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East Bay Economic Outlook



Created for the
East Bay Economic Development Alliance

Authored by
Beacon Economics

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East Bay Economic Development Alliance

The East Bay Economic Development Alliance (East Bay EDA) is a public/private partnership serving the San Francisco East Bay (Alameda and Contra Costa Counties) whose mission is to establish the East Bay as a world-recognized location to grow businesses, attract capital and create quality jobs.

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This publication was prepared by:

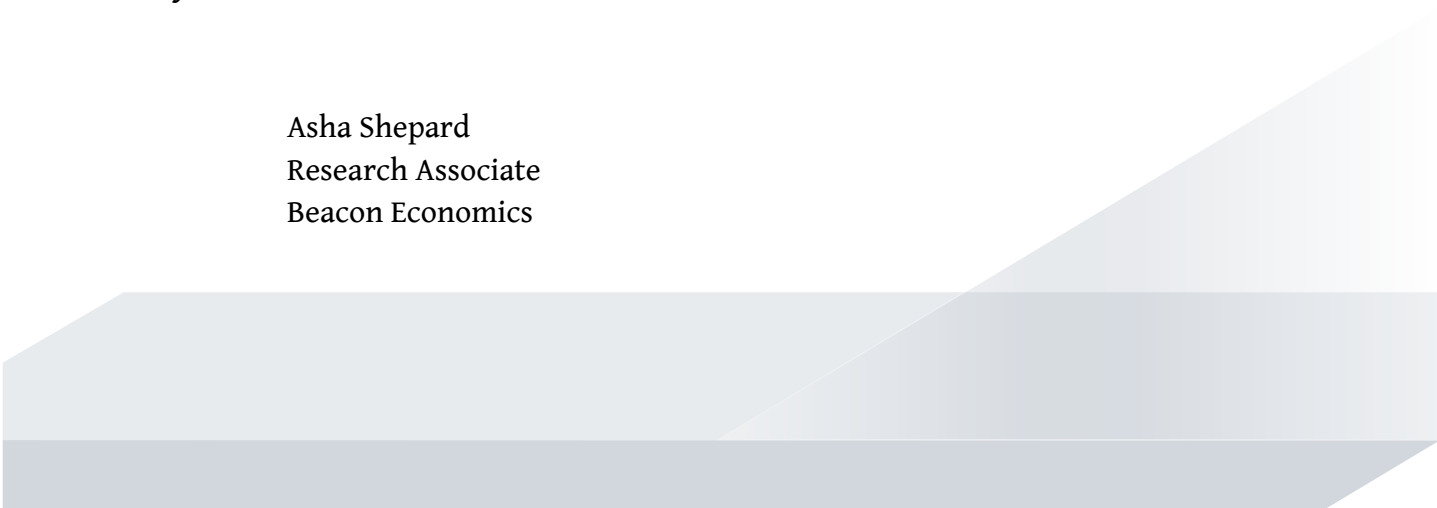
Beacon Economics, LLC

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

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

And by:

Asha Shepard
Research Associate
Beacon Economics



EXECUTIVE SUMMARY

Employment: Contrary to proclamations in the popular press, the **economic recovery in the U.S., California, and the East Bay continues to gain steam.** Although nonfarm employment has posted only modest gains in the third quarter of 2011, the household survey shows that the labor force is expanding and that more residents are finding work. Unemployment rate remains high, but the East Bay is down to its lowest level in over two years. San Francisco and the South Bay continue to lead California's labor market recovery. Given the commute patterns and reductions in local unemployment, East Bay residents have certainly been taking advantage of that. Several sectors continue to struggle to turn the corner. Most of them are not surprising, such as government and construction, while others like financial activities are less intuitive until you scratch the surface. Overall, the picture is improving. By mid-2012, Beacon Economics is forecasting that the unemployment rate is expected to fall into the single-digits, but it will take time to recover—remaining above 8% until mid-2015. By late 2013, the East Bay will move past the 1 million job mark, though it won't get back to previous peaks until 2015/16.

Clean-Tech: Solyndra's recent bankruptcy has created much consternation in the media due to the help it received from the federal government. This has led many to raise questions about the viability of clean-tech in the United States. We find that **these concerns are largely unfounded and that the performance of one particular firm is not indicative of a sector that is on its way out.** In the East Bay in particular, the data shows that clean-tech is gaining steam. Even with respect to solar, the future is bright. The East Bay has attracted a disproportional share of solar investments and some of its larger companies are growing in the region.

Consumers: **Consumer spending in the East Bay has bounced back nicely** since the end of the recession—growing by more than 13% from trough. Yet, this has not fueled the type of retail employment boost that is traditionally associated with rising consumer spending. There are two main culprits behind this phenomenon. The first is rising efficiency and worker productivity: employers have simply learned to do more with less during the downturn and we see that the amount of sales generated per worker up significantly since 2005. In addition, uncertainty about both the pace of the recovery and if/how Washington will choose to address our longer-term deficit and debt issues has caused employers to be timid in their hiring on the consumer-side.

The Port: The Port of Oakland continues to be the leading bright spot in the East Bay economy. Continued real depreciation of the U.S. Dollar has kept American exports in high demand. The strong growth from 2010 has continued into 2011, which has created a sizeable number of new positions in the wholesale trade and transportation/warehousing industries.

Housing: Housing in the region is actually healthier now than it has been in many years. Neither the East Bay nor the state overall has yet to see much growth in terms of home prices, but affordability is at an all-time high. Additionally, defaults continue their downward trend signaling that the worst is behind us.

EAST BAY ECONOMY

CLEAN-TECH STILL STRONG IN EAST BAY, DESPITE SOLYNDRA

Recent headlines in the East Bay and across the nation have focused on the debacle involving Solyndra—a Fremont-based manufacturer of lightweight solar modules. The controversy stems from the fact that, after receiving more than \$500 million in federal government loans as part of the President’s economic plan and being touted as a model for what the plan could accomplish, the company filed for bankruptcy in August.¹ This has been interpreted not only as an indictment of the current administration, but also as an ominous sign for the future of the clean-tech industry in the United States—particularly with regard to solar. Given that the East Bay was home to this company that got so much attention and the fact that the region has focused on developing a niche in the clean-tech space, the concerns locally are even more acute. However, the future outlook for the clean-tech industry remains positive in the U.S. overall and the picture is even rosier in the East Bay.

**Top Venture Capital Investees
East Bay, Q4-09 through Q2-11**

City	Company	Industry	VC Raise \$ Millions	Share of Total (%)
Oakland	BrightSource Energy Inc.	Industrial Energy	381.69	19.7
Livermore	BridgeLux Inc.	Semiconductors	147.34	7.6
Pleasanton	Fulcrum BioEnergy Inc.	Industrial Energy	75.00	3.9
Newark	Revance Therapeutics Inc.	Biotechnology	71.24	3.7
Emeryville	Amyris Biotechnologies Inc.	Biotechnology	67.14	3.5
Fremont	Solaria Corporation	Industrial Energy	50.35	2.6
Oakland	Livescribe Inc.	Computers and Peripherals	44.83	2.3
Hayward	Moximed Inc.	Medical Devices and Equipment	43.27	2.2
Richmond	MBA Polymers Inc.	Industrial Energy	39.58	2.0
Fremont	GreenVolts Inc.	Industrial Energy	39.05	2.0
Berkeley	Nordic Windpower LLC	Industrial Energy	38.00	2.0

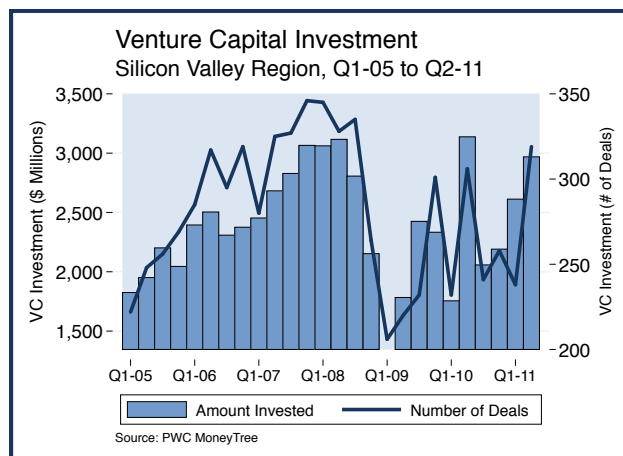
Source: PWC MoneyTree

Over the past decade, the East Bay has done an impressive job of growing firms in the clean-tech industry. This encompasses not only solar, but firms making bio-fuels, LED lighting solutions, recycling, biotechnology for processing waste products and converting them into useful applications, wind energy, and many others. Two things become clear when looking at the list of the top 15 recipients of venture capital funding in the East Bay since the fourth quarter of 2009: 1) clean-tech has definitely taken root in the East Bay; and 2) the sizable clean-tech sector

¹David Louie, ABC News, “Solyndra files for bankruptcy, lays off 1,100 workers,” August 31, 2011, <http://abclocal.go.com/kgo/story?section=news/business&id=8336915>.

in the region is well diversified in areas beyond solar. Indeed, eight of the top 11 recipients of venture capital funding in the East Bay region can be considered clean-tech firms. Moreover, these firms represent more than 40% of all funds that were invested in the East Bay across all sectors. Thus, the concerns about clean-tech floundering in the region and in the nation more broadly are probably more akin to knee-jerk reaction than they are to analysis.

The recent data on venture capital flows show that the outlook is improving—at least from the perspective of private equity markets. Since hitting bottom in the first quarter of 2009, venture capital funding has more than doubled in the Silicon Valley region, which includes the East Bay as well as San Francisco and the South Bay areas. Many of these same clean-tech firms continued to attract investment through the first half of this year.



For the past three years at least, East Bay companies have received over \$1 billion annually in total venture funding – more than any state except for California, Massachusetts and sometimes a third state. The East Bay is highly specialized in several key industries related to clean-tech and high-tech. Between the final quarter of 2009 and the second quarter of 2011, nearly \$40 billion in venture capital has been raised, of which a little over \$1.9 billion or 4.8% flowed to the East Bay. However, this is far larger than the relative size of the population in the East Bay, which ac-

Venture Capital Investment by Industry East Bay, Q4-09 through Q2-11

Industry	VC Raise \$ Millions	Share of EB (%)	Share of U.S. (%)
Industrial Energy	834.22	43.1	14.5
Medical Devices and Equipment	291.61	15.1	5.5
Semiconductors	221.59	11.4	12.3
Biotechnology	197.95	10.2	3.0
Software	140.04	7.2	1.9
Electronics Instrumentation	70.49	3.6	9.3
Computers and Peripherals	46.83	2.4	7.0
Media and Entertainment	44.04	2.3	1.4
Consumer Products and Services	34.63	1.8	3.0
Business Products and Services	19.78	1.0	3.5
Networking and Equipment	9.50	0.5	1.2
Healthcare Services	7.75	0.4	2.1
IT Services	7.60	0.4	0.2
Financial Services	5.57	0.3	0.5
Telecommunications	4.91	0.3	0.4
Total	1,936.50	100.0	4.8

Source: PWC MoneyTree

counts for less than 1% of the total U.S. population. In addition, there are several industries where the East Bay accounts for a disproportionate share of investment. Unsurprisingly, given their strength in the clean-tech sector, the East Bay took in roughly 14.5% of all venture capital investments in the industrial energy sector over the same time period, and maintains above-average shares in the electronic instrumentation, semiconductors, and computer sectors. In addition to attracting a disproportionate share of private-equity dollars in the clean-tech sector, one of the largest recipients of these funds, BrightSource, Inc., is preparing to go public. These trends point to a clean-tech industry that is poised for future success in the region, despite the turbulence surrounding one highly publicized firm's demise.

