- Yogi Berra famously remarked decades ago when asked about the expected future performance of the New York Yankees. Much like the Yankees of Yogi Berra's years, the U.S. economy has been remarkably resilient over the past year in spite of enormous challenges, policy setbacks, and a number of ominous external shocks. In fact, U.S. real GDP grew by 2.2% in 2012, not too shabby when compared to the more paltry 1.8% growth recorded in 2011. The 2.2% growth managed to survive a barrage of rather daunting headwinds: a flare-up in the Eurozone crisis in Spring and early Summer, a long and grueling U.S. political campaign, a near-headlong plunge over the "fiscal cliff" towards the end of the year, and fever-pitch concerns over the slowdown of the global economy and a potential hard-landing in China. In line with our expectations the more gloomy scenarios were averted, but the close-calls were too many and, at times, the brush with disasters too high for comfort. Policy uncertainty at home and abroad delivered sizable blows to household and business confidence, denting growth and restraining the pace of the still-fragile recovery. That's why the 2.2% growth is cause for celebration: however meager it may be compared to the pace of a normal recovery, it is still a testament of the resilience and breadth of the recovery.

Our outlook for the U.S. economy is moderately upbeat and perhaps the most optimistic we have offered since the end of the Great Recession. We expect the recovery to continue to gain strength and expand during the current year and beyond: a bit more tentatively in 2013 but rather buoyantly in 2014 and 2015. The private sector is

expected to plow ahead with its "deep depth," offsetting losses from the public sector which will remain a drag on growth in the foreseeable future. Labor markets will continue to improve (though the unemployment rate will edge down slowly), retails sales (particularly autos) are expected to hit pre-recession highs, business investments will add to growth (though at a more moderate pace than in 2012), corporate profits will remain firm, exports will support growth, monetary policy will remain accommodative, stock markets have soared to all-time highs, and restored household wealth should support consumer spending. Importantly, risks of a significant global slowdown have receded and, in general, downside risks to the economic outlook are less ominous now than at any point during the recovery. But the brightest spot in an overall sunnier outlook is the housing market: it has staged a remarkable recovery since mid-2012 and is expected to contribute meaningfully to economic growth over the next four years. Though a full-recovery in housing will be a multi-year affair, the important thing to note is that, unlike previous false starts which were short-lived and largely supported by government policies, the current rebound is organic, self-sustained, and will continue to expand over the next few years.

In normal times, this long list of supportive factors would be enough for a real celebration with a heading "Welcome to the Recovery." But this time is hardly normal, this time it is indeed different. Though the economy is now on a much stronger footing than at any time since the end of the Great Recession, it continues to remain vulnerable to a number of risks and long-term structural

issues. Above all, this time is different because growth needs to happen at a period of unprecedented public debt overhang in most advanced economies. This is worrisome on two counts: fiscal consolidation needs to happen at a rather inopportune time coming in the heels of the deepest post-war financial crisis, and it will likely occur in virtually all advanced economies at the same time with no single country healthy enough to carry out the heavy-lifting and propel the global economy while others deleverage.

On the near-term risks, fiscal consolidation in the U.S. as well as the Eurozone crisis continue to remain the two top concerns threatening immediate growth prospects. On the fiscal front, U.S. policymakers failed yet again to reach an agreement that would place U.S. finances on a path to long-term fiscal sustainability which requires radical tax and entitlement reforms. The only good news on the fiscal front is that calamitous results were averted at least for the time being: the economy did not dive off the cliff (though the end-year deal was the most marginal one could imagine), the debt-ceiling has been "suspended" for a few months (most likely until mid-summer), the government shutdown was averted (until end-September), while sequestration took effect on March 1st. All in all, policymakers seem to have settled on a path of the least resistance: suspend, delay, and postpone are better than default, shutdown and other catastrophes, but are a far outcry from what it is really needed to put the U.S. on a sustainable path to fiscal solvency. More worryingly, additional rounds of talks are needed over the next few months, which will likely add to the general uncertainty if

negotiations proceed in a similar fashion as in the last few years (there is no real reason to suspect otherwise).

The Eurozone crisis still presents the largest downside risk to the forecast and a flare-up in the region can easily derail the global economic recovery. The area stabilized notably after the European Central Bank (ECB) chief promised in late summer to do "whatever it takes to save the euro ... and believe me, it will be enough." In September, the ECB unveiled its most ambitious plan yet committing to purchase unlimited amounts of sovereign debt with maturities of up to three years from troubled sovereigns, provided these countries submit to strict policy conditions. Though none of the troubled countries has requested a formal bailout, the promise of virtually unlimited support has had a profoundly stabilizing effect in the region, with peripheral bond yields dropping significantly from crisis levels. Nonetheless, the fundamental issues that plague the Eurozone region continue to remain unaddressed and any adverse development seems to reignite a full-blown crisis. Italy's inconclusive election sent jitters across world markets, while the Mediterranean-style drama that recently played out in Cyprus was a painful reminder of the frailty of the precarious 17-country union. More importantly, the region continues to sink deeper into recession territory which will likely stretch over this entire year, only to be followed by extremely stagnant growth in 2014 and beyond.

Longer-term, the economy faces a number of enormous challenges, but also a few important growth opportunities. In the medium-term, perhaps the biggest risk comes from the timing and pace at which the

Federal Reserve removes the unprecedented amount of liquidity and begins to raise rates. This will have significant implications for the financial markets and the economy as a whole. Longer-term, an ageing population and low population growth are expected to further reduce labor participation rates, which have declined steadily over the past decade and more precipitously since the start of the Great Recession. Just as concerning, productivity growth seems to have stalled beginning in mid-2000. Both these factors (labor force and productivity) will weigh heavily on the economy's potential growth rates in the long-term. Add to this the daunting fiscal challenges of an already overburdened public sector, and it should not come as a surprise that long-run growth may come in below-historical records.

These challenges notwithstanding, there is good cause for optimism even in the medium-to-long run. Perhaps one of the best pieces of news is that few are waiting for the federal government to fix the economy. At the state, regional, and local level economies are being reformed, transformed and reinvigorated forcefully. The shale oil and gas extraction from newly minted technologies (such as hydraulic fracturing, or fracking) is expected to add around 0.5-0.6% to real GDP growth over the next few years. By some accounts, the U.S. is expected to overtake Saudi Arabia (world's largest oil producer) and Russia (world's largest gas producer) as the largest producer of oil and gas by 2020.

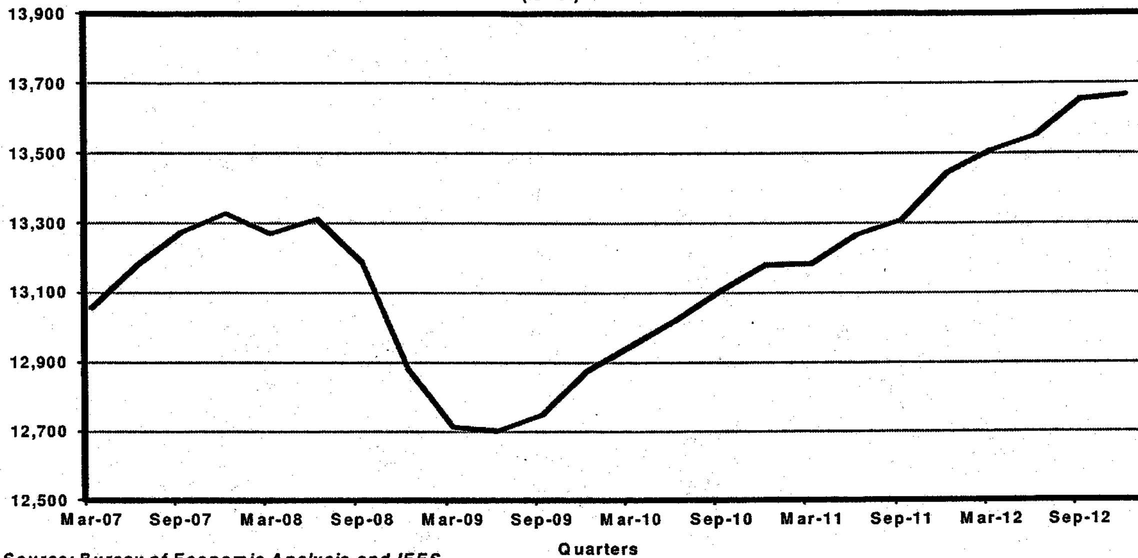
Below we provide an analysis of the U.S. economy and discuss our outlook and forecasts as they relate to some of the main components of the economy: (A) real economic activity, (B) inflation, (C) financial

and government sectors, and (D) global environment. Section (E) details our projections of key national economic variables.

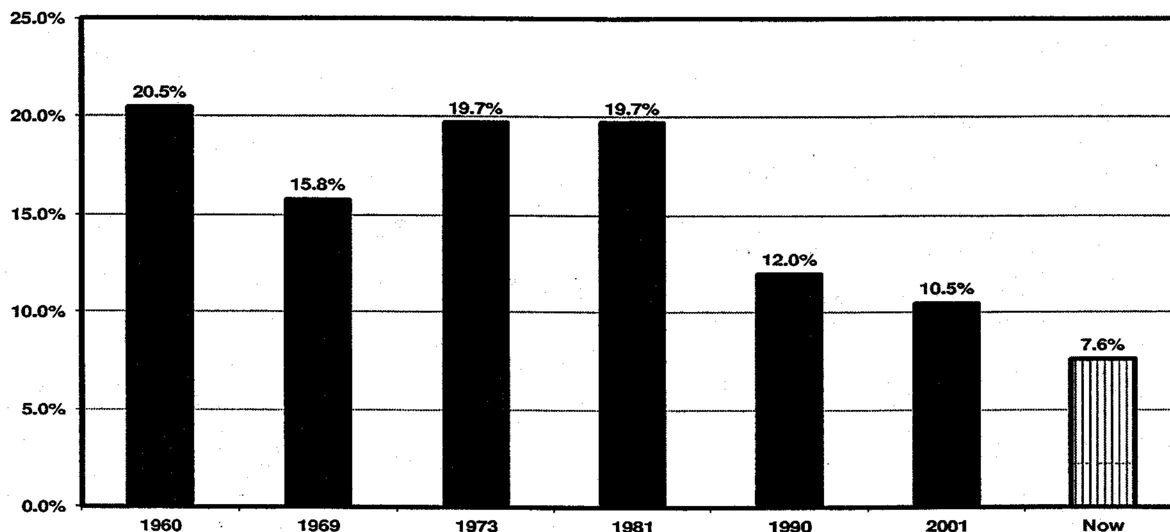
C1. Real Economic Activity

Real economic activity grew by 2.2% in 2012, a notch above the 1.8% rate recorded in 2011 and slightly below the 2.4% pace of 2010. The fourth quarter of 2012 proved particularly disappointing: revised upwards from an initial -0.1% decline, the latest number shows a positive yet feeble 0.4% gain. Nonetheless, the headline figure overstates the weakness of the economy: the soft number was largely due to a one-off -22% decline in defense spending ahead of sequestration (a $1.1 trillion 10-year reduction in government spending) and inventory accumulation, which combined subtracted a total of 2.8 percentage points from Q4 RGDP. In fact, beneath the surface, the fourth quarter growth numbers were rather encouraging: personal expenditures rose by an annualized rate of 1.8%, non-residential investments by a significant 13.2%, and residential construction by an additional 17.6%.