**Solar vs. Overall Venture Capital Investment
Q4-09 through Q2-11**

Region	Total VC Investment		Solar VC Investment	
	\$ Millions	% of Total	\$ Millions	% of Total
East Bay	1,936.50	4.8	471.32	41.2
San Jose MSA	6,818.70	17.0	214.88	18.8
San Francisco MD	6,386.36	16.0	107.14	9.4
Balance of California	4,832.96	12.1	100.48	8.8
Balance of US	20,058.47	50.1	249.52	21.8
Total	40,032.99	100.0	1,143.34	100.0

Source: PWC MoneyTree

Even with respect to solar, the East Bay still has much to offer. Recent studies show that solar remains poised for growth², and according to the venture capital database produced by PWC and MoneyTree, the East Bay received more than 40% of all investments in the solar industry—none of which went to the troubled firm Solyndra. This dominates the share of investment that went into San Francisco or the South Bay despite that fact that these two markets receive a larger share of funding overall. In fact, the East Bay received more solar funding over the past 18 months than these two neighboring regions combined and surpassed the totals in the remainder of California and the balance of the United States as well. Indeed, as noted, BrightSource (a leading solar developer) is about to launch a public offering and a German solar-related firm just opened offices in the region³, which is a positive indication for the sec-

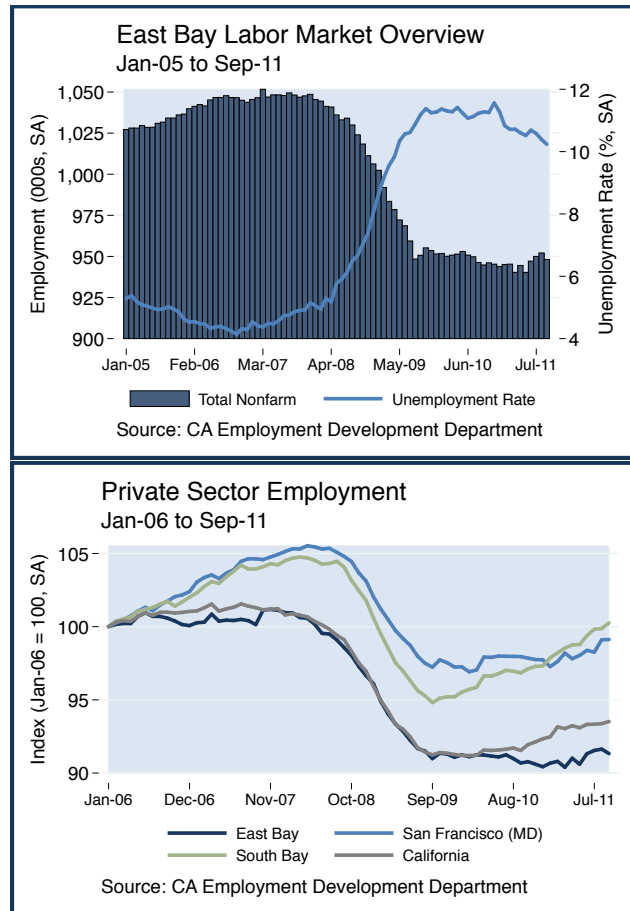
²Michael Martinez, CNN.com, "Solar energy industry posts record growth, despite Solyndra collapse," October 18, 2011, http://articles.cnn.com/2011-10-19/us/us_solar-jobs_1_solar-energy-industry-solar-foundation-solar-business?_s=PM:US.

³Bay Area News Group, "Bay Biz Buzz: Innovation-driven economy, Solyndra, BrightSource, Sonnen Systems," October 14, 2011, http://www.insidebayarea.com/news/ci_19099726.

tor moving forward and shows that the East Bay remains attractive for solar and clean-tech. That is not to say that solar does not face difficulties—the sector will continue to face increasing competition from abroad and there will be pressure to keep prices down—but these are challenges that we expect the industry to be able to meet and all indications are that the East Bay is exceeding expectations in this area.

LABOR MARKETS INCHING FORWARD

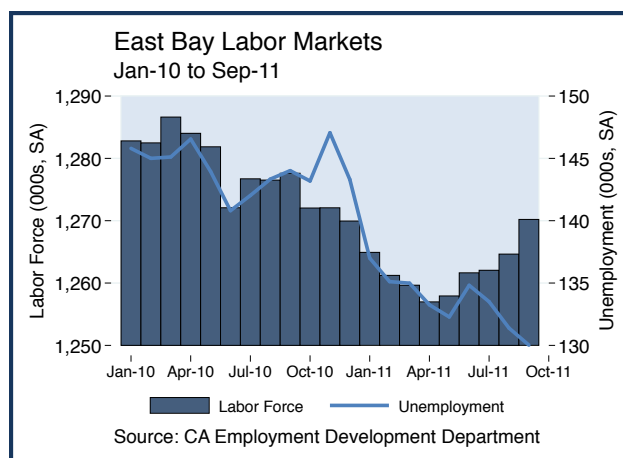
Although based on the nonfarm payroll numbers, East Bay job growth has lagged behind its neighbors to the west and south, the East Bay’s residents have benefitted from the strong job growth in the broader Bay Area as demonstrated by the household employment numbers. According to the payroll employment survey, which asks employers how many employees they currently have regardless of where they live, the East Bay’s job numbers tracked the overall decline experienced by the state during the downturn. However, the region continued to struggle when recovery began to create private sector job growth in California, San Francisco, and the South Bay. In fact, East Bay private sector jobs did not hit bottom until March of 2011—more than a year later. While things clearly remain tough for many people in the region with unemployment elevated and lackluster job growth, it is important to keep in mind that the recovery is moving in the right direction.



However, the household employment numbers, the basis of the unemployment rate, are based on a survey of East Bay residents, regardless of where they work. The payroll and household survey numbers often present differing pictures because a significant number of East Bay residents commute outside the region to take jobs in Silicon Valley, San Francisco, and the North Bay, just as residents of those areas commute into the East Bay for work each day. The house-

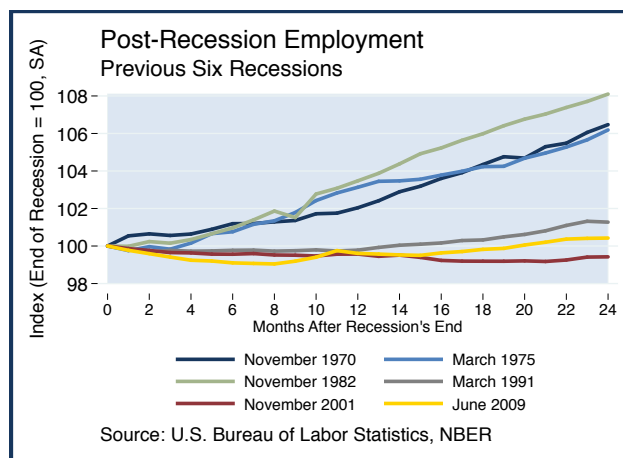
hold numbers show a stark improvement in the employment picture for residents of the East Bay.

Perhaps the most promising statistics from a forward looking perspective are the labor force trends. Between April and September, the labor force in the East Bay expanded each month consecutively on a seasonally adjusted basis—increasing by more than 13,200 in total. This is an important bellwether because it indicates optimism about the prospects of finding work. When discouraged workers stop looking for work, they are no longer counted among the labor force. The



The East Bay saw its labor force contract by over 33,000 between February 2009 and April 2011, but over the last six months have made up more than a third of that ground. Importantly, household employment has expanded by nearly 16,500 over the same period, which indicates that despite disappointing payroll job growth East Bay residents are taking advantage of the recovery in the broader region. Additionally, the number of unemployed residents has fallen by more than 17,000 from its peak in November 2009. Add it all up and these reductions in the unemployment rate are legitimate. The unemployment rate, which at 10.2% is already at its lowest level in over two years, is down more than 1% from its peak.

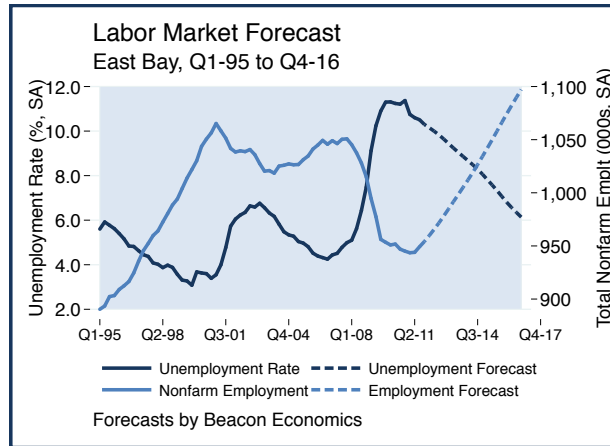
It's also important to remember that the East Bay's private sector has added 5,500 jobs since last year. Certainly this is not enough to repair all the recessionary effects, but it is progress nonetheless. Moreover, the strength demonstrated by many sectors is being partially masked by other sectors that continue to lag behind.



Specifically, Government and Financial Activities have both shed 2,200 jobs relative to last September and Construction is still down 800 jobs relative to last year. Government job losses are not surprising: although taxable sales have rebounded nicely, government budgets remained strained—especially at the local level

given the reduction in property and transfer taxes on top of reduced sales taxes. Financial Activities has yet to rebound despite the fact that equity markets have seen a bounce back into the 12,000 range. However, real estate and rental/leasing firms as well as mortgage brokers and insurance agents continue to be a drag on this sector. Although the residential market has clearly reached bottom, it has yet to post any serious growth in the region. In that context, financial activities could continue to drag on the jobs recovery in the East Bay.

Given today's technological age, where recoveries overall are more jobless because employers are able to substitute technology for workers, and considering the depth and severity of the downturn, this recovery was always going to be slow. Still, Beacon Economics forecasts that job growth in the East Bay will continue through the end of this year and accelerate into 2012 and beyond. By mid-2012, the unemployment rate is expected to fall into the single-digits, but will remain above 8% until mid-2015. By late 2013, the East Bay will move past the 1 million job mark and will hit its previous peak in mid-2015. It will be slow going at first, but the pace of growth will increase as the economy improves.



East Bay Recent Employment Performance

Industry	Sep-11 Empl't (000s)	1-Month Change (000s)	1-Year Change (000s) (%)		2-Year Change (000s) (%)	
Total Farm	1.3	0.0	-0.2	-13.1	-0.1	-8.5
Total Nonfarm	948.1	-4.0	3.3	0.3	-2.6	-0.3
Total Private	784.5	-2.6	5.5	0.7	2.9	0.4
Wholesale Trade	45.4	0.4	3.4	8.1	2.8	6.5
Education/Health	142.8	-2.6	3.1	2.2	5.4	3.9
Professional	82.9	-0.3	1.5	1.9	5.2	6.7
Admin Support	47.5	0.9	0.7	1.5	1.4	3.1
Trans/Warehouse/Util	32.3	-0.1	0.6	1.8	-0.2	-0.7
Retail Trade	99.9	1.6	0.5	0.5	-0.7	-0.7
Manufacturing	77.3	-1.5	0.2	0.3	-3.5	-4.3
Natural Resources/Mining	1.1	-0.1	0.0	0.3	-0.1	-8.0
Management	20.8	-0.1	-0.1	-0.6	-0.3	-1.5
Leisure/Hospitality	85.5	-0.2	-0.4	-0.4	1.2	1.5
Other Services	34.0	-1.5	-0.5	-1.4	-0.2	-0.5
Information	22.8	-0.1	-0.5	-2.3	-2.0	-7.9
Construction	45.9	-0.2	-0.8	-1.8	-5.4	-10.6
Financial Activities	46.2	1.0	-2.2	-4.5	-0.7	-1.5
Government	163.6	-1.4	-2.2	-1.3	-5.5	-3.3

Source: California Employment Development Department

PORTS AND TRADE HOLD STRONG

The majority of the East Bay's job growth has been driven by the strengths of the region itself. For example, the Port of Oakland is a major asset to the region—and with the dollar at its weakest level in decades the Port has seen increased activity. Strong commodity prices have helped to boost agricultural exports through the Port of Oakland by double-digit percentages for two years running.

It is said that California is the world's salad bowl and Oakland's proximity to wineries and farms along the Central Coast and Central Valleys helps the East Bay to take advantage of appetite for agricultural products. High-tech products including machinery and computers, and optic and electrical machinery, are also posting solid gains, highlighting the diversity of the state's economy overall.