All told, the U.S. economy has recovered fully from the trough of the recession: after fourteen quarters of positive growth, real GDP is now 7.6% higher when compared to the trough of the recession (in Q2 2009). Nonetheless, when compared to the pre-recession peak (Q4 2007), real GDP is currently only 2.6% higher -- a paltry gain for such a long period (5-years) (Figure 1).



Part of this has to do with the fact that the cumulative fall from the recession was much deeper this time around when compared to the previous post-war recessions: -4.2% in the current cycle compared to an average of -2% decline in previous recessions. Moreover, the recovery that ensued has been exceptionally sluggish following the pattern of the previous two recoveries (in 1990s and 2001), which were similarly anemic. Prior to the 1990s, RGDP grew on average by a cumulative of nearly 20% over the three and a half year period following the end of a recession. The pace downshifted significantly (to around 10%) during the past two recoveries (1990s and 2001), with the current one, at a 7.6% cumulative gain, tracking even lower than the lackluster growth of the previous two (Figure 2).



Source: Bureau of Economic Analysis and IEES

This should not come as a surprise particularly when accounting for the forces that brought forth the current recession: a housing collapse, a global financial crisis and a deep balance sheet-recession -- all of which take a lot longer to repair than a garden-variety business cycle recession. Moreover, growth is hard to come by in times of fiscal restraint: the fiscal end-year deal will likely reduce RGDP growth in 2013 by a total of 0.7 percentage points, with 0.5% coming from the expiration of the payroll tax and 0.2% from the increase in marginal tax rates for upper-income individuals. A full implementation of the sequestration (which is currently in effect) will likely chip away an additional 0.4-0.5% from 2013 growth, while reinvestments and rebuilding efforts related to hurricane Sandy are expected to add around 0.1-0.2% to RGDP growth. On balance, the current fiscal drag is expected to reduce RGDP growth in 2013 by around 1 percentage point.

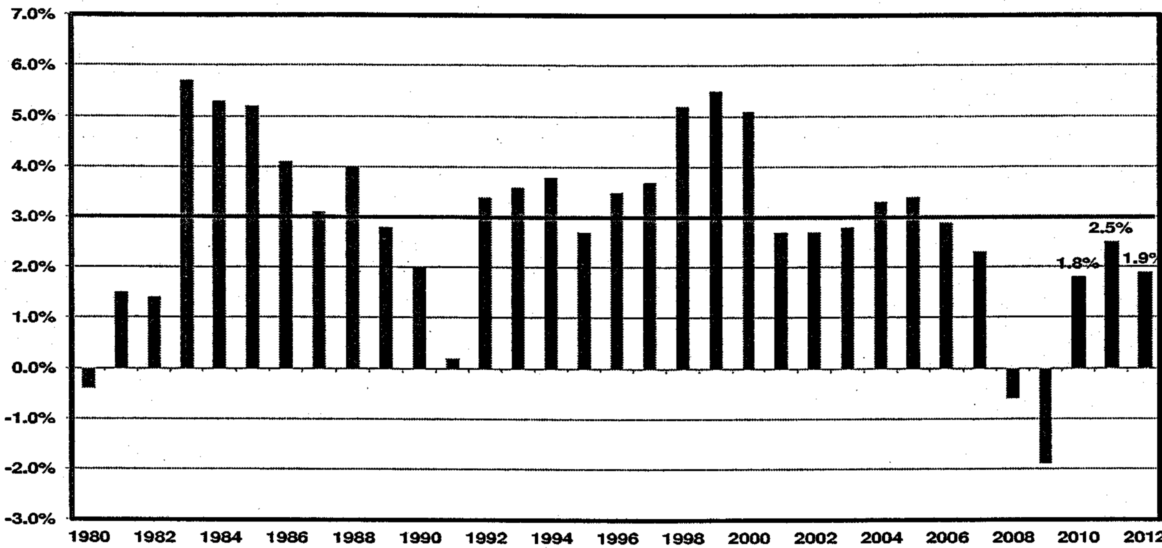
Despite these fiscal headwinds, we expect U.S. real GDP to continue to expand during this year, boosted primarily by steady consumption, robust motor vehicle sales, continued business investments and ramped-up construction spending (particularly in the residential sector). Growth is likely to be more restrained in the first half of the year (mostly because of reduced spending due to tax increases and higher gasoline prices) and pick up more robustly in the second half of the year and beyond (bolstered primarily by the housing sector). U.S. real GDP is expected to grow by 1.9% in 2013 -- weighted down mainly by the fiscal drag -- and by a more robust 2.7% in 2014. 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 remain vulnerable to external shocks (Eurozone crisis, oil). In the long-run, our overall assessment of the U.S. economy is positive, with an annualized long-run real GDP growth of around 2.2%-2.5%.

Consumption Spending

Personal consumption expenditures make up the bulk of real economic activity, accounting for about 70% of real GDP. As such, continued real GDP growth is highly dependent on consumer behavior given the sizable share of economic activity that this sector commands. Despite high unemployment rates, sluggish income growth, a gruesome multi-year deleveraging process, the lingering effect of home wealth depreciation, and tight access to credit, consumers have held steady during the three-year recovery, with real personal expenditures

growing by 1.8% in 2010, 2.5% in 2011 and 1.9% in 2012. Though still below the long-term average (of around 3.2%), the resilience of consumption spending during this recovery period is quite noteworthy (Figure 3).

Figure 3
Consumption Spending
(% change from previous year)



Source: Bureau of Economic Analysis and IEES

The start of this year did see a drop in consumer confidence: apparently the expiration of the payroll tax cut did come as a surprise to many consumers whose take-home pay took a hit as of January 1, 2013. For the median household income ($50,000 per year) the higher payroll rate implies a take-home pay of around $1,000 less when compared to the previous year. In addition, the wrangling over fiscal negotiations, rising gasoline prices, delayed tax refunds and a blizzard in the Northeast, seemed to have taken a toll on consumer mood earlier in the year.

Despite these early-year setbacks, we expect consumer spending to hold tight over the current year and expand more confidently in 2014.

Retail sales rose by an average annual rate of 4.7% in 2012 -- below the 6.5% rate posted in 2011, but positive nonetheless. Notably, spending on durable goods has expanded at a solid pace of over 6% since the beginning of the recovery (over 7% in 2011 and 2012). This trend is expected to continue with light vehicle sales remaining a bright spot over the next few quarters. As of the latest reading, vehicle sales stand at 15.3 million unit (annual rate), just a notch below the pre-recession levels. The motor-vehicle fleet in the U.S. is now over 10 years old (one of the oldest in history), while hurricane Sandy destroyed around 250,000 autos in early November in the Northeast. These two factors are likely to keep motor vehicle sales elevated over the current year which should boost growth.

Overall, we expect consumption spending to continue to grow over the forecast period, albeit at a slower clip in the first half of the year. On the plus side, gains in the labor market, high demand for durables (particularly motor vehicles), and improved balance sheets, are expected to support consumer spending going forward. However, the payroll tax increase and higher gasoline prices coupled with sluggish income growth will continue to weigh on consumers. Though some downside risks remain, consumption should grow by around 1.9% this year and by an additional 2.4% in 2014.

Household Earnings and Balance Sheets

With relatively weak job growth and plenty of slack in the labor market, income growth has been particularly lackluster during this recovery cycle. Wage and salary growth has proven extremely sluggish,

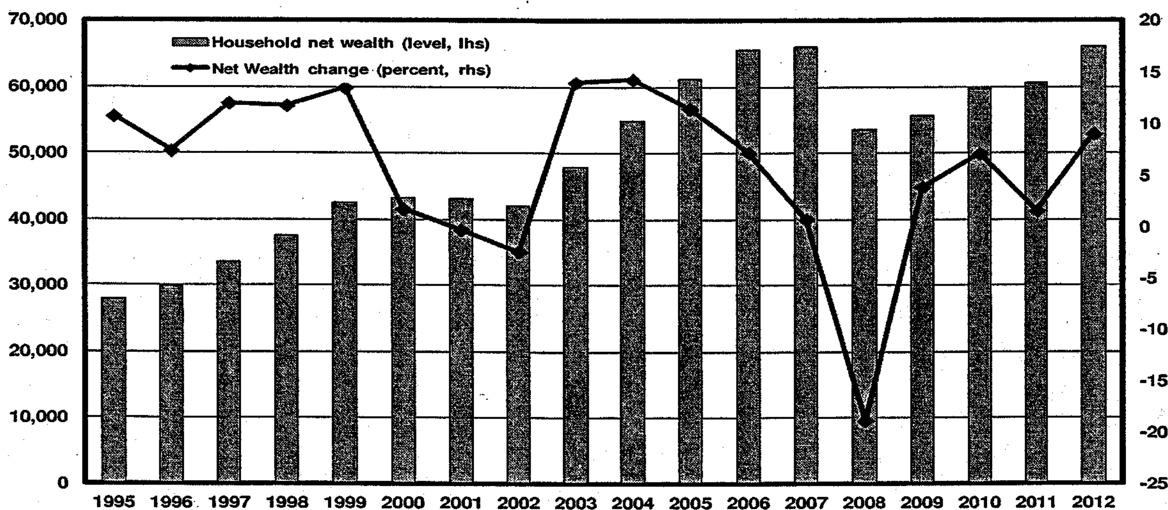
rising by 1.6% in 2010, 1.7% in 2011 and 1.8% in 2012 -- well below the 2002-2008 average of 2.8%. Similarly, Real Disposable Income rose by a meager 1.3% in 2011 and an additional anemic 1.5% in 2012. The second half of 2012, however, recorded a noticeable 3.9% increase, though this was simply due to an outsized bump in dividends and employee bonus compensation as firms shifted the timing of disbursements in anticipation of higher marginal tax rates at the start of 2013. Stripping away this effect, real disposable is estimated to have increased by a more modest 1.4% over the second half of last year.

Consumer balance sheets are now healthier than at any point during the recovery. U.S. household debt service as percent of disposable income has fallen to 10.4% from a high of over 14% before the crisis, while financial obligations as percent of disposable income has dropped to 15.5% -- the lowest level in over 30 years. These improvements are largely due to historically low interest rates: actual debt levels, though off from their boom-peaks, still remain very high compared to the historical standards. Mortgage debt has edged down from a high of $13 trillion to around $12.2 trillion, but this is still high compared to the historical norm. In fact, low interest rates have helped expand consumer credit which has grown by a total of $380 billion since Q4 2010. Much of this increase is due to non-revolving credit (auto and student loans) which account for around two-thirds of total consumer credit outstanding. More encouragingly, consumer delinquencies have edged down: delinquencies on credit card debt are now at the lowest level since the early 1990s, while mortgage

delinquencies are at the lowest level since the start of the recession.

Perhaps the best news out there for consumers is the increase in total net worth: as of Q4 2012, U.S. households have recouped nearly all of the wealth lost during the recession with net worth levels now near pre-recession peaks. This astounding turnaround amounts to an increase in household net worth of roughly $15 trillion over a span of three years (Figure 4). Much of the climb was due to the remarkable rebound in financial wealth -- which rose by over $12 trillion since the trough of the recession -- with an additional $2 trillion coming from improving home equity values. On average, a sustained $1 dollar increase in net wealth, tends to boost consumption spending by around 5 cents. The effect is larger when the boost in wealth comes from increases in home equity (about 7 cents), and lower when it occurs through stock prices (around 3 cents). In normal times, this sizable wealth increase would have translated into noticeably larger consumption spending. However, this time is different: as consumer balance sheets recover from a deep shock, it is natural to assume that the wealth effect on consumption is likely to be less than the historical norm. Nonetheless, higher wealth levels will surely go a long way to restore consumer confidence and should also be able to blunt to a certain extent the impact of the fiscal drag on U.S. economic growth.

Figure 4
Household Net Wealth
(billions of dollars and percent changes)



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

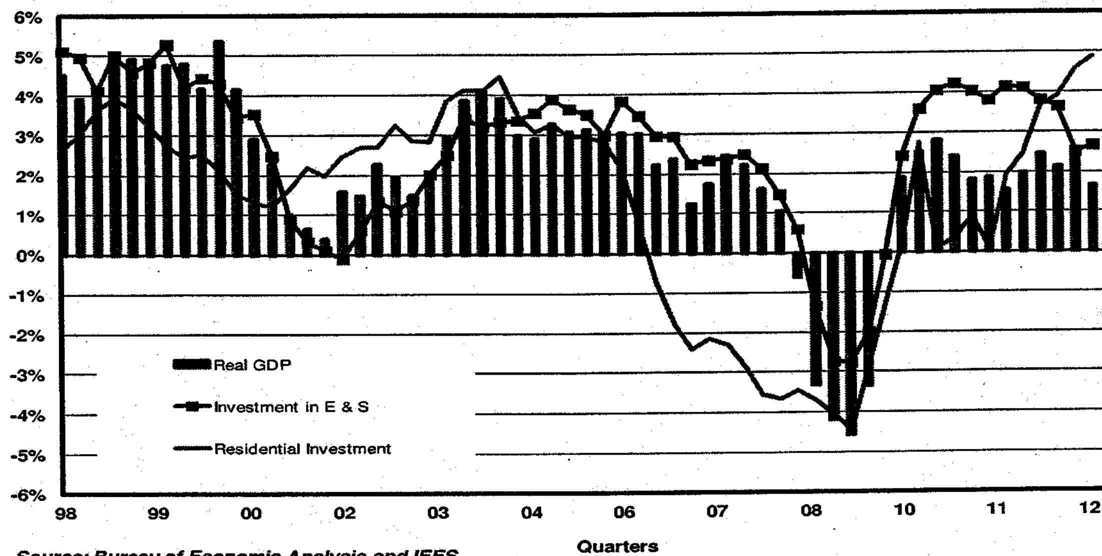
Business Investments

Business Fixed Investments (which comprises Nonresidential and Residential investments) rose by a solid 9.8% in 2012, after increasing by 5.2% in 2011 and 13.7% in 2010. Business investments in Equipment and Software (E & S) have been the driving force behind growth in this component since the start of the recovery, rising by a total of 33.7% since the end of the recession and adding 0.6% to real GDP growth in 2010, 0.7% in 2011 and an additional 0.5% in 2012 (Figure 5). In fact, business investments in equipment and software have rebounded quite robustly in this recovery cycle, growing at roughly the same rates as during the boom years of mid-2000 as firms took advantage of lower interest rates to replace outdated capital and resume capital spending that was deferred during the recession.

The latest data shows a further acceleration in equipment and software expenditure in Q4 2012 with a sizable 14% increase -- the

largest quarterly gain in over one year. This bounce likely overstates the actual strength of this investment component: much of the year-end increase was due to the anticipated expiry of the bonus depreciation tax treatment (later extended through 2013) which shifted spending from the future into the last quarter of 2012. As such, we expect investment spending in E &S to slow to around 2% in Q1 2013, before re-accelerating again in the second half of the year to around 7%-8%. Overall, we expect investments in E & S to grow by roughly 4.7% in the current year, below the 6.9% pace recorded in 2012.

Figure 5
Real GDP, Investment in E&S and Residential Investments
(percent, year-on-year change)



Source: Bureau of Economic Analysis and IEES

One of the brightest developments which is expected to contribute substantially to future growth is the pick-up in real residential investments (Figure 5). After plunging by a cumulative -59% from its peak in 2005 and declining for six straight years, construction spending on residential investment has finally turned a corner posting seven consecutive quarters of healthy growth. All told, this sector

has risen by a total of 19.8% since its cycle-lows in early 2011. What bears noting is that this component is rising from overly depressed levels: residential construction had shrunk to a mere 2.4% of real GDP after the financial crisis -- a far outcry for an average historical level of around 5%. Though the recent pick-up in activity has nudged up this ratio to around 2.7%, there is still plenty of room for growth which bodes well for the economy. In addition to new home construction, outlays on home improvements, remodeling and expenditures on durable goods will also continue to rise further, providing an additional boost to real economic activity. We expect real residential investments to expand at a brisk pace over the next few years, rising by 15.3% in 2013, and 21.4% in 2014. This should add around 0.5% to U.S. real GDP growth in 2013 and an additional 0.6% in 2014.

Private non-residential construction grew rapidly in 2012, rising by 10.8% boosted primarily by investments in oil & gas drilling activity and continued spending on electric power plants. Nonetheless, we expect this investment component to grow at a much more modest pace in 2013 as a dramatic fall in gas prices reduces the pace of investments in new wells. In addition, spending on electric power plants remains unusually high by historical standards, which should lead to a potential correction over the course of this year. Overall, high vacancy rates in commercial real estate, tight credit conditions, and continued fiscal uncertainty are expected to restrain the pace of business investments in structures for the balance of this year. The outlook is brighter in 2014 and beyond, when investments in

structures are expected to rise by 7.9% in 2014 and by 9.5% in 2015 in response to improved economic conditions.

Production

Production activity rose by an average annualized pace of 3.7% in 2012, below the 4.1% rate recorded in 2011. From the trough of June 2009, production has risen by nearly 20% with capacity utilization improving from a low of 67.3% to a current 79.6% rate -- below the full-utilization level of 83%, but still a remarkable improvement.

The final score on 2012 proved to be better than what was originally feared: in mid-year, practically all indicators -- orders, shipments, sentiment -- pointed to an impending deterioration in the production outlook. After this general softening, conditions seem to have improved noticeably by end-2012 and early in 2013. Capital goods orders (excluding aircraft) are now growing again and the ISM Manufacturing Index has edged up to its highest level since June 2011.

Although the worse case scenarios seem to have been averted, manufacturing output is expected to increase this year at a slower pace than in 2012. We forecast a rate of 3.0% in 2013 and a more upbeat 3.3% in 2014 -- below the 3.7% rate of 2012. Much of this cycle slowdown is due to the impact of fiscal tightening and the still-fragile business confidence. Though companies are generally awash with cash, they seem unwilling to expand operations at a rapid pace given the prevailing uncertainties related to the fiscal policy in the U.S. and global economic outlook.

U.S. Energy Oil and Gas: On the Cusp of a Revolution

A technological revolution in oil and gas drilling is rapidly transforming the outlook for America's energy and its economy. Unconventional oil and natural gas extracted through new techniques (horizontal drilling and hydraulic fracturing (or fracking)) may have well reversed the U.S.'s fortunes on energy production with significant implication for U.S. economic growth, energy independence, and geopolitical role. Prior to this revolution, U.S. oil production was on a clear secular downtrend: from 1970-2008 U.S. oil production dropped from 9.6 million barrels per day (mbd) to 5 mbd. Natural gas extraction remained flat (at around 47 billion cubic feet (Bcf) per day) from 2000-2006.

In a short span of five years, the energy transformation has been dramatic. U.S. natural gas production has risen from a total of 52 Bcf per day to 65 Bcf per day in 2012, largely due to a rapid expansion in shale gas production. The supply of natural gas has fast outpaced demand, causing a collapse of gas prices in the U.S. from around $13 per million BTU (British Thermal Units) in 2008 to around $2 per mBTU in early 2012. Though plummeting gas prices have triggered a pull-back in production, cheap gas has vastly improved the competitiveness of U.S. firms: in 2011, American factories paid a third of the German gas price and a quarter of the South Korean gas price.