Exports by Commodity Type Port of Oakland, Through August

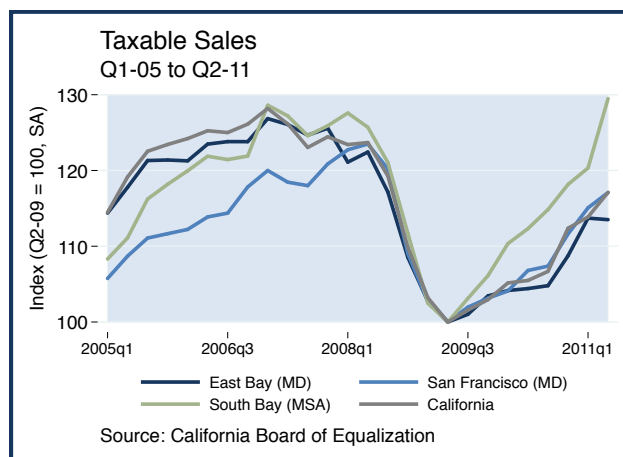
Commodity	Port Exports (\$000s)		Growth Rate (%)	
	2010 YTD	2011 YTD	2009-10	2010-11
Edible Fruit/Nuts/Citrus Fruit/Melon Peel	1,647,353	2,086,268	28.67	26.64
Meat/Edible Meat Offal	1,168,523	1,551,528	21.06	32.78
Industrial Machinery/Computers	622,359	752,003	14.59	20.83
Beverages/Spirits/Vinegar	458,386	548,689	11.78	19.7
Iron/Steel	384,478	526,833	54.48	37.03
Inorg Chem/Prec & Rare-Earth Metals/Etc	419,681	491,689	13.07	17.16
Vehicles/Parts	322,007	452,751	12.52	40.6
Electric Machinery/Sound Equip/TV Equip	447,343	433,993	25.66	-2.98
Optic, Photo Etc, Medic Or Surgical Instrments Etc	243,095	305,227	1.47	25.56
Dairy Prods/Birds Eggs/Honey/Animal Products	209,744	292,600	135.61	39.5
Total	9,639,317	11,630,464	22.26	20.66

Source: Wiser Trade

This has helped to create 4,000 jobs in the Wholesale Trade and Transportation/Warehousing industries in the region. Barring a disaster in Europe associated with sovereign debt issues in Greece and the spread of the financial crisis to other countries, the dollar is expected to remain weak, making U.S. goods and services increasingly attractive to overseas customers—especially in the fast-growing East Asian economies. This bodes well for the East Bay as these sectors will continue to lead the recovery in the region.

HOTELS AND CONSUMERS: GROWTH BUT NOT MANY JOBS

Taxable sales in the East Bay were up by more than 13% in the second quarter relative to last year thanks in large part to healthier balance sheets on the part of households in the region. The recent downturn forced significant deleveraging in terms of both mortgage debt (via foreclosure and mortgage modification) and consumer debt (via genuinely paying down loans and through bankruptcy proceedings). Additionally, savings rates nationwide have rebounded from roughly 1% at the peak of the bubble to the 4.5% to 5% range currently.



These changes have helped consumers feel more comfortable spending again, and that is reflected in the region's taxable sales numbers. And while the growth in taxable sales in the East Bay is slightly lower than in the state overall or in San Francisco and much lower than in the South Bay, it marks a distinct trend toward recovery. We are cautious however as the bump in spending has also been aided by tax rates, which as a percentage of total personal income, are at the lowest levels since the Great Depression. If the government decides to raise taxes substantially over the short run, this could impact consumer spending in the region.

Despite increases in spending, retailers have yet to add many jobs. As noted earlier, part of this is due to productivity gains. Today, businesses are generating roughly \$91,000 in taxable sales per retail worker in the East Bay. This is up by nearly \$10,000 from 2005, indicating employers have clearly learned how to do more with less during the downturn.

Local Sales Tax Revenue East Bay, Q2-10 and Q2-11

Category	Q2-11	Q2-10	Change (%)
Autos And Transportation	177,974,958	165,562,016	7.5
Building And Construction	166,463,589	154,426,210	7.8
Business And Industry	159,494,949	147,702,981	8.0
Food And Drugs	144,386,328	133,112,098	8.5
Fuel And Service Stations	139,040,519	127,901,439	8.7
General Consumer Goods	128,410,066	119,565,432	7.4
Restaurants And Hotels	108,831,854	100,922,381	7.8
Other	99,902,520	92,573,701	7.9
Total	88,987,479	82,781,008	7.5

Source: HdL Comanies

Uncertainty in the marketplace has also played a role in retailers' slow pace of hiring. The Media headlines have blared alarming economic news recently and some top-level numbers that

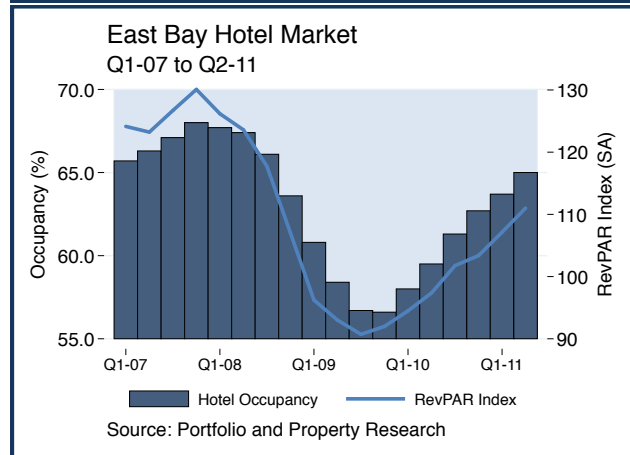
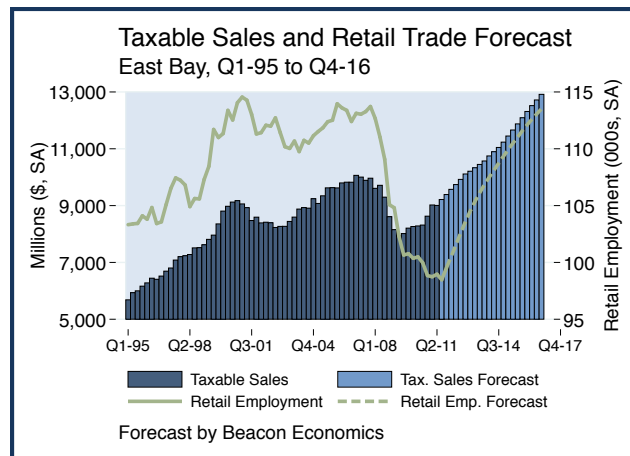
look bad on their surface, actually paint a better picture of the economy once you dig deeper as discussed in the national outlook. With fiscal challenges and debt and deficit impasses a constant issue in Washington, higher tax rates will have to come at some point to address our longer-term issues. All of these issues make employers nervous, even if the economy seems to be gradually improving. Part of their fears about the debt/deficit stalemates are well-founded: If the process of unwinding the nation's unsustainable fiscal position begins too soon, incomes will not have enough time to grow sufficiently to offset those increases. If that happens consumer spending and/or savings rates will be the victim.

In sum, a combination of productivity growth, efficiency and uncertainty about the sustainability of the recovery, partially explains why retailers are waiting for large and sustained increases in demand before making longer-term labor investments. The result is that retail is up only 500 jobs relative to last year. That said, Beacon Economics remains cautiously optimistic and forecasts that consumer spending will continue to improve in the region and that Retail Trade will see job growth begin to accelerate as we enter 2012. Increased employment and income growth will fuel this trend as the economy heals.

Beacon Economics is also forecasting that consumer spending will continue to increase—surpassing its previous peak by the end of 2012. This increased demand will eventually shift employers from a mode of efficiency and productivity enhancements to making longer term investments in new staff. Therefore, expect Retail employment growth

to accelerate in coming quarters, though this sector will only be getting back to its pre-recession peak by the end of Beacon Economics' sample in 2016.

Interestingly, the Leisure and Hospitality sector, which had been posting a fairly consistent employment recovery between March 2010 and February 2011, **began to trend back down-**



ward in March 2011. Consumer spending overall has been trending upward and according to HdL Companies, Alameda and Contra Costa Counties saw sales taxes increase by 6.1% and 8.4% respectively in the second quarter of this year. In addition to generating more sales tax revenues, **the underlying fundamentals of demand for the East Bay's hotels are also trending in the right direction.** Both occupancy and revenue per available room (RevPAR) have risen in each quarter consecutively since the end of 2009. Specifically, RevPAR is up more than 22% from its low point in the third quarter of 2009 and occupancy has risen by 8.4 percentage points from 56.6% to 65.0%.

Despite the fact that this has not led to the creation of many new jobs in the Leisure and Hospitality sector, this bodes well for the region. Increased traveler flows bring additional spending—primarily by business travelers, which generates economic impacts by creating demand for local goods and services. As we've already noted, they also generate a vital source of revenue for county and local governments through sales and use taxes and transient occupancy taxes. And, while hotels and restaurants have been hesitant to add new staff recently, improving occupancy and RevPAR will eventually give way to job growth in the Leisure and Hospitality sector.

HOUSING PICTURE: CONDITIONS TOUGH, BUT IMPROVING

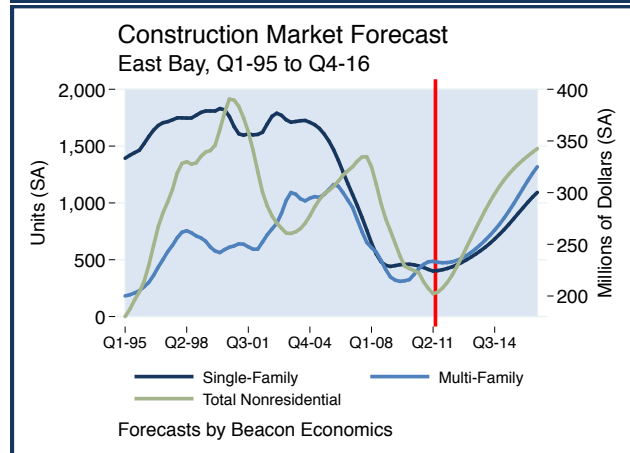
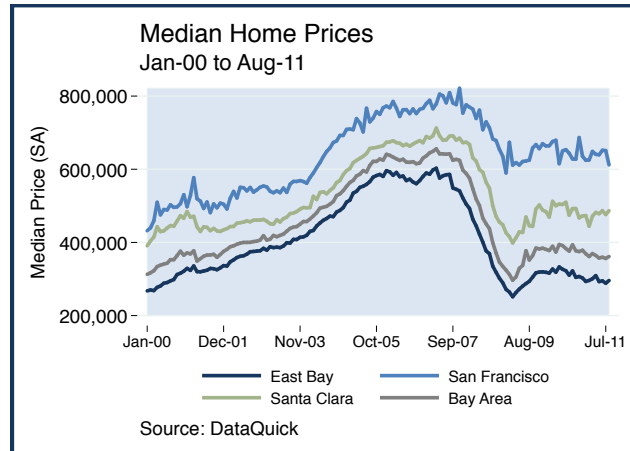
The housing market has yet to see much real price appreciation in the East Bay. However, this is not necessarily a bad thing and in fact the region's housing market is healthier today than it has been in many years. During the bubble, home prices appreciated to a level that was almost unprecedented. This created a large amount of wealth for those who got in early and sold at the top, but for everyone else, the bubble created phantom wealth that homeowners today have already given back.

We know that home prices fell because they were unsupported by income levels in the region. The increase in perceived wealth caused consumers to change their habits, which is why the effects of the downturn were so severe. Since people were feeling asset-rich, they no longer felt it necessary to save, thinking that their homes would finance their retirements. Thus, cash cushions dwindled as the savings rate dropped into the 1% range by the peak of the bubble. At the same time, consumers ratcheted up their spending behavior and combined with falling tax rates, consumption as a percentage of personal income was at nearly record-high levels in the United States.

As home prices began to fall and all that perceived wealth disappeared, many household found that there was simply no “wiggle room” in their budgets and were forced to pull back. This created the cycle of falling output, deteriorating labor markets, and continued decline in housing—each of which reinforced the other.

It is also important to keep in mind that defaults have been trending downward in the East Bay fairly consistently. This is significant because foreclosures are expected to continue to fluctuate as policy decisions create volatility in the flow of those homes back onto the market. However, defaults are the key leading indicator of new foreclosures, and that picture shows that the worst is behind the East Bay.

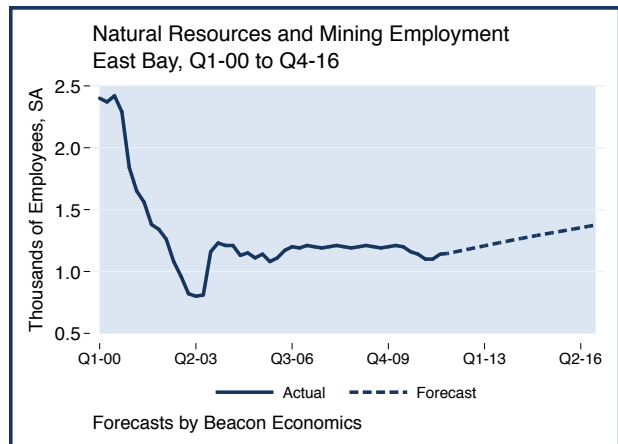
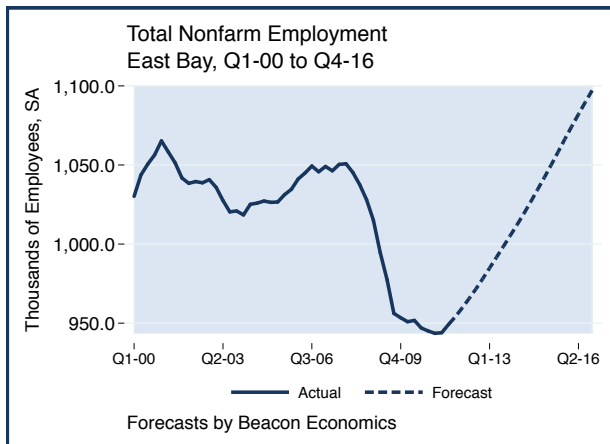
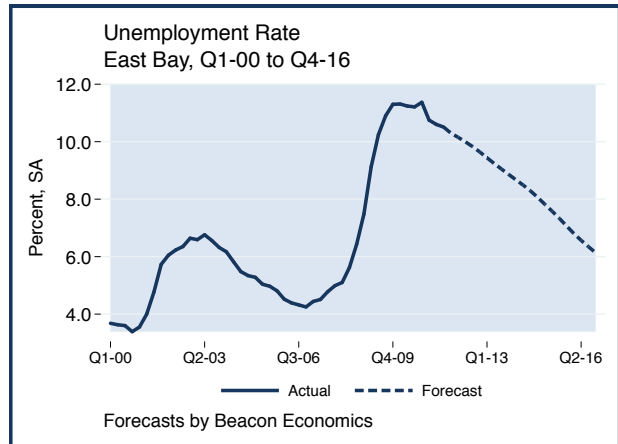
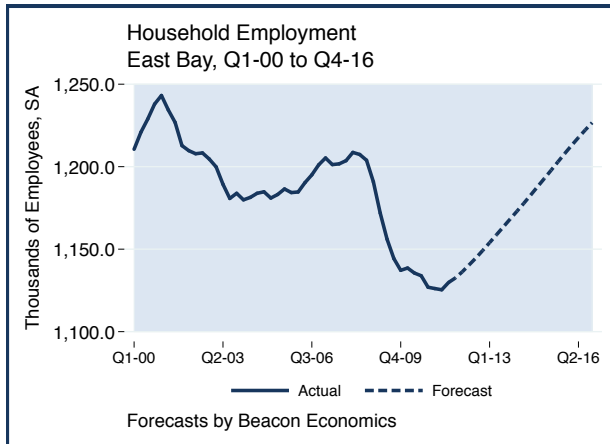
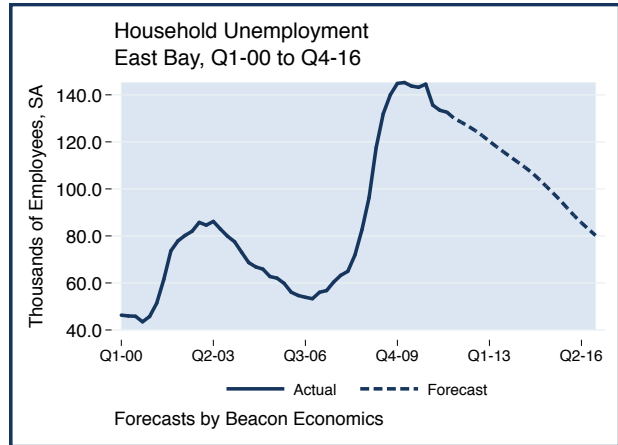
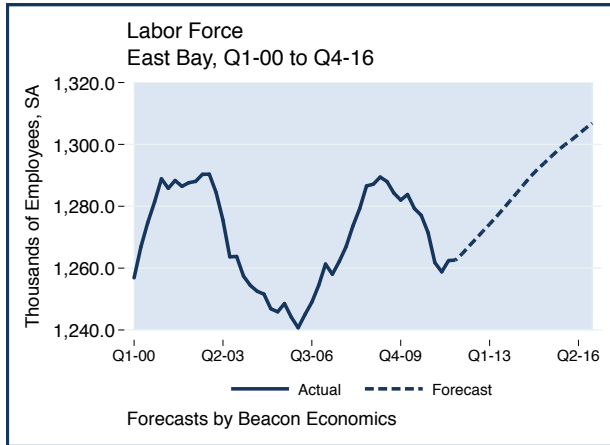
Unfortunately, there are still backlogs of distressed properties that have to work through the system before new construction can begin in earnest. The East Bay has already seen a slight uptick in multi-family construction since the end of the downturn, but it has leveled off in recent quarters. Part of this is due to new requirements for residential permits that involve tougher environmental regulations. This had the effect of borrowing permits forward from the second half of 2011 in late 2010 and early 2011 as homeowners and builders tried to get in before the new laws went into effect. Still, neither California nor the East Bay has enough housing stock to meet future demand so construction will have to resume at some point. Unlike Florida, Arizona, and Nevada, California still has one of the lowest household vacancy rates in the nation

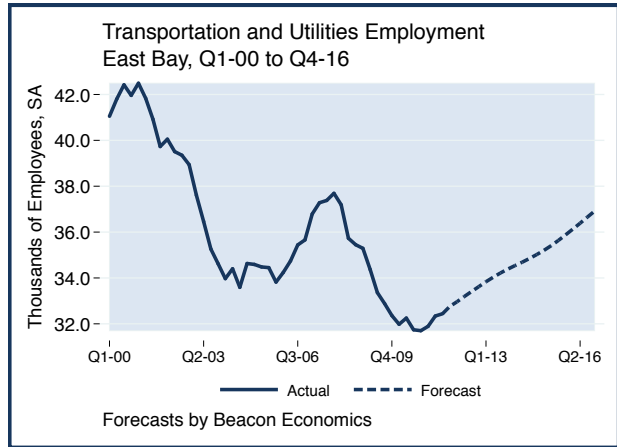
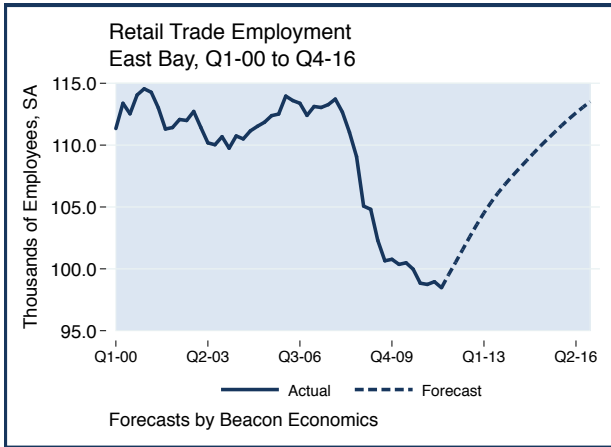
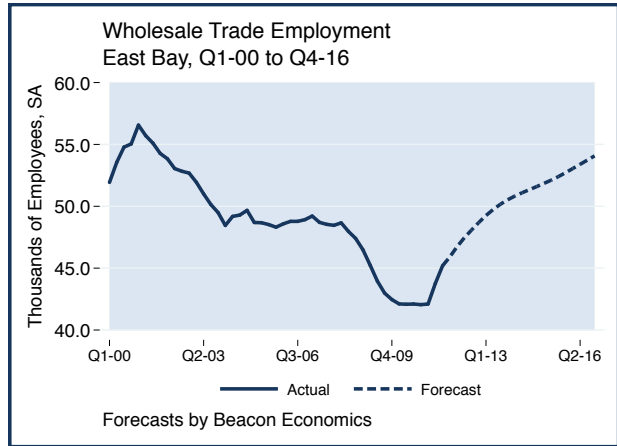
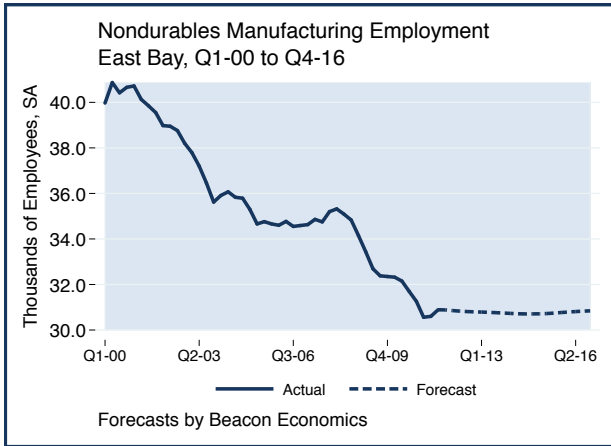
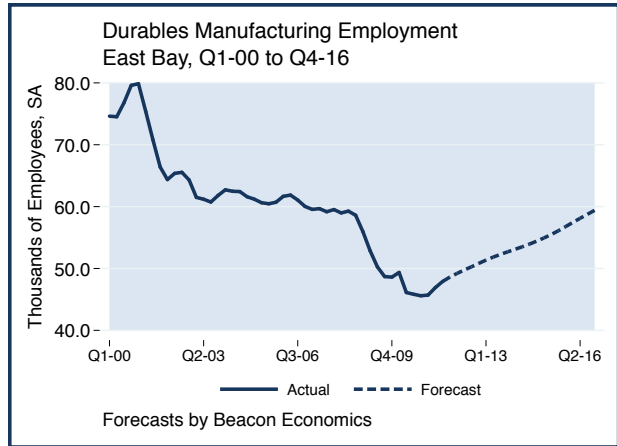
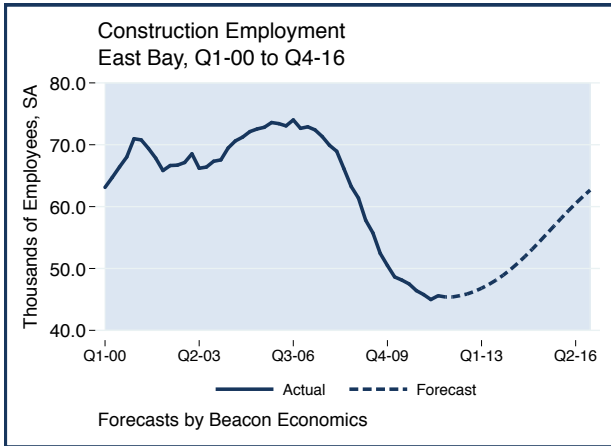