U.S. crude oil production has also increased significantly: the U.S. is now the world leader in capacity growth for crude oil, adding

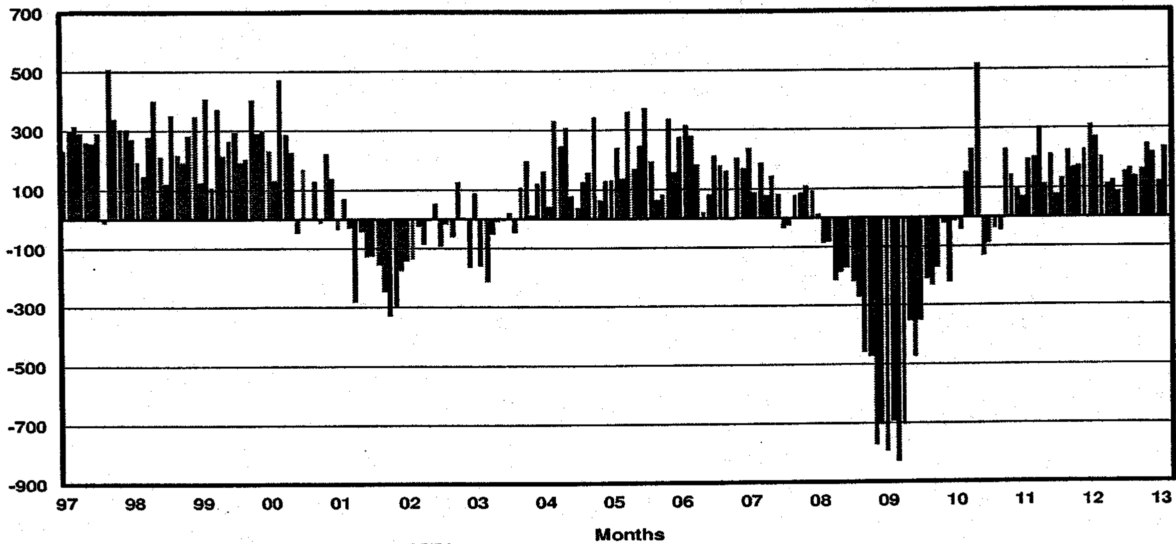
nearly 1.2 million barrels per day to its capacity. Unconventional oil extraction has risen from around 100,000 barrels per day in 2003 to around 1.2 million barrels per day in 2012 -- a more than tenfold increase.

The future appears to be even brighter: energy experts expect oil and gas production to expand substantially over the next 25 years, radically transforming the landscape and outlook for U.S. energy production and economic growth. Natural production is expected to rise to 80 Bcf per day by the end of this decade with almost three quarters of this production coming from shale gas. Crude oil production is expected to reach around 8.5 million barrels per day by 2020 (from a current 7 million barrels per day), of which roughly two thirds are expected to come from tight oil and deep-water drilling.

The economic impact of such an energy boom are far-reaching. In 2012, unconventional oil and gas activity is estimated to have added a total of $238 billion to U.S. GDP, supporting an estimated 1.7 million jobs (direct, indirect and induced employment). The actual beneficial impact may be higher because these figures do not account for second-round effects of cheaper gas and electricity. By the end of the decade, the economic impact is expected to nearly double to $416 billion supporting roughly 3 million jobs. Capital expenditures related to exploration activities are expected to reach $172 billion by 2020, while the various levels of government (federal, state, local) should receive an additional $110 billion in tax revenues.

Labor Market

In line with our expectations, the labor market has continued to heal over the past year with the outlook brightening further in early 2013 (Figure 6). The economy shed a jaw-dropping 8.1 million jobs during the recession, of which only 5.1 million have been recovered. The good news is that the pace of job creation has steadily edged up during the recovery, averaging 85,000 in 2010, 175,000 in 2011 and 183,000 in 2012. Private payrolls have fared even better than total nonfarm payroll numbers (which are weighted down by government layoffs at all levels of government): after falling by 8.8 million, private nonfarm payrolls have swelled by 6.3 million since March 2010 (the start of the labor market recovery), adding a total of 2.4 million in 2011 and 2.2 million in 2012. The unemployment rate has come down from a cycle high of 10% to the current rate of 7.7%, declining by a total of 0.4 percentage points in 2012.



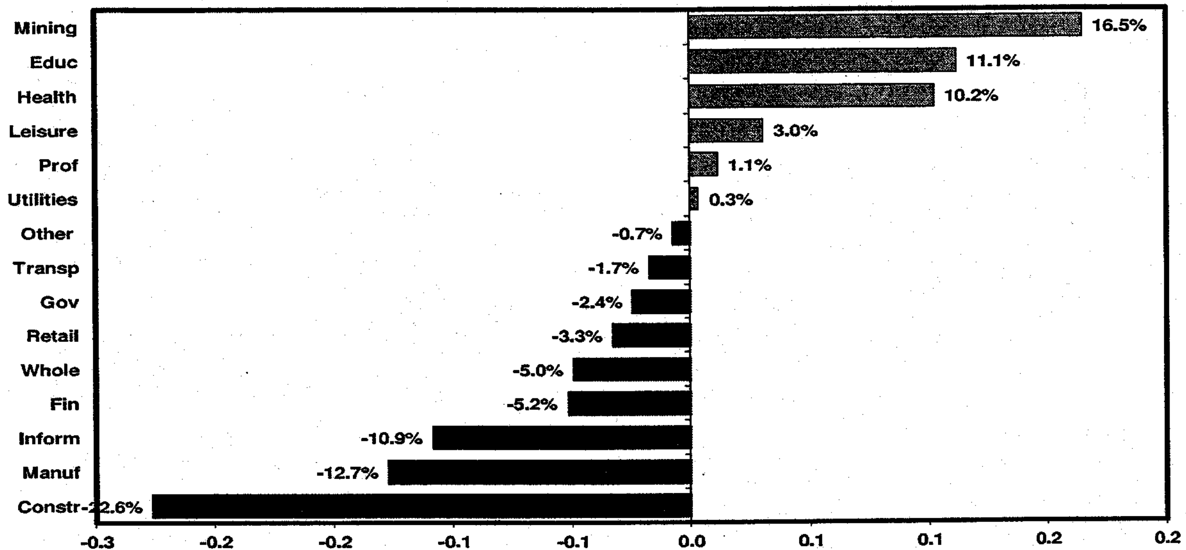
The February 2013 data are even more encouraging: nonfarm payrolls rose by 236,000 (246,000 for private payrolls) and the unemployment rate edged down from 7.9% to 7.6%. Improvements are broad based: since the start of the recovery, all but two sectors have experienced job growth. The largest increase was in Mining & logging (28.7%), followed by Professional Services (10.2%), Transportation & Warehousing (7.9%), and Leisure and Hospitality (7.8%). The two sectors that continue to decline and show negative growth rates in employment are Information (-1.4%) and Government (-2.8%).

Temporary help services, which is a leading labor market indicator, has been on an upswing since the start of the recovery. Average weekly hours have also picked up indicating increased demand for existing labor which should eventually translate into new hiring. Government layoffs seem to have abated lately: after declining by -213,000 in 2010 and -317,000 in 2011, government layoffs in 2012

totaled only -76,000. More importantly, private employment has increased for 36 consecutive months, and though the pace of job formation has been slow to completely erase the plunge in employment levels during the recession, the overall trend points to continued improvement.

Despite these positive developments, the recovery in the labor market has been extremely sluggish with plenty of slack in most sectors. When compared to their pre-recession peaks (December 2007), employment levels in the majority of sectors are underwhelming: employment in construction is almost 25% below its pre-crisis level, with manufacturing employment showing a -10.7% decline. Only 5 out of 15 sectors have fully recovered: employment in Mining & Logging is up 16.1% compared to their December 2007 values, Education has grown by 11.1%, Health Services by 10.2%, Leisure and Hospitality by 3% and Professional & Business Services by 1.1% (Figure 7).

Figure 7
Labor Market Sector Employment: 2007-2012
(percent change in employment)



The slack in the labor market is also apparent in the number of long-term unemployed, discouraged workers, and part-time workers for economic reasons. As of February 2013, the number of long-term unemployed (those jobless for 27 weeks and over), at 4.8 million, continues to remain at historically high levels. Though this represents a drop of nearly 2 million since the depth of the recession, it is still nearly four times higher than the historical average rate and accounts for roughly 40% of the total unemployment. Moreover, the number of part-time individuals for economic reason, "marginally attached" workers, and "discouraged" workers, though down slightly from recession levels, continue to remain extremely high when compared to historical norms. Disturbingly, the trend for this segment of the labor market seems to be flat, with a marginal improvement (if at all) over the past year.

More concerning is the secular and consistent drop in labor force participation rates over the past decade, which has intensified noticeably since the crisis. Currently, the labor participation rate stands at 63.5%, almost a full 3 percentage points below the 66.4% rate recorded in the years prior to the crisis. In fact, the participation rate is now at the same level as in 1980, which marked the beginning of the surge in labor force as women joined the workforce. Though the labor force tends to shrink somewhat after a recession as discouraged workers leave the market and rejoin when conditions are more favorable, the decline seems to be more structural this time around. Overall labor participation rates were on the decline even before the Great Recession: the retirement of baby-boomers, the decline in participation rate of young adults (16-24 years old), and a discontinuation of the uptrend in female labor participation had reduced labor participation rates from a high of 67.2% in early 2000, to around 66.2% in 2007. However, had the pre-crisis trend continued at the same pace (and not at the unprecedented rate witnessed since the Great Recession), the labor force today would be larger than it currently is by around 5 million workers.

Another concerning development in the long-run is the issue of productivity: since the 1970s, total factor productivity (a measure of efficient use of inputs in the production process) has improved at a significantly more muted paced when compared to the 1950-1970 period. Total productivity rose by an average annual pace of 2.1% from 1950-1970, while growing only by 0.9% from 1970-2007. Lower productivity and reduced projected labor force participation rates due to

population ageing are expected hamper future potential GDP: potential GDP is expected to grow at an annual pace of around 2.2% per year over the next decade -- a significant downshift from a 3% historical average.

Our outlook is for continued improvement in the labor market, particularly in the second half of this year and beyond. We expect job growth to average around 175,000 jobs per month in 2013 and 200,000 jobs in 2014. The unemployment rate is expected to remain elevated during the forecast horizon reflecting the slow pace of job creation and an increase in labor force, averaging 7.5% in 2013 and 7.1% in 2014.