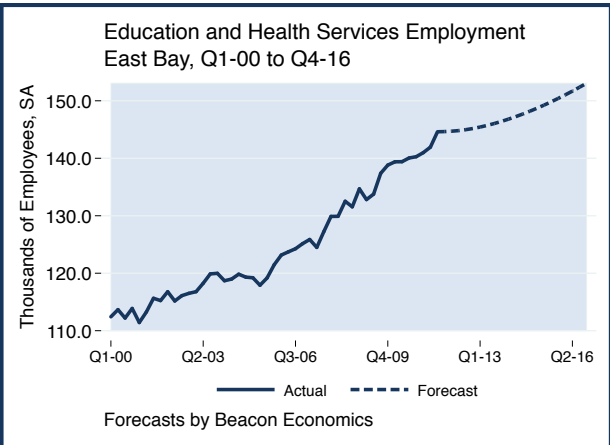
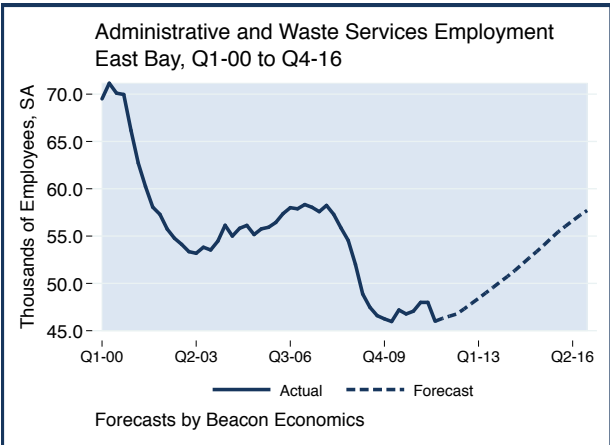
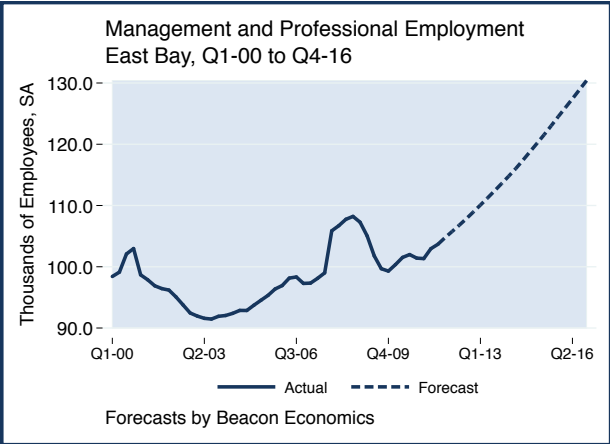
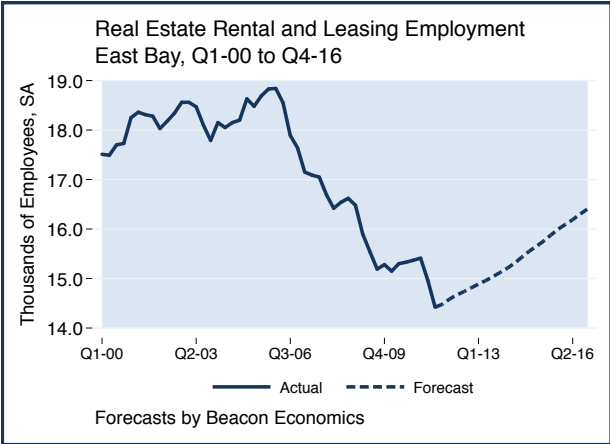
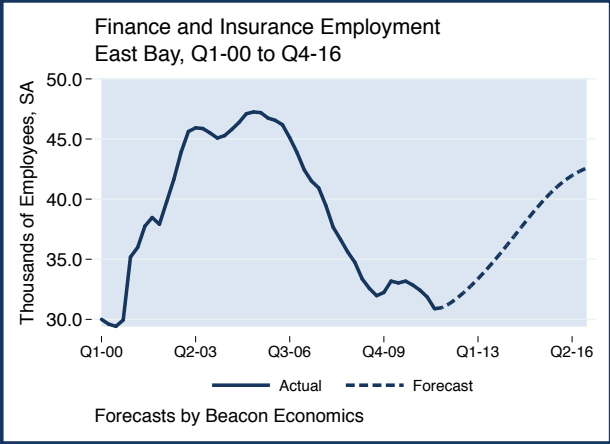
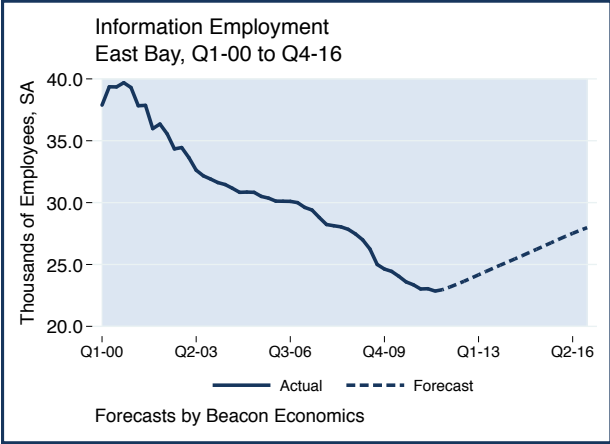
despite all of the building that happened during the bubble. And, as the remaining inventory of defaults and foreclosures are reabsorbed into the market and prices settle into a range that is supported by incomes, this will create a solid basis for East Bay growth moving forward.

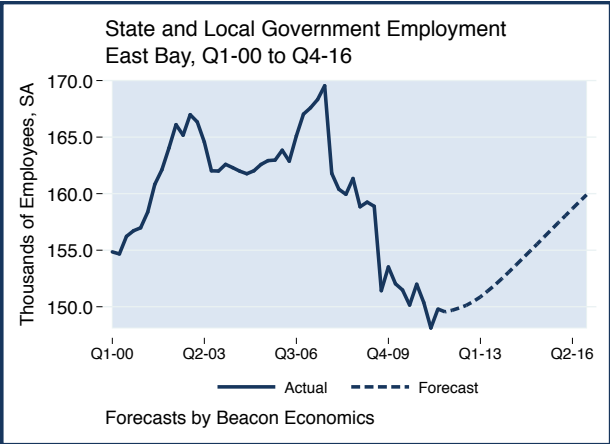
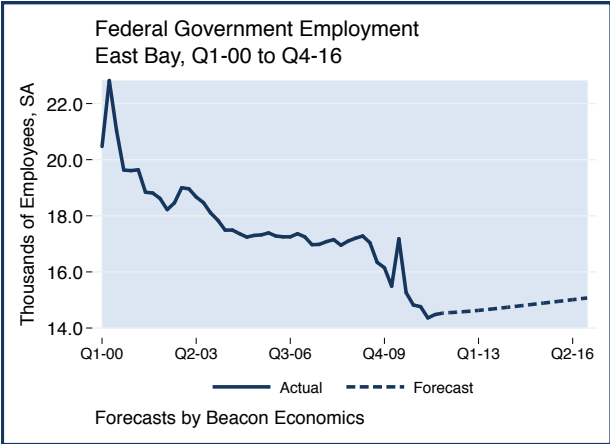
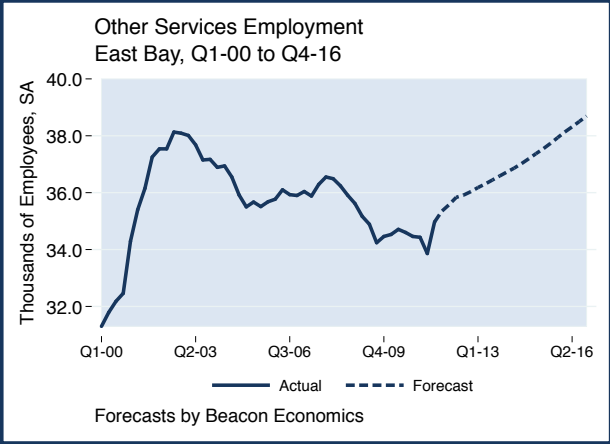
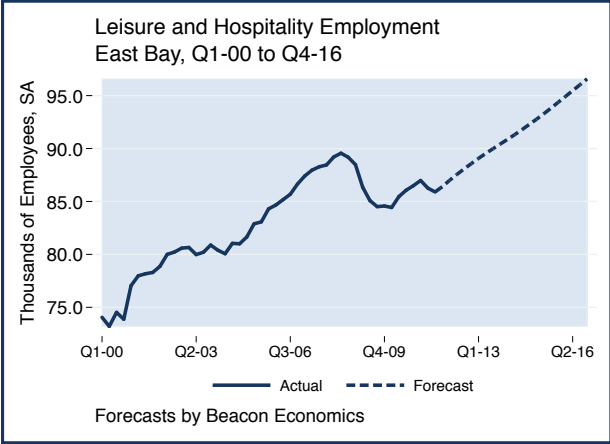
Beacon Economics is forecasting that the housing market in the East Bay will gradually begin to improve in the remainder of 2011 and into 2012. Prices that align with incomes should help prevent prices from falling much further. This affordability combined with rising incomes and a recovering labor market should push home sales higher next year. Later in 2012, and into 2013, the East Bay will start to see modest increases in the growth of home prices. Building permits will continue to increase as the remaining supply is burned off and multifamily is expected to do particularly well in the region. Clearly the worst has passed and the East Bay can begin to grow in a sustainable way, but the peaks reached during the bubble won't be seen again for a long time—which, from a long-run perspective, is for the better.

DETAILED EMPLOYMENT FORECAST









CALIFORNIA ECONOMY

WHY SO SKITTISH?

The biggest fear among today’s media and policymakers is that California’s economy is heading for a double-dip recession. The skepticism about the current economy stems in part from the severity of the Great Recession, which took a huge psychological toll on California’s residents and policymakers alike. In some sense, the state went from a mode of denial about whether the bubble would ever burst (and force a correction to the key imbalances that had built up over several decades), to a mode of hysteria about whether the recovery would ever materialize.

California's Recessionary Effects
Peak-to-Trough Decline, Selected Indicators

Category	Decline
Jobs Lost (000s)	-1,366.40
Home Price Decline (%)	-57.1
Taxable Sales Decline (%)	-22.2
Residential Permit Decline (%)	-84.8
Nonresidential Permit Decline (%)	-56.6

Source: Calculations by Beacon Economics

When you take stock of the damage done during this downturn, it is easy to see why Californians are so apprehensive. There is a big hole in our economy: whether you are looking at the nearly 1.4 million jobs lost, the 57% decline in home prices, or the 22% decline in taxable sales, it’s clear that California was hit hard by the recession. Many of the jobs lost were in retail and construction—sectors that are expected to lag the recovery, therefore leading to a lot of uncertainty among that segment of the unemployed. But the recessionary effects were fairly widespread, extending beyond retail and construction, with financial markets and banks also highly affected by the bursting of the bubble. This cocktail of declines in employment, consumer spending, home prices, and asset values over the past few years has left little for Californians to feel hopeful about in the absence of positive news.

On top of these psychological effects, the first half of 2011 saw several key data releases that led many in the media to fear the worst. This pessimism about the recovery first kicked off when the S&P/Case-Shiller home price index showed weakening home prices across the nation. Suddenly, grim headlines were increasingly splashed across the local daily newspapers. Mortgage

News Daily looked at the data and concluded, along with many others, that “Case-Shiller Data Confirms Double-Dip in Home Prices.”⁴

U.S. Real GDP Growth & Contributions to Growth						
Component	Q1-10	Q2-10	Q3-10	Q4-10	Q1-11	Q2-11
Gross Domestic Product	3.90	3.80	2.50	2.30	0.40	1.00
Consumption	1.92	2.05	1.85	2.48	1.47	0.30
Durables	0.70	0.56	0.63	1.20	0.85	-0.40
Nondurables	0.75	0.30	0.47	0.67	0.25	0.07
Services	0.47	1.18	0.75	0.61	0.36	0.64
Gross Domestic Investment	3.25	2.92	1.14	-0.91	0.47	0.78
Structures	-0.76	0.18	0.10	0.26	-0.40	0.38
Equipment/Software	1.32	1.45	0.94	0.56	0.60	0.55
Residential	-0.41	0.50	-0.76	0.06	-0.06	0.08
Change in Inventories	3.10	0.79	0.86	-1.79	0.32	-0.23
Net Exports	-0.97	-1.94	-0.68	1.37	-0.34	0.09
Exports	0.86	1.19	1.21	0.98	1.01	0.41
Imports	-1.83	-3.13	-1.89	0.39	-1.35	-0.33
Government	-0.26	0.77	0.20	-0.58	-1.23	-0.18
Federal	0.23	0.71	0.26	-0.26	-0.82	0.16
State/Local	-0.49	0.05	-0.06	-0.33	-0.41	-0.34

Source: U.S. Bureau of Economic Analysis

Next were the national economic releases, which showed that after fairly robust growth in 2010, real GDP growth slowed to less than 0.4% in the first quarter of 2011 and to 1% in the second quarter. On top of that, a weak national employment report in August showed the unemployment rate holding steady at 9.1% after the country added no jobs from July. Indeed, here in California the unemployment rate remains in double digits, with only modest improvements from its peak.