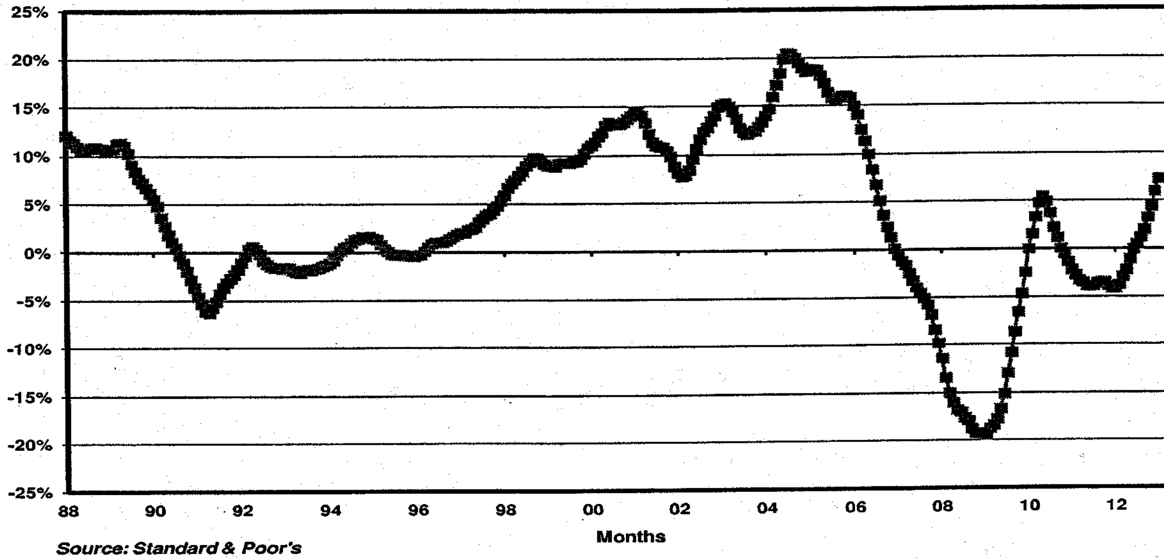
Real Estate Market

At the very core of renewed optimism about the strength of the recovery is the recent rebound in the housing market. In line with our expectations, housing turned a corner in early 2012, gaining momentum steadily over the course of last year and into 2013. Improvements are broad-based, though from extremely depressed levels: sales, prices, starts and permits have all posted remarkable gains compared to the depressed levels of the past 6 years.

Sales of existing homes rose by a healthy 10.2% in February 2013 compared to a year ago, while sales of new homes spiked nearly 30% higher in January (on a year-over-year basis). New home sales have risen by nearly 50% since 2010, from a historical low of a seasonally adjusted rate of 280,000 to the current 411,000 units. After settling at a low base of 4.1-4.2 million units in 2010 and 2011, sales of

existing homes rose at an annualized rate of 4.6 million in 2012 and currently stand just a hair shy of 5 million. Moreover, total housing inventory is extremely tight: at a 4.7-months supply the inventory of existing homes is the lowest recorded since 2005 -- at the peak of the boom cycle. Tight inventory bodes well for future construction and is expected to place an additional upward pressure on home prices.

As expected, home prices have rebounded solidly from rock-bottom levels. All metrics have firmed up significantly: the median existing-home price for all housing types (as reported by the National Association of Realtors) was $173,600 in February, up 11.6 percent from February 2012, the 12th straight month of home price appreciation. The gain recorded as of the latest reading (February 2013) was the strongest since November 2005. Likewise, CoreLogic home price index rose 10.2% in February (on a year-over-year basis), with Los Angeles and Inland Empire Metro Areas coming second and third in the nation in price appreciation. For January 2013 (latest available data), the S&P/Case-Shiller Home Price Indices showed a 7.3% increase for the 10-City composite and 8.1% for the 20-City composite (Figure 8). More encouraging, all metrics point to a continued acceleration in price increases, which means that the long-awaited recovery in home values is finally beginning to take hold.

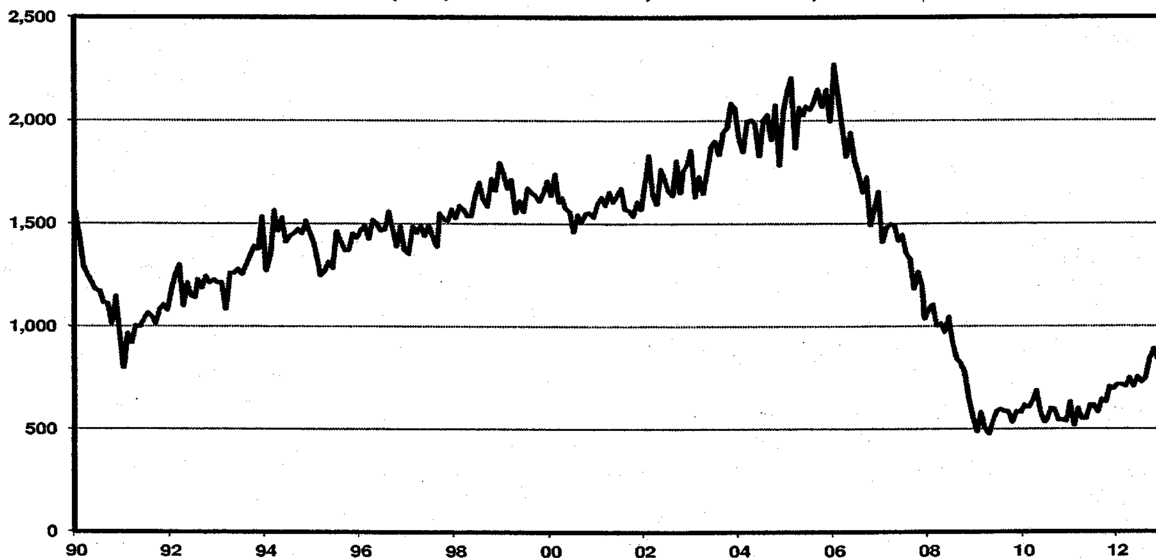


Home price appreciation has greatly improved the value of homeowner equity: in 2012, over 1.7 million properties moved into positive equity, bringing the total amount of properties (with a mortgage) up to 38.1 million. Of these, 11.3 million have less than 20 percent equity, while 2.3 million have less than 5 percent equity. The overall amount of negative equity dropped from a high of $750 billion in end-2011 to a current $628 billion. Clearly the recent uptrend in home valuations has improved household net wealth levels: homeowner's equity has increased by nearly $2 trillion since the first quarter of 2009, though it is still significantly below its historical peak in Q1 2006 (by $5.2 trillion).

Perhaps the brightest spot in the housing recovery is the pick-up in construction which is expected to continue in earnest in 2013 and beyond, contributing substantially to U.S. real GDP growth. In February 2012, housing starts rose at the second fastest pace in over

four years, while permits for future construction rose at the fastest rate since 2008 (Figure 9). Housing starts rose at a seasonally adjusted rate of 917,000 -- up 27.7% compared to year-ago levels. Multifamily housing units rose by an annualized pace of 285,000 and are currently running at the same pace as during the boom years of 2003-2007. This is not surprising given the large demand for apartment units witnessed since the end of the recession. The more encouraging news is the solid pick-up in single family starts: after declining to a historical low of 393,000 (annualized rate) in February 2011, single-family housing starts have risen to 617,000 with the momentum picking up steam with each consecutive month.

Figure 9
Housing Starts
(level, thousands of units, annualized rate)



Though the housing market has improved substantially since mid-2012, some lingering concerns remain. The number of foreclosures, though in decline, continues to remain high by historical standards. There were 54,000 foreclosures completed in the month of February,

down from 67,000 in February 2012, but substantially above the 21,000 per month recorded during the 2000-2006 period. Since the start of the crisis, there have been a total of 4.2 million foreclosures nationwide, yet there are currently an additional 1.2 million homes at various stages of foreclosures. Mortgage delinquencies, while down by roughly 6.5 percentage points from year-ago levels, stand at 6.8% -- still high when compared to the historical average. However, as the housing market recovery continues to expand and gather momentum, we expect these figures to improve substantially over the forecast horizon.

The outlook for the housing market is bright. We expect the current rebound to gain breadth and strength with broad-based improvements in sales, prices, and construction. Housing starts are expected to rise by an average annualized pace of 980,000 in 2013 and 1.25 million in 2014. Home prices should post additional gains over the next few years, rising by 5-7% (on a year-over-year basis) in 2013, and by an additional 6%-8% in 2014.

The recovery in commercial real estate began in late 2011 and has continued apace in 2012 and early in 2013. The market is rather segmented though, with some sectors performing much better than others. Apartments have seen remarkable improvements: vacancy rates are now at the lowest levels since 2002 spurred primarily by increased demand for rental units. The number of rental households has increased by 5.3 million over the past six years, while the number of homeowners has decreased by 1.3 million. The latest numbers suggest that the pace of acceleration has begun to slow, which means that we

are likely to see some moderation in this sector during 2013 from the frantic pace of the past few quarters. The industrial sector has also picked up steam due to increased demand for warehousing capacity boosted primarily by online retailers, data centers, and a turnaround in manufacturing.

In contrast office and retail markets continue to remain in a painfully slow recovery. Slow growth, a sluggish labor market and anemic retail sales have made it difficult for the retail sector to gain meaningful traction. Similarly, the office market continues to show weakness: vacancy rates for this segment of the market is still high (around 17%) having fallen only 30 basis points over the past year.

Going forward, the commercial real estate sector is expected to show continued improvements. Retail and office markets should post modest gains, industrials are expected to grow robustly, while the market for apartments should improve at a more moderate rate compared to the stellar pace of the past two years. Commercial property prices seem to have bottomed out in mid-2010 after declining by a total of -48% from their record-highs of September 2007. Prices have firmed up substantially over the past couple of years, though the recovery has been uneven and the pace of growth decelerated somewhat in 2012.

C2. INFLATION

With considerable slack in labor markets, contained unit labor costs, relatively stable commodity prices and well-anchored long-term inflation expectations, inflation remained a non-issue in 2012. The

headline consumer price index (CPI), which includes both food and energy prices rose by an average annualized pace of 2.1% in 2012, significantly below the 3.1% pace recorded in 2011. The more muted rate was largely due to the behavior of world oil prices: while oil prices were elevated throughout much of 2011, after an initial surge in 2012 they declined and remained relatively flat on global growth concerns. In contrast, core inflation (which excludes volatile prices such as food and energy) rose 2.1% in 2012 compared to a 1.7% annualized rate in 2012, reflecting modest but continued improvement in the economy and increases in rental pricing (owner's equivalent rent). Some of the increase was also due to a pick-up in wage and salary compensations: although the labor market is still a ways off from full recovery, productivity grew at a much more anemic pace in 2012 placing upward pressure on compensation rates.

Oil prices rose again early in 2013, on improved global outlook, brighter prospects from China and supply reductions from Saudi Arabia. In February 2013, increases in gasoline prices appeared in both PPI (Producer Price Index)inflation (a 7.2% advance) and in CPI inflation (a 9.1% advance). We expect the increase in gasoline prices to reverse over the course of the next few months and for oil prices to remain range-bound for the balance of the year.

Our outlook for inflation remains stable over the next two years. The main reason for a continued tame inflation 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 4-5% 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 expectations derived from TIPS (Treasury inflation-protected securities) though up by around 55 basis points since early June 2012 remain well within their historical range.

Though our overall inflation outlook is rather benign (at least over the short-term), the recent run-up in residential rents and homeowner's equivalent rent -- which account for roughly 40% of the core CPI -- will continue to put pressure on core inflation. As the recovery expands, core CPI is likely to increase beyond the Fed's 2% inflation-comfort zone, and we expect the Fed will tolerate this rise as long as labor markets continue to heal. Longer term, given the overly accommodative monetary policy since the onset of the crisis, 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.

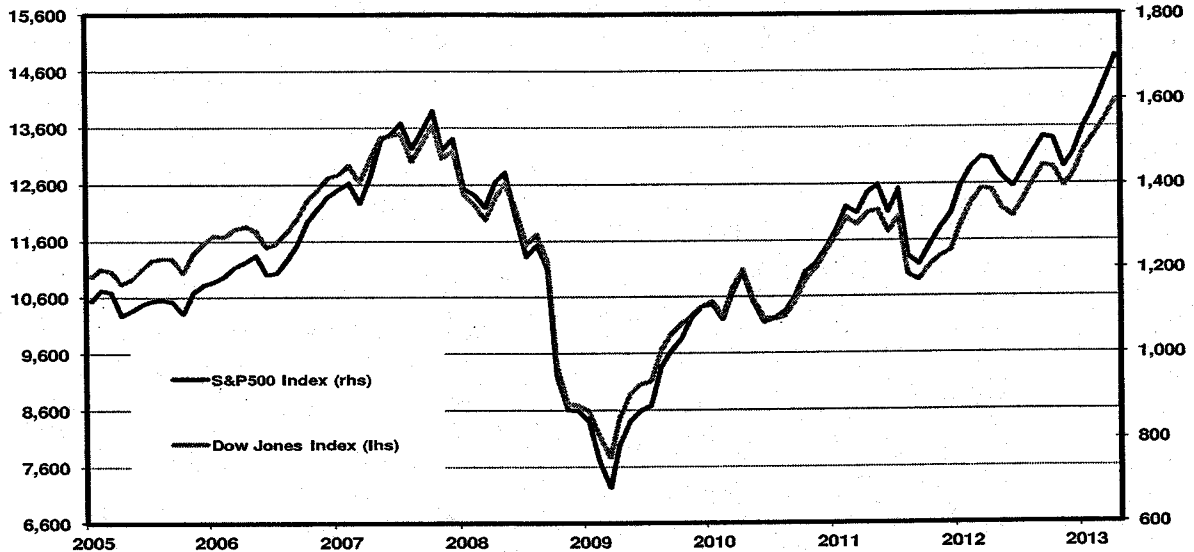
C3. FINANCIAL AND GOVERNMENT SECTORS

Financial Markets

Equity markets have had a spectacular four-year run, rising by an astounding 131% since their post-crash values of March 2009. Perhaps the biggest news so far this year came in March when both the Dow

Jones and S&P500 broke above their pre-recession peaks (of October 2007) to set new record highs (Figure 10).

Figure 10
Stock Indices at Record highs
(Dow Jones Industrial Average and S&P 500, Index, level)



Of course, the run-up to historical levels did not proceed as smoothly as one would have hoped: equity markets took a dive in mid-2012 when the growth momentum slowed, "fiscal cliff" jitters intensified, and the initial outcome of the Greek election spiked fears of a disorderly disintegration of the Eurozone. The slide was soon reversed thanks mostly to robust central bank intervention across the globe. By June 20, 2012, the Fed had pledged to continue its Operation Twist through 2012 and expand it by an additional $216 billion. By end-June, policymakers in the Eurozone had taken important steps towards establishing a Eurozone banking union. When the momentum seem to falter again in end-July and Spanish and Italian bond yields shot up, the ECB chief took a bold step promising everyone that "the ECB will do whatever it takes to save the euro." By early September,

that promise was followed by actual concrete steps outlining a bond-purchasing program by the ECB intended to buy up sovereign bonds from troubled nations. The Federal Reserve soon followed with its QE3 program which -- unlike previous rounds -- is open-ended and will continue until the recovery (especially in the labor market) -- is in full swing. In addition, bank of Japan stepped up its asset-buying program (by around $127 billion) while the Bank of England continued its own £375 billion bond-buying program.

As a result of these continued unprecedented interventions, the S%P 500 has increased by a staggering 22% since last June. Though momentum faltered yet again in November 2012 on fears of failed "fiscal cliff" negotiations, prospects appeared brighter early in 2013 when the "cliff" was avoided and economic outlook seemed much improved. After breaching all-time high levels, concerns have now intensified on whether equity markets are overvalued and headed for a correction.

Though there is little doubt that stock prices have shot up to their record-levels largely on the back of an extremely accommodative monetary policy, concerns about severe overvaluation seem overblown. For one, the price-earning ratio -- among the best gauges of equity valuations -- appear well within their historical norms and are still well below their pre-crisis levels. And aside from lax monetary policy, there is real reason to rejoice in the performance of the economy: corporate earnings and corporate profit margins are at record-levels, hard macroeconomic data is improving, worse-case scenarios appear to have been avoided (for now), a U.S. government

shutdown or a debt-ceiling stand-off was averted, and the Eurozone crisis seems contained.

This does not imply that markets are immune to corrective moves. One of the looming risks is related to the eventual gradual end of monetary easing: the timing and speed matters greatly to the stock market performance. In fact, just a whiff of Fed-speak on the timing of an eventual "exit" from the current expansionary stance sent market roiling in February: it took repeated reassurances from Bernanke and other Fed officials before fears subsided. Continued flare-ups from Eurozone are another risk factor: inconclusive elections in Italy and the Cyprus bail-out fiasco, are two very recent reminders of the vulnerability of the financial sector to the Eurozone woes. Lastly, missteps in the U.S. fiscal negotiations present additional sources of risk which could easily cause a market correction if the fiscal assumptions built into asset prices prove incorrect.

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 have increased by around 20 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 also increased over the past two months, reflecting receding global risks and improved optimism about domestic growth. Short rates are expected to move in tandem with policy rates, maintaining their current (low) levels in 2013 and 2014. However, long-term bond yields are expected to move

upwards by around 30-40 basis points in the second half of this year as the recovery continues to expand.

Sentiment for the banking sector has improved appreciably over the second half of 2012 as the risks of an impending Eurozone break-up receded. In fact, bank stocks outperformed the broader equity markets by quite significant margins: JPMorgan Chase stock added 34%, Citigroup was up 56%, and Bank of America shot up by 116%. Early this year, all but one of the major banks passed the Fed's stress test of having enough capital buffer (5%) to sustain a severe recession where unemployment spikes to 12.1 percent, equity prices fall more than 50 percent, housing prices dip more than 20 percent, and the largest trading firms experience a sharp market shock. According to the results of the test, even with this dire backdrop, most banks would emerge with adequate capital thus successfully weathering the storm.

Bank lending has also proceeded at healthy rates. As of Q4 2012, Commercial & Industrial loans (C & I) are just a touch below their pre-crisis peaks. Real estate loans continue to be soft even though a modest net fraction of banks reported having eased standards for commercial real estate loans in the second half of the year. Delinquencies and charge-offs have also declined, though they are still above their historical levels. One area of concern is bank profits: though substantially improved from the depth of the recession they are still significantly below the levels that prevailed prior to the crisis.

Going forward, we expect the banking sector to continue to normalize as the recovery gains more traction. Bank credit expanded

noticeably in 2012 and 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. In general, the financial sector is likely to remain remarkably sensitive with respect to adverse developments in the Eurozone, fiscal negotiations in the U.S., the global regulatory environment, and the calibration of the Federal Reserve's "exit" strategy from unprecedented policy accommodation to more normal levels.

The Government Sector

Fiscal Policy

Over the past few years, the U.S. economy was caught in a seemingly endless cycle, transitioning from "cliffs" to "ceilings" to "shutdowns" or some other form of impending calamity. The biggest event (in terms of fiscal and economic consequences) was the December 31, 2012 deadline, when the expiration of a whole host of previous tax cuts, a series of crisis-legacy benefits, and a scheduled automatic sequester spending cuts -- was bound to take effect. There were reasonably high hopes that with so much at stake, the policymakers would try to cobble together a "grand-bargain" of noteworthy accomplishment: a sensible blueprint that would sustain short-term support for the still-fragile recovery while addressing longer-term fiscal solvency issues through entitlement and tax reforms.

Instead, what we did get was the "smallest" bargain one would have expected: the end-year fiscal-cliff negotiations addressed most

tax-related issues (concerning the expiration of the Bush-era tax cuts) and some (rather miniscule) spending cuts without true long-term reform. Perhaps the only positive coming out of the final hours of 2012 was that the economy was not pushed over the cliff and some certainty was established (at least with respect to taxes). On the tax front, marginal-tax rates were extended for all but the top income individuals (those earning $400,000+ or married couples over $450,000). Capital and dividend tax rates were set at 0% for individuals in the 10% and 15% tax bracket, at 15% for individuals in the higher tax brackets (but below $400,000) and at 20% for individuals earning more than $400,000 (plus a 3.8% surcharge mandated by the Affordable Health Care Act). A "permanent-fix" was put in place for the Alternative Minimum Tax (AMT) to prevent middle-income families from being subject to the much higher AMT rates. The estate tax was raised from 35% to 40% with a $5 million exemption, while the 50% bonus depreciation provision was extended for another year. A whole host of other tax credits and business tax breaks were also extended such as the Earned Income Tax Credit, Child Tax Credit, and higher education tax credit. Perhaps the most important item (other than the permanent extension of marginal tax rates) is the expiration of the 2% payroll-tax cut, which is estimated to raise the tax burden on households for 2013 by around $110 billion (roughly $1,000 per year for the median income household of $50,000).