Finally, the summer was capped off by the debt-ceiling debacle, with politicians playing a game of economic chicken over our willingness to meet our short-term obligations. The standoff created a great deal of uncertainty in the marketplace, and both businesses and consumers sat on the sidelines wondering what would come of the debate. Combined with the natural disaster in Japan, which had a significant impact on auto sales during June and July due to supply chain disruptions, these events caused us to see some rather weak performances in the consumer accounts in the second quarter.

Still, as bad as the news has been recently, a double-dip recession requires the double D’s: drivers and data. In the run-up to the recession, we had an ample supply of both. The drivers of the Great Recession were the fundamental imbalances in the housing, consumer, and finan-

⁴Graham, Matthew, “Case-Shiller Data Confirms Double-Dip in Home Prices,” Mortgage News Daily, May 31, 2011, http://www.mortgagenewsdaily.com/05312011_case_shiller.asp.

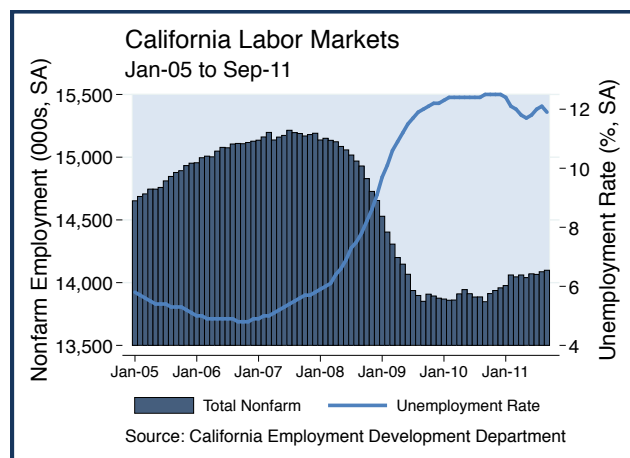
cial markets. Home prices were growing too fast relative to incomes, and consumers' financial institutions were spending too much and taking on excessive amounts of debt. Not only did we have the drivers, but the data supported a recession as well. Defaults and foreclosures started rising dramatically and the securitized real estate loans began suffering losses. The subsequent effects on the financial markets precipitated the housing and financial crisis and led to a major pullback on the part of consumers. This time around, Beacon Economics cannot find either the data or the drivers that would suggest that a double dip is imminent. In the next section, we review the data and discuss why a second recession is not an immediate concern.

DOUBLE-DIP: FACT OR FICTION?

Despite the double-dip hype in the media, the view at Beacon Economics is that the recovery continues to plug along, though not at the pace that we would like to see. This recovery was always going to be a slow one. California had one of the largest housing and consumer spending bubbles in the nation and has since suffered one of the largest downturns relative to most other states. That said, most of the indicators show that the state continues to recover from the Great Recession.

Take the labor markets as a prime example. We've heard the term "jobless recovery" in the past, and this is certainly a feature of the new economy—in response to weakening demand conditions, employers cut back on their workforce and squeeze as much productivity and efficiency as possible from those who remain. The advent of computers, robotics, and other high-technology products make this more possible for businesses than ever before. Indeed, we can see a marked difference in employment recoveries in the last three recessions compared with earlier recessions.

Nonetheless, California's labor markets are moving forward. In terms of total nonfarm employment, the state has added back more than 225,000 jobs since reaching bottom in 2010. Obviously this is a small number of jobs in relation to the total job losses we suffered, but it is a far cry from a continued decline. The unemployment rate does remain stubbornly high—12% on a seasonally adjusted basis in July. However, even on that front California is making progress, with the rate down



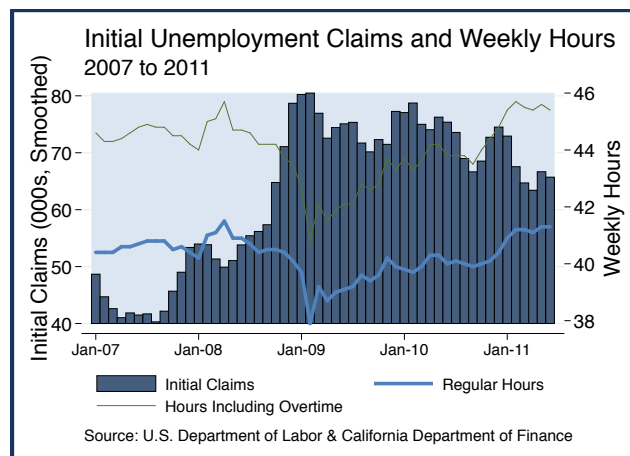
from its peak of 12.5%. And we know that labor markets are traditionally a lagging indicator of economic activity, so it is not surprising that we have yet to see employment take off.

Importantly, the leading indicators continue to show that California's economy is improving. For example, with 56,000 initial claims for unemployment insurance over the last 3-week period in August, California remains well below the 83,000 initial claims for unemployment that were filed during the heights of the recession. In addition, weekly hours of work in the manufacturing sector continue to rise. According to the California Department of Finance, the average work week hit 41.3 hours in the most recent data available, which is the highest level since before the recession began. For existing workers, this has created some overtime opportunities, averaging roughly 4 hours per week. These statistics show that although the news has been rather grim, businesses are continuing to place high demands on their existing workforce. Eventually, these increases in productivity will give way to increased employment as employers reach the limit of what can be extracted from existing workers.

It's not only the labor markets that give us optimism about the recovery going forward. There have also been noticeable improvements in several sources of demand. Chief among these are exports. California has always been an export state, due in part to its ports and its access to the faster-growing economies in East Asia. However, California also produces the high-technology products and services that have continued to do well in the new economy. This includes pharmaceuticals, intellectual property, biotechnology products, industrial machinery, and computers.

In fact, on a year-to-date basis, California's exports continue to do well, rising 12.7% over this time last year. The boost in exports has been led by our technology products (electrical and industrial machinery, and photo/optic/medical equipment), though our agricultural sector has been posting strong gains as well.

Because the dollar has weakened during the downturn, California's exports have grown even more attractive in overseas markets, and this trend is evident in the uptick in California-made exports. Currently, the real U.S. exchange rate measured against a broad basket of currencies is at its lowest level in over three decades. As the price of our currency falls, California's goods



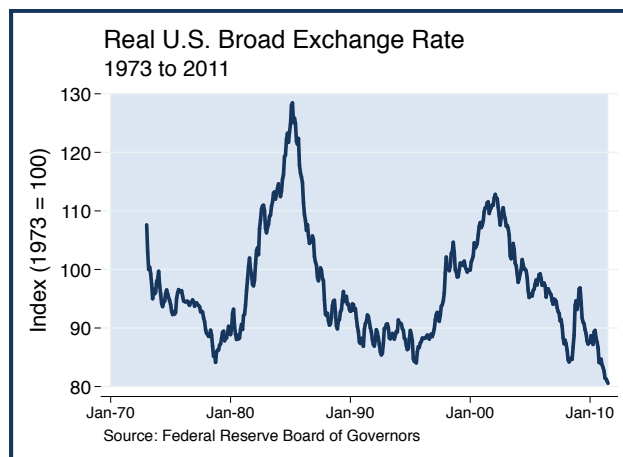
California-Made Exports by Commodity Type
Values in \$000s

Commodity	2010 YTD	2011 YTD	Percentage Change	
			2009-10	2010-11
Electric Machinery/Sound Equip/TV Equip	15,409.83	16,338.39	19.74	6.03
Industrial Machinery/Computers	13,748.84	15,373.03	32.26	11.81
Optic/Photo/Medical/Surgical Instrmnts	8,970.25	9,710.30	18.78	8.25
Natural Resources/Precious Metals	3,339.90	4,168.30	63.29	24.80
Edible Fruit & Nuts/Citrus/Melon	3,467.31	4,038.68	21.05	16.48
Vehicles/Parts	3,476.14	3,995.70	13.24	14.95
Aircraft, Spacecraft, & Parts	3,389.63	3,861.90	-10.49	13.93
Mineral Fuel/Oil/Bitumin Subst/Mineral Wax	2,483.13	3,172.57	23.03	27.76
Plastics	2,335.90	2,586.14	16.98	10.71
Pharmaceutical Products	2,248.61	2,363.62	13.59	5.11
Total	80,345.11	90,527.84	19.25	12.67

Source: Calculations by Beacon Economics

become increasingly competitive on global markets. Given that the state produces goods that are in demand overseas, this should continue to bolster the state’s recovery moving forward.

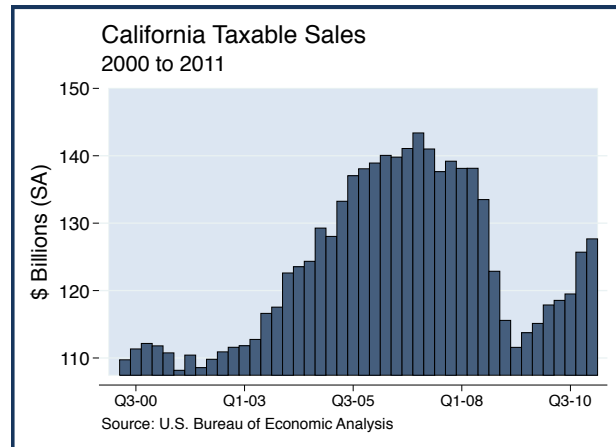
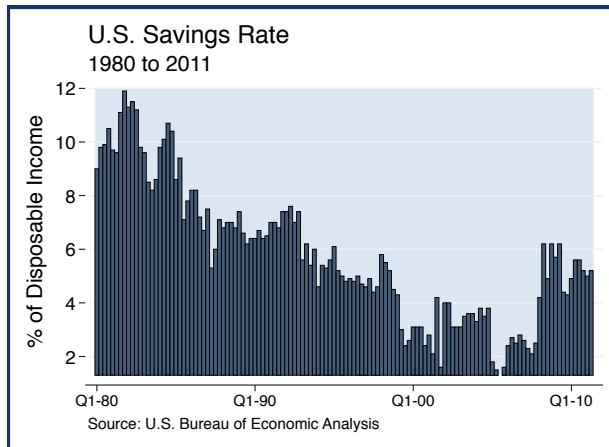
Another positive sign for the state is that consumers are beginning to feel comfortable about opening their wallets again. In the run-up to the bubble, many households felt so asset-rich that they stopped saving for the future. In the minds of many, the surge in home equity and the value of their stocks were sufficient to finance their retirements. As a result, we saw savings rates fall from more than 10% in the 1980s to less than 1% by the peak of the market. As the downturn gained steam, many consumers realized that a zero-savings cushion did not provide the flexibility required to deal with economic fluctuations; they pulled back sharply and began saving again.



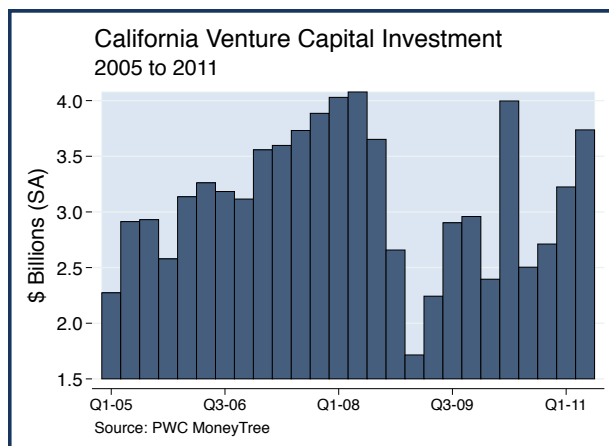
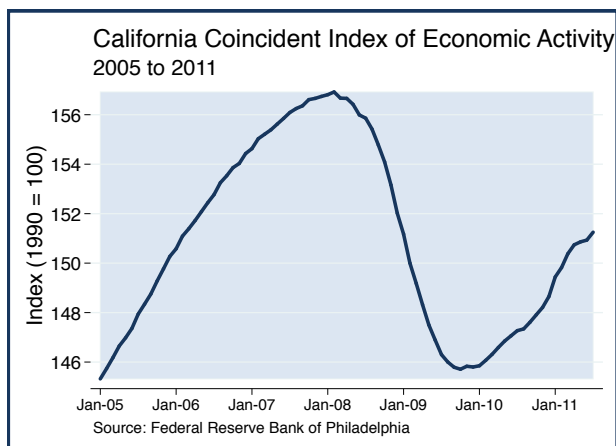
California Sales Tax Revenue Allocations by Type Adjusted for Economic Factors

Category	2010 Q1	2011 Q1	% Change
Autos/Transportation	142,127,742.99	160,995,259.81	13.28
Building/Construction	73,706,220.14	77,746,769.87	5.48
Business/Industry	157,200,542.93	166,949,888.87	6.20
Food/Drugs	68,035,978.14	70,137,400.70	3.09
Fuel/Service Stations	120,414,739.67	147,124,997.79	22.18
General Consumer Goods	264,529,997.88	277,841,051.13	5.03
Restaurants/Hotels	132,645,507.83	140,970,581.08	6.28
Total	1,075,443,136.83	1,174,103,828.18	9.17

Source: HdL Companies



Currently, savings rates have popped back into the 5% range, which is still probably not enough, but household balance sheets are in much better shape than when the recession began. This is showing up in the state's numbers on consumer spending, which have risen consistently for several quarters consecutively. Although the data for the second quarter of 2011 are not available yet, taxable sales rose by more than 14% from the trough in the second quarter of 2009. Most of these gains have come from spending on automobiles and on general entertainment, with restaurants posting solid gains in the first quarter of this year. However, the state is also benefiting from increased business investment. Specifically, the business and industry category posted a 6.1% year-over-year gain in the first three months of 2011. Given that consumers are such a large part of the economy, this increase in spending should help to bring about increased economic growth as California moves forward.