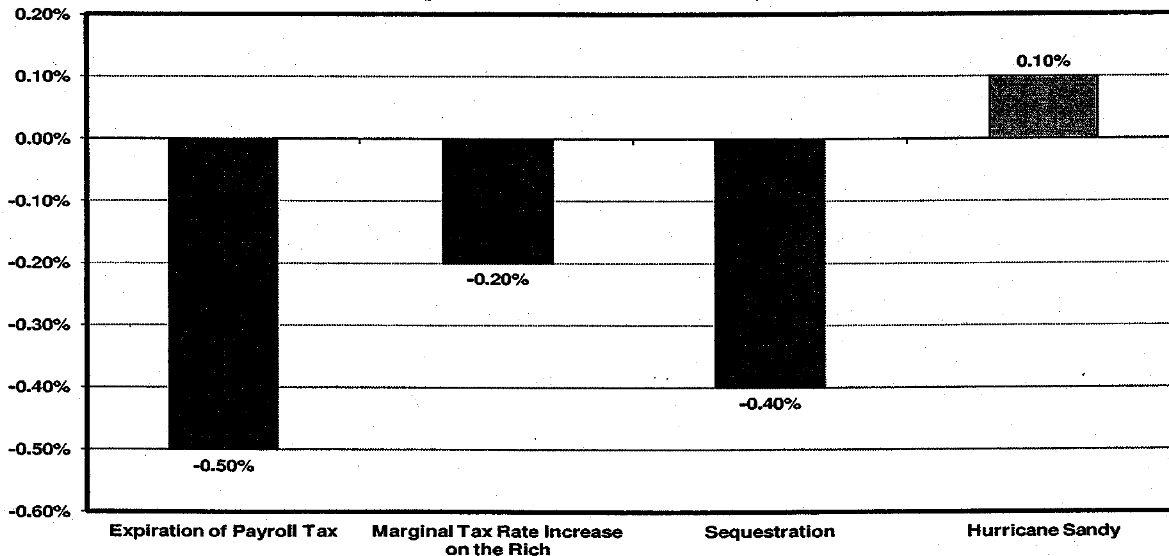
On the spending side, the year-end deal had few things to offer: it extended unemployment insurance benefits for one year, it prevented a severe cut in reimbursement rates to Medicare providers

(the "doc" fix) also for one year, and it delayed sequestration for two months (until March 1st). The cost of the sequester delay was around $24 billion, half of which was offset by defense and non-defense cuts, while the other half came through increased revenues (from the voluntary conversion of traditional IRAs into Roth IRAs). Perhaps the best compliment one would pay to the year-end "fiscal-cliff" deal is that, at the end the worse-case scenario -- diving over the cliff -- was actually averted.

The next big deadline in the fiscal-negotiation saga was the sequester (a legacy of the Budget Control Act of 2011): though some had hoped that more time would have produced a better compromise than the half-haphazard measures prescribed in the "sequester", no compromise were to be found and the sequester took effect in March 1. In total, the sequester consists of $1.2 trillion in a spending reduction over the nine-year period (2013-2022), of which $1 trillion comes from actual spending cuts (evenly divided between defense and non-defense spending) and the remaining $200 billion come from interest rate savings. The least effect will be felt in 2013: the sequester delay cut the budget authority by $85 billion rather than by the expected $110 billion. In addition, because actual budget outlays (actual spending by the government) take time to catch up with budget authority (the authority to spend now or in the future), only around $44 billion of the widely cited $85 billion cuts will take place in the fiscal year 2013. Our baseline scenario assumes that the sequester continues in its current form: if replaced with a more sensible platform (which preserves the current amount of deficit

reduction) it will likely lead to a slightly less onerous weight on growth, but not by much.

As discussed above, we expect the fiscal contraction from the "fiscal-cliff" deal and the "sequester" to chip away around 1.2 percentage points from real GDP growth in 2013. Tax hikes from the cliff negotiations will likely reduce growth by around 0.7 percentage points while a full-implementation of the sequester will subtract another 0.5 percent. The reconstruction efforts to rebuild the Northeast in the wake of the devastation left by hurricane Sandy is expected to add around 0.1-0.2 percent to real GDP, which brings the total effect of the fiscal drag on real GDP to around 1 percentage point (Figure 11). Of course, if the sequester were to be repealed in its entirety (and not replaced) the trade-off would be higher growth in the short-term but at the expense of future growth.

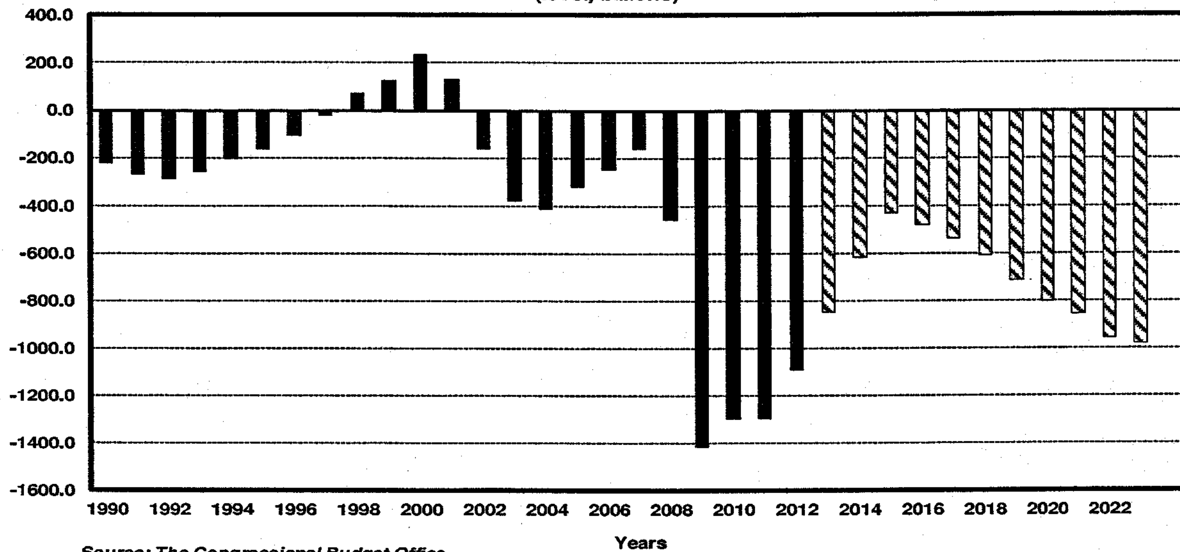


All in all, the various negotiations of the last two years have reduced the 10-year budget deficit projections by a total of around $2.4 trillion. Roughly $585 billion were enacted through the various continuing resolutions passed into law in 2011. The Budget Control Act of 2011 (the debt-ceiling negotiations) cut the deficit by an additional $860 billion, with the fiscal-cliff deal providing an additional $750 billion (around $650 billion from tax increases, $30 billion from spending cuts, and the rest from interest rate savings). An estimated $250 billion in interest-rate savings brings the total to around $2.4 trillion. If the sequester were to proceed as planned (or replaced with a more sensible plan which preserves the $1.2 trillion reduction), then the total deficit reduction over a ten-year period would be around $3.6 trillion (when compared to the 2010 baseline). Rough estimates indicate that an additional $200-$300 billion is needed to put the budget deficit in a sustainable trajectory (roughly around 3% of the GDP).

Though short-term budget projections seem less ominous now than they did even a year ago, the U.S. faces formidable budgetary challenges in the long-term driven primarily by structural underlying forces, such as rising health care costs and an ageing population. Spending for entitlement programs (Social Security, Medicare, and Medicaid) is slated to push the budget deficits to unsustainable levels in the not too distant future (starting at the end of this decade). According to the Congressional Budget Office (CBO), the budget deficit was $1.1 trillion in FY 2012 (7% of nominal GDP), lower than the $1.3 trillion recorded in both FY 2010 and FY 2011. Deficits

are projected to fall over the next couple of years, but begin to rise again in the mid-decade and beyond as entitlement programs start to weigh significantly on the U.S. budget (Figure 12). 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. 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.

Figure 12
US Budget Deficit: Historical and Projected
(level, billions)



Source: The Congressional Budget Office

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. 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.

The opportunity for the much coveted "grand bargain" is close at hand as the debt-ceiling battle looms ahead: the ceiling -- which was "suspended" until May 18th -- needs to be raised again in late August/early September. This provides an opportunity for real long-term reform on entitlement and taxes, though based on past history and the current political divide, it is hard to envision that a "grand bargain" would be achieved in the next round of negotiations.

The Federal Reserve

A slowly recovering labor market, sluggish growth, fiscal tightening, and a low-and-contained inflation environment, have combined for an extremely accommodative monetary policy not just in the U.S. but across the globe. In no previous time in history has there been such a large injection of liquidity for so long. The Federal Reserve (Fed) has certainly been in the forefront of the activity adopting various conventional and unconventional means in an effort to boost economic growth and support the fragile recovery.

Perhaps the boldest move was the one announced by the Fed in September 2012: another round of quantitative easing worth around $40

billion per month of bond-purchases of mortgage-backed securities. The main change is that the program is "open ended" (no limit on how much MBSs will be bought) and, more importantly, the length of the program is tied to the outlook for the recovery in general and the labor market in particular. The link to economic activity was reinforced further in December 2012, when the Fed announced that it will not raise interest rates as long as unemployment remains above 6.5%, while inflation expectations are anchored at below 2.5%. This was its most explicit statement yet, directly linking Fed actions to specific macroeconomic targets. Since last fall, the Fed has continued to purchase a total of $85 billion per month in long-term securities: $40 billion in agency mortgage-backed securities (MBSs) and $45 billion in long-term Treasuries.

The latest round of quantitative easing (QE3) comes in the heels of a number of other similarly aggressive quantitative easing measures. From December 2008 through March 2010, the Fed embarked on its first quantitative easing efforts (QE1) 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 (QE2). 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 a result of the many rounds of quantitative easing, the Fed's balance sheet has surpassed $3 trillion dollars (more than triple the pre-crisis levels), of which roughly $1.7 trillion are in Treasury securities while around $1 trillion are in MBSs. By the time QE3 will end, the Fed's balance sheet is estimated to reach $4.2 trillion, or roughly 25% of US GDP.

These extraordinary measures have had some effect: mortgage rates are at historic lows (providing a boost to the ailing housing sector), car loans have surged (due to low interest rates), and corporations have used the low-interest rate environment to improve their balance sheets. Without a doubt, the biggest gains have been in financial markets: the U.S. stock market has more than doubled since its crisis-levels even as the U.S. economy has grown only by a feeble 7%. There are concerns that the hyper-lax monetary policy has encouraged excessive risk-taking and distorted market prices. We agree with these concerns: though valuations are well within historical norms, there can be no denying that the stock market rally has more to do with easy monetary policy than a genuine robust performance of the economy. The sensitivity of the market participants to Fed policy is evident on a routine basis: witness the fall of the Dow on the day when the FOMC minutes were released indicating the Fed's growing unease with the costs and benefits of the bond-buying program.

Over the next 2-3 years, one of the biggest risks facing the U.S. economy is related to the timing, manner, and speed with which the Fed

"exits" from its overly lax policy stance. It is likely that, as the recovery continues to gain traction, the Fed will provide more explicit guidelines about the end of QE3, much as it did with regards to its interest rate policy. We expect the Fed to keep rates on hold this year and the next, and begin to tighten in early-to-mid 2015. QE3 will likely be tapered-off rather than come to an abrupt halt, with the Fed continuing the bond-buying program into early 2014.

C4. GLOBAL ENVIRONMENT

The outlook for the global economy has improved compared to a few months ago as worse-case scenarios are avoided and global risks recede. The slowdown in emerging economies witnessed through much of 2012 appeared to have come to an end by the fourth quarter of 2012. Concerns over the Eurozone crisis abated significantly after the European Central Bank (ECB) promised to backstop some of the euro zone's weaker bond markets and policymakers took some steps towards banking and financial market integration.

In line with our expectations, China's economy averted a "hard-landing" and growth appeared to reaccelerate early this year largely boosted by more expansionary monetary and fiscal policies implemented in mid-2012. Overall, the Chinese economy grew by 7.8% in 2012 -- the slowest rate in over one decade, with growth slowing to 7.4% in Q3 2012. Nonetheless, fourth quarter real GDP rose to 7.9%, breaking a seven-quarter cycle of continued deceleration. Elsewhere in the emerging world, growth prospects have also improved: Brazil's real GDP

grew by a paltry 1.4% (year-over-year basis) in 2012, but Q4 data point to a brighter outlook bolstered by fiscal and monetary stimulus. After a fall in Q3 2012 related to slower growth in U.S. manufacturing, Mexico's economy expanded by 3% in the fourth quarter, supported in large part by cuts in policy rates by the central bank aimed at boosting domestic demand.

The outlook for emerging markets, though improved, is still below the levels seen in the immediate aftermath of the Great Recession when these economies grew rapidly as global trade rebounded sharply. India's economy is on pace to grow at the lowest rate in over a decade, while South Korea's prospect are dimmed by a significant appreciation of its currency relative to other Asian economies (notably Japan). Part of the problem is that an export-growth model (which most emerging economies have adopted) is hardly suitable in a time when advanced economies are undergoing either extremely sluggish growth (as in the case of U.S.) or are in the midst of a recession (Eurozone). Nonetheless, we expect emerging markets to grow over the forecast horizon given their strong domestic fundamentals, sound finances and generally healthy fiscal outlook. Overall, we forecast that emerging economies will grow by 5.6% in 2013 -- above the 5.2% rate posted in 2012, but significantly below the 6.3% rate of 2011 and the 7.3% rate of 2010.

The performance of advanced economies will continue to remain disappointing over the course of this year, but improve in 2014. Japan's economy seems poised for a revival from a deep slumber, after the year-end elections brought to power Prime Minister Shinzo Abe and

the Liberal Democratic Party (LDP) on an economic platform of significant expansionary fiscal and monetary policy. The government has implemented a number of measures: it called on the Bank of Japan to employ "unlimited" policy easing including open-ended asset purchases and an increase in inflation target from 1% to 2%. It also put in place a 10.3 trillion yen fiscal stimulus package to boost the economy. As a result, the yen has depreciated significantly (around 17%) relative to the U.S. dollar, which should help Japanese exports and provide additional impetus for Japanese growth. Based on these measures, we expect the Japanese economy to grow modestly (0.6%) this year and a bit more robustly in 2014.

The main threat to the global outlook over the near term comes from Europe. One moment it seems that the fate of the single currency market is in the brink of a catastrophe of Lehman-like proportions, the next enough policy steps are put in place to stem the bleeding, at least temporarily. The crisis is mired in this seemingly endless cycle of resurface and retreat -- neither boiling over to a complete break-up nor bringing closer a more complete union.

The crisis abated somewhat after September 2012, when the ECB effectively promised to use its balance sheet to buy up sovereign debt from troubled countries. As a result, Italian and Spanish 10-year yields dropped by a staggering 2.5 percentage points which has certainly helped in managing the debt payment of these countries, at least over the past six months.

Though no longer on the verge of a devastating catastrophe, the Eurozone debt crisis is far from over. Positive steps towards the

creation of a closer union, larger banking integration and more compact fiscal integration are continually threatened by repeated pull-backs from the nation countries. The inconclusive elections in Italy have further inflamed fears of a potential renewed instability in the single-currency area. Though the electorate was split between the center-right and the center-left, one message was unmistakable: Italian voters appear fed-up with reform-minded governments (like the Monti technocratic government which was in power for a little over one year) and have universally rejected austerity. This clearly complicates matters, since for Eurozone to hang together it is imperative that the weaker southern European nations implement structural reforms aimed at liberalizing their labor markets, increase competitiveness, and reform entitled programs and the overly extended welfare state.

In the meantime, the Eurozone crisis will continue to remain a source of risk and instability in the global economic landscape. The periodic flare-ups -- like the Cyprus bail-out -- clearly add more fuel to the growing concerns about the survival of the single-currency market. The "bail-in" of depositors in the Cypriot baking crisis, though a more market-based approach to resolve the issue of banking exposure to the sovereign-debt issue, sparked fears that bank deposits in the weaker nations may not be safe after all. Though the event seems to have been contained to the Cyprus affairs, for now, it may still spark a drawdown in bank deposits in the countries-at-risk should another shock hit sometime down the line.

More concerning is the fact the Eurozone continues to be mired in a recession which shows little signs of ameliorating. The downtrend in economic activity has now extended to core countries: the German economy appears to have shrunk in the fourth quarter of 2013 more than at any time since the height of the financial crisis in 2009. Compared to their 2007 levels, most Eurozone economies have shrunk, some by a sizable margin, which indicates that the sovereign debt crisis continues to take a heavy toll in these countries' economies. We expect the single-currency region to remain in recession until the end of this year, followed by an exceptionally weak pick-up in economic activity in 2014. Longer term, it is difficult to envision how the Eurozone region survives without structural reform and much-needed growth. Some countries (Greece in particular) will likely exit the single-currency union, given its bleak prospects for growth under current austerity measures. Overall, we expect the Eurozone to "hang together while muddling through" in the near term, with periodic shocks from the region continuing to pose a threat to the global economy.

Going forward, the global economy is expected to expand by a tepid pace of 3.4% in 2013, slightly above the 3.2% rate of 2012 and far below the 4.0% rate in 2011 and 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. Among the advanced economies, more strength is expected to come from the U.S. (given a genuine improvement in fundamentals) and Japan (given its sizable fiscal and monetary policy efforts). 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 11.2% in 2010 as trade volumes expanded, but the pace of growth was more muted in 2011 coming at 6.7% and even more so in 2012, growing at an anemic 3.4% rate. As of Q4 2012, exports have surpassed their 2008 record-levels by 8.4%, contributing 1.3% to real GDP growth in 2010, 0.8% in 2011 and an additional 0.5% in 2013. Imports have also recaptured their pre-recession peaks, boosted primarily by increased demand for capital goods, motor vehicles and parts, and industrial supplies. Export levels are expected to increase by 2.9% in 2013 reflecting a lower growth path in emerging markets and a deepening of recession in Eurozone: 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 these 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 -$424 billion (2.7% 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 (major currency index) fell in the first half of 2012 especially against emerging currencies as these countries experienced strong capital inflows due to robust economic performance.

The trend however reversed sharply in the middle 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. As concerns about a Eurozone break-up tapered off in the fall of 2012 after the ECB's intervention, the dollar ended the year flat. The U.S. dollar has appreciated nearly 20% against the Japanese yen over the past few months, as the Japanese government embarks on unprecedented monetary policy measures in an effort to boost the ailing economy.

As the risks from Eurozone wax and wane, the dollar is expected to remain largely flat in 2013 and increase modestly in 2014. In the medium term however, 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 and large external imbalance are expected to place further downward pressure on the 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						
2010	2.4	1.8	-3.7	0.7	11.1	12.5
2011	1.8	2.5	-1.4	8.6	6.7	4.8
2012	2.2	1.9	12.1	8	3.4	2.4
Forecast						
2013	1.9	1.9	15.3	3.8	2.9	1.7
2014	2.6	2.4	21.4	7.4	5.5	4.8
2015	3.1	2.3	17.2	6.8	6.1	4.3
2016	2.9	2.2	6.5	5.3	6.5	3.8
2017	2.8	2.3	-2.4	5.2	6.4	3.7
2018	2.7	2.2	-0.3	4.5	5.8	3.5

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						
2010	1.6	1.0	1.6	9.6	-0.7	3.1
2011	3.1	1.7	1.7	8.9	1.2	0.6
2012	2.1	2.1	1.8	8.1	1.7	0.7
Forecast						
2013	1.8	1.9	2.1	7.6	1.6	0.7
2014	2.3	2.4	2.5	7.2	1.9	1.1
2015	2.7	2.6	2.8	6.6	2.0	1.2
2016	2.8	2.7	3.0	6.2	1.8	1.5
2017	3.2	2.9	2.8	5.9	1.7	1.8
2018	2.7	2.6	2.9	5.8	1.4	1.8

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						
2010	0.18	0.14	3.21	4.69	-2.7	-2.4
2011	0.10	0.05	2.79	4.46	-3.1	-4.4
2012	0.14	0.09	1.80	3.66	-3.0	2.6
Forecast						
2013	0.16	0.11	2.28	3.65	-2.8	1.8
2014	0.16	0.13	2.93	4.12	-2.5	0.8
2015	1.23	1.32	3.47	4.97	-2.4	-2.1
2016	2.44	2.25	4.12	5.78	-2.5	-2.6
2017	3.82	3.57	4.79	6.48	-2.2	-1.9
2018	4.21	4.02	5.12	6.65	-2.0	-1.8