In fact, we’ve already seen these trends contribute to overall economic growth in the state. According to the Federal Reserve Bank of Philadelphia’s coincident index of economic activity, California’s economy is indeed on the mend. In total, it is estimated that the state has added back roughly 3.8% of its economic output since reaching bottom in October 2009. The index does show California well below its 2008 peak, but the state has seen 19 straight months of uninterrupted growth. Although the labor markets in particular are leaving much to be desired, this is not an indication of a double dip in the economy but rather an indication of rising efficiency and rising productivity—as well as a rising skills mismatch that we will discuss below.

There have been some concerns about broader macroeconomic conditions recently, with real GDP growth slowing in the first half of 2011. Our view is that this below-average growth was temporary—mostly associated with (1) supply chain disruptions related to

California Venture Capital Investment % of Total, Q2 2011

Sector	% Share
Software	24.1
Medical Devices and Equipment	15.0
IT Services	11.9
Biotechnology	9.7
Media and Entertainment	9.6
Industrial Energy	8.3
Semiconductors	7.6
Consumer Products and Services	2.7
Networking and Equipment	2.1
Business Products and Services	1.8
Electronics Instrumentation	1.6
Telecommunications	1.5
Computers and Peripherals	1.3
Financial Services	1.3
Healthcare Services	0.9
Retailing and Distribution	0.5
Other	0.2
Total	100.0

Source: PWC MoneyTree

natural disasters in Japan and the Midwest, which caused auto sales to take a tumble, (2) the political game of chicken that defined the debt-ceiling debate, which created a sense of uncertainty among both businesses and consumers, and (3) the erosion of purchasing power fueled by the spike in oil prices, which have already begun to come down. Despite the transitory nature of these phenomena, policymakers and the media have all pointed to these events as a sure sign that a double-dip recession is imminent. The view at Beacon Economics is actually quite the contrary. Despite this turbulence, the underlying indicators of demand have yet to drop off despite what you read in the newspapers.

When one looks to the private equity markets, many in the industry are still “betting” on California. According to a joint project between PWC and MoneyTree, venture capital investment is on the rise. Since hitting a low of \$1.7 billion in the first quarter of 2009, new venture capital investment has risen sharply—nearly 118%. We have another cause for optimism about California’s future when we see where these funds are being directed. Specifically, four sectors took home more than 60% of all the venture capital funding in the state last quarter: the software, medical devices and equipment, IT services, and biotechnology industries. These are sectors that play to California’s strengths in that they require a highly skilled workforce and access to overseas markets for future growth. As the economy heals, having a concentration in these sectors will help California resume the strong growth trajectory that it exhibited before the downturn.

THE REAL CULPRIT—SKILLS MISMATCH

Although we believe that fears of a double dip have been largely overblown in the media and that there are reasons to be cautiously optimistic about a sustained recovery, there are nonetheless several factors preventing California from experiencing faster growth. The most serious problem is the skills mismatch in the labor market. To be more specific, there is a real dichotomy between the skill sets of the workers in those sectors that were pummeled by the downturn and the skill sets required by the sectors that are leading California out of the recovery. On a proportional basis, construction, real estate, and retail trade were among the hardest-hit sectors in the region in terms of job losses. These sectors traditionally have low education requirements and pay relatively low wages, which are two of the predominant characteristics of our unemployed population.

The Annual Social and Economic Supplement to the Current Population Survey (CPS) allows us to examine the characteristics of the employed and unemployed populations in California. Given that the consumer-oriented and housing-oriented sectors suffered the most during the

**California Unemployment by Industry
2010 Current Population Survey**

Industry	Employed	Unemployed	Unemployment Rate (%)
Agriculture, forestry	395,361	209,439	34.6
Construction	1,137,637	244,155	17.7
Transportation and utilities	689,358	130,142	15.9
Other services	1,025,837	190,259	15.6
Wholesale and retail trade	2,395,685	392,817	14.1
Leisure and hospitality	1,437,273	234,077	14.0
Manufacturing	1,446,132	204,776	12.4
Information	482,804	60,392	11.1
Financial activities	1,078,028	115,255	9.7
Educational and health services	3,300,270	264,470	7.4
Professional and business	2,003,732	116,383	5.5
Public administration	636,122	31,106	4.7
Total	16,028,239	2,193,271	12.0

Source: National Bureau of Economic Research

recession, it is no surprise to see that these sectors are exhibiting the highest unemployment rates in the state, while the sectors that have been performing relatively well have maintained much lower levels of unemployment. According to the 2010 statistics, the unemployment rates for construction, wholesale and retail trade, and the household sector (other services) are showing unemployment rates ranging from 14% to nearly 18%, which are much higher figures than the statewide average for all sectors. On the other hand, education, and professional and business services are far below the state average, with unemployment rates in the single digits. If we want to plan for future growth, it is important to realize that the sectors with high rates of unemployment account for more than one-third of all the unemployed workers in California. Getting these folks back to work is a big part of bringing down California's unemployment rate—though this is much easier said than done.

In addition to letting us pull out unemployment statistics by industry, the CPS also allows us to look at unemployment by education level, which highlights some important challenges that our state will face going forward. The most recent data for 2010 shows that Californians with the lowest levels of educational attainment are being disproportionately affected by the downturn, while the most highly educated residents are maintaining “normal” levels of unemployment. More than 17% of all adults over the age of 25 who have less than a high school diploma were unemployed last year, compared with roughly 5% of all Californians with a graduate or

**California Unemployment by Education
2010 Current Population Survey**

Education	Employed	Unemployed	Unemployment Rate (%)
Less than HS	1,923,102	409,726	17.6
High School	3,087,210	346,450	10.1
Some College	3,523,567	510,446	12.7
Bachelors Degree	3,774,069	317,492	7.8
Grad./Prof. Degree	1,838,829	100,481	5.2
Total	14,146,776	1,684,595	10.6

Source: National Bureau of Economic Research

professional degree. Not only do the less educated suffer from higher rates of unemployment, but they are a much larger group than Californians with graduate degrees. Residents without a college degree constitute more than 75% of the unemployed.

This represents a serious issue for both the short-term prospects and the long-run growth of California's economy. Earlier, we discussed some of the bright spots in the state's recovery, from trade in high-tech goods and intellectual property to new developments in biotechnology and software. California is indeed adding jobs: more than 225,000 since late 2010; but almost half of these jobs have been in the professional and business services or education and health industries. It is very difficult to take advantage of growth in these sectors without a college degree. It's true that some of the jobs in administrative support and in education and health care do provide some jobs for those on the lower end of the educational-attainment scale, but these industries are dominated by jobs that require some postsecondary training.

Of course, policymakers cannot wave a magic wand and grant every Californian a college degree. But that does not mean that we should ignore the skills mismatch that is currently bogging down the state's recovery and jeopardizing the long-run growth in sectors that, up to now, have been the centerpiece of California's "new economy." The current budget woes certainly do not make things any easier, but these simple statistics would suggest that we need more focus on education, not less.

This means requiring better quality results from our K-12 system, which will require investments at a time when K-12 spending is on the chopping block. This also means that we will need to fill our universities with more Californians, even though the state can collect more money from out-of-state students. California needs to expand enrollments and provide more assistance to lower-income students. And not everyone wants or needs a four-year degree,

**California Unemployment by Age
2010 Current Population Survey**

Age	Employed	Unemployed	Unemployment Rate (%)
25 or Less	2,221,619	522,260	19.0
26 to 35	4,112,447	371,910	8.3
36 to 45	3,454,542	545,583	13.6
46 to 55	3,503,335	492,566	12.3
56 to 65	2,095,266	209,710	9.1
66+	655,150	51,240	7.3
Total	16,042,358	2,193,271	12.0

Source: National Bureau of Economic Research

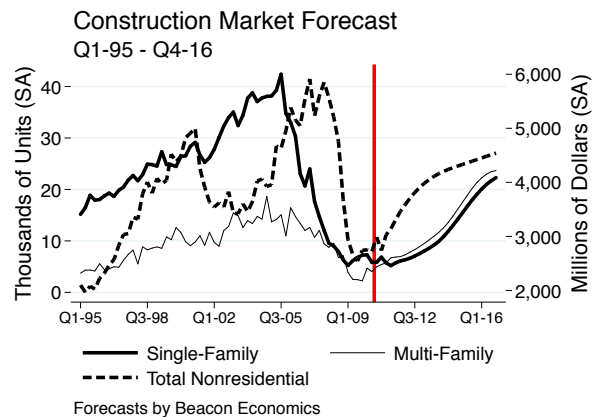
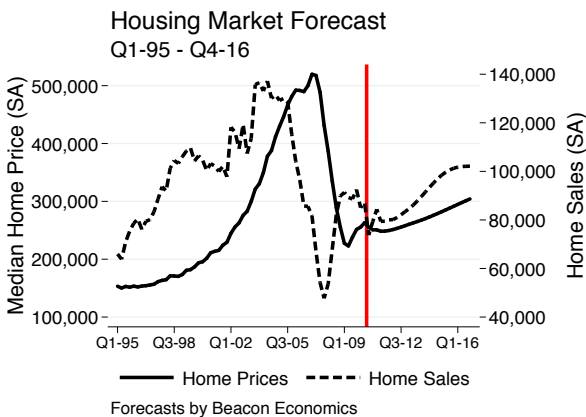
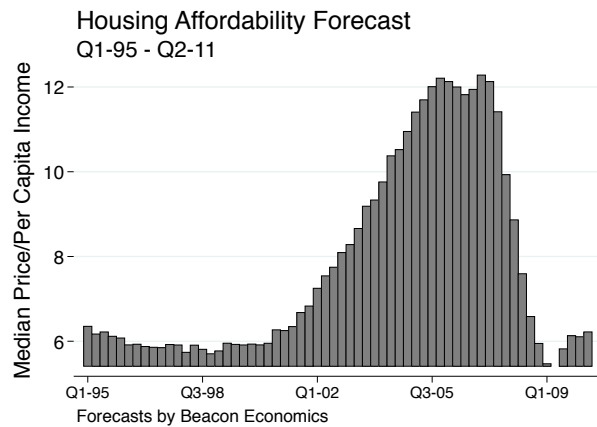
which is why our community college system can play a critical role—especially over the short-run—in providing professional development opportunities in certificate or other training and retooling programs that would allow students to take advantage of the jobs that are in demand. Of course, accepting in-state fees and providing more financial assistance will strain the paper-thin budgets of the university system, and new and expanded community college programs will require new resources to be effective, but the costs of failing to make higher education available for California residents will be even more expensive in the long run if the state doesn't take steps to address these challenges today.

Roughly two out of five unemployed Californians are 35 years old or younger. For these folks, retooling and learning a new trade is well worth the investment relative to a lifetime of higher earnings. For the 56-and-over crowd, retooling can be a more challenging prospect. However, there will always be demand for lower-skilled workers in California. Although retail, construction, and real estate are not expected to lead the economic recovery, they will begin to add jobs eventually. California specifically has a long-term need for additional housing units given that we have one of the lowest housing vacancy rates in the nation. And California's idyllic climate and treasure trove of destination spots will ensure that it continues to draw tourists from around the world, which will create increased demand for the retail, and leisure and hospitality sectors. However, if we do not address the skills mismatch, then the healing process will take that much longer and the ability of California to thrive in a knowledge-based economy will be hampered.

FORECAST HIGHLIGHTS

The outlook for California remains positive. The media hype suggesting the onset of a second, more severe downturn is largely overblown—the state is lacking both the drivers of a new collapse and the data to show that one is coming down the pike.

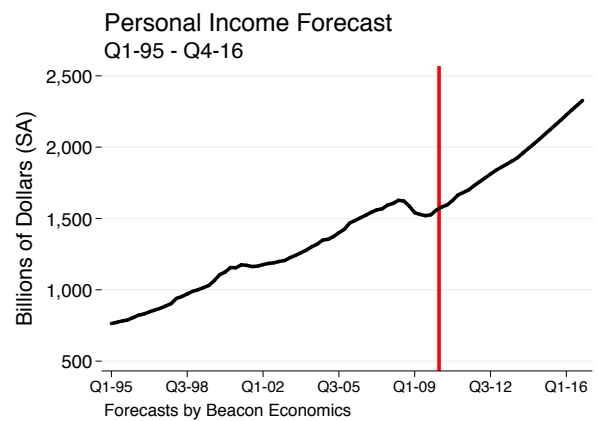
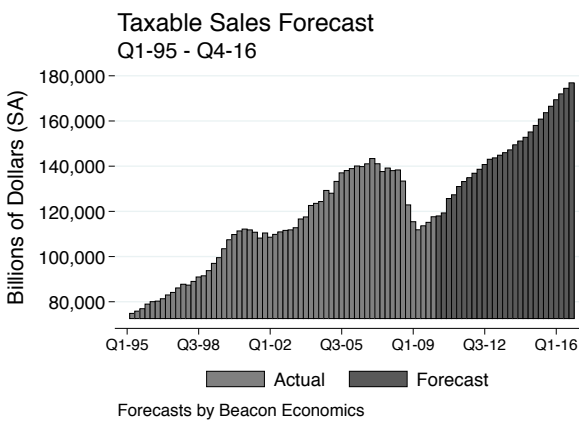
The housing market is a prime example. Despite the precipitous decline in home values when the housing bubble burst, California’s housing market is healthier today than it has been in many years. Home prices have been driven primarily by incomes in the state, averaging between six and seven times per capita income over the last several decades. It’s important to note that this ratio is skewed somewhat by the inclusion of non-homeowners, who traditionally drive the per capita income figures downward. Still, this was a relatively stable range from the mid-1970s through the turn of the century. During the housing bubble, home prices shot up to more than 12 times per capita income—a level that was clearly unsustainable. As painful as the downturn in prices has been for many Californians’ individual balance sheets, home prices have returned to a level that makes sense.



As a result, Beacon Economics is forecasting that home prices will begin to grow slowly as the year draws to a close, but that growth will be tepid at best. In 2012, we will see home price appreciation accelerate gradually, rising by between 1% and 2% on a year-over-year basis. The

affordability of homes and a slowly healing labor market will drive sales higher next year, averaging roughly 80,000 sales per quarter before climbing into the 90,000 range by late 2013.

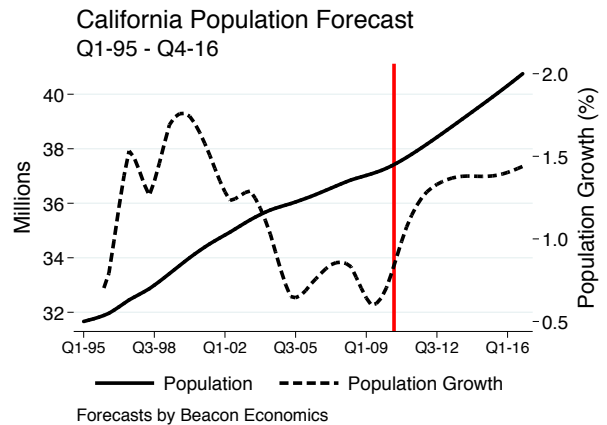
New home construction will need to wait awhile before growth begins in earnest. Yet here, too, we see reasons for optimism. Both defaults and foreclosures have been trending downward for several quarters. They remain elevated, but the market is being allowed to reabsorb these units as both rental housing and ownership housing. As this inventory is processed through the system, there will be a demand for housing in the state. According to the U.S. Census Bureau, California has one of the lowest housing vacancy rates in the nation at 5.9% for renters and 2.3% for homeowners. Thus, unlike other states, such as Florida, Nevada, and Arizona, which overbuilt during the bubble, California does not have enough housing. As these distressed properties are cycled through the system and as the economy continues to heal, new households will begin forming at a faster pace. This will lead to additional residential construction in the coming years. Beacon Economics is forecasting that the next 18 months will be slow, with the state seeing between 12,000 and 18,000 new units permitted per quarter. By 2013, California should see permitting increase, ranging from 80,000 to 90,000 per year. This will create some much-needed construction jobs in the state, but patience will be critical as the remaining problems left over by the downturn work their way through the market.



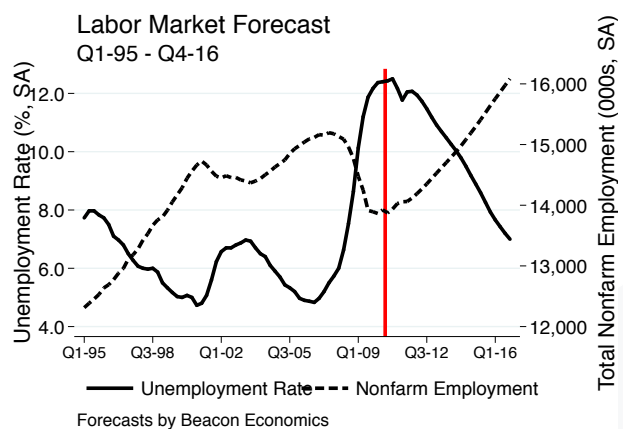
On the consumer side, the numbers will continue to improve. Income has already begun to rise and has surpassed its previous peaks after turning the corner in late 2009. On a per capita basis, incomes are improving as well. Based upon updated population figures from the 2010 census, Beacon Economics estimates that per capita income is above \$44,000. Rising incomes, combined with healthier balance sheets on the part of households, have already driven solid increases in taxable sales over the past 18 months. Through the first quarter of 2011, taxable sales had added back more than 14% of their 2009 trough, and we expect to see continued

growth through the rest of 2011. By 2013, taxable sales will exceed the previous peak and will see growth accelerate through the end of our forecast in 2016.

California's population is expected to see continued growth. Traditionally, California experiences significant downward pressure on population during times of economic turmoil as potential new residents forego a move to the state due to high levels of unemployment. Our own residents can also be attracted to neighboring states in hopes of finding better opportunities. This time around, the recession was broad based, both across sectors and across geographies. As such, the incentive to move has been moderated by the fact that labor markets in many other states are lagging—especially those of our closest neighbors in Nevada and Arizona. And, with home affordability at very high levels, due to both low home prices and relatively low interest rates on home mortgages, the timing has never been better for California to attract new residents from the rest of the U.S. and around the world. Therefore, Beacon Economics is forecasting that California will see its population continue to rise as the economy heals. We expect the state's population to increase by between 1% and 1.3% per year moving forward. This will be driven in part by new migration into the state as well as by natural increase from our existing population. By 2016, Beacon Economics forecasts that the total population in California will breach the 40 million mark for the first time.



Unfortunately, the speed of the labor market recovery will continue to disappoint. There's no doubt that the recovery is underway: we see it in the leading indicators of employment, from unemployment insurance claims to weekly hours to employment itself, which is up by more than 225,000 since hitting bottom. However, the pace of the jobs recovery will be slow. Part of this is due to gains in productivity and efficiency; employers are currently in a mode of maximizing returns on their existing workforce. Yet, an even bigger



issue is the skills mismatch that is stifling job growth in the state. Eventually productivity growth will slow, which will give rise to new positions, but the more difficult task will be placing relatively less-educated workers into jobs in growing industries because they simply don't have the requisite skill set. Indeed, employers are hiring, as evidenced by the job growth we have seen over the past 10 months, but the jobs have been concentrated in the highly skilled industries.

Therefore, Beacon Economics is forecasting that the labor market will continue to improve, but the pace of the recovery will be slow. The rest of 2011 will leave something to be desired, with employment growth averaging 1.5%. There will be a slight acceleration in job growth to nearly 2%. The labor market will continue to gain steam in 2013, and we expect it to surpass its previous peak of more than 15 million jobs by 2014. The unemployment rate will begin to come down gradually as well. Although it is expected to remain in the double digits through the end of 2012, the unemployment rate should drop into the 9% range by 2013. Still, it will be several years before the state gets back to "normal" levels of unemployment, and that could be a relatively higher baseline of 7% if we cannot find a way to address some of the structural problems with our workforce.

UNITED STATES ECONOMY

Beacon Economics is optimistic about the U.S. economy in the short term, but acknowledges there are substantial problems the nation will eventually have to address. The economy is still far behind where it should be at this stage in the business cycle, explaining much of the weakness in the labor markets.

- In recent years the U.S. economy has grown by slightly less than 3% (in real terms) per year. Apply this basic growth trend starting in 2008, and it is clear the nation is “behind” by nearly 9% of GDP—roughly \$1.3 trillion of output in current values.
- The output gap is not driven by consumer spending (the American consumer continues to overspend, which has maintained the still worrisomely large U.S. trade deficit), but by the ongoing trade deficit, and less construction and business investment in equipment and software. Construction is being hampered by excess inventories of residential and commercial property. The precise reason behind lower business spending is less clear, but economic and financial uncertainty and a lack of substantial domestic demand might explain the gap.
- The Federal deficit eventually needs to be closed, whether driven by tax increases or spending cuts

OVERVIEW: THINGS ARE LOOKING UP—BUT CHALLENGES REMAIN

On September 30th the Economic Cycle Research Institute (ECRI) announced that the U.S. economy had “officially” entered a new recession.⁵ This call had two interesting features to it. First, the ECRI does not date recessions. Rather the National Bureau of Economic Research took that task upon itself decades ago. So for the ECRI to call it “official” seems presumptuous. Secondly, they are wrong, as the data simply does not support such a call.

Despite ECRI’s declaration, other negative reports, the grim prognoses of the TV pundits, and the stock market volatility, the U.S. economy is not, we repeat, not, falling back into another recession. Yes—the U.S. economy slowed sharply in the first half of the year, but slowing growth is not the same thing as a recessionary contraction. For the economy to shrink there needs to be a significant and sustained negative shock to the system. While there have been a number of mild ones—some of which have contributed significantly to the slowing of the economy in

⁵“U.S. Cyclical Outlook: September 21, 2011,” Economic Cycle Research Institute. Note: this report was posted on the ECRI website. www.businesscycle.com, on September 30, 2011.

the first half of the year—these have all been reversed, and as such we expect growth to pick up in the second half of the year and into 2012. Indeed, we currently estimate that third quarter growth could come in at 2.5% to 3.5%—more than tripling the growth seen in the first half of the year.

There is plenty of data to support this view. Consumer spending was back in positive territory in July and August. Auto sales and overall levels of retail spending were very solid in September. Industrial production and durable goods orders have also showed signs of growth over the past few weeks. And private sector employment continues to expand as the nation adds jobs, albeit at a very weak pace (the U.S. added nearly 150,000 jobs in September, and the previous two months also saw upward revisions). Incomes are growing, despite all the turmoil in recent months, and the number of job openings continues its slow climb.

Exports are growing as well, fueled by strong fundamentals in Asia, Canada, and Mexico. In October, we saw an acceleration in bank lending for commercial and industrial loans, which bodes well for business investments in equipment and inventory. State and local government revenues have seen modest growth, and later in the year, the improvements in revenues will finally start to offset some of the drain that this sector of the economy is having on overall growth. Housing prices have stabilized, and population growth will surely help to chip away at the problem of excess supply. Indeed recent numbers have shown a decline in vacant units for the first time since 2006. We expect home construction to pick up a modest amount of speed by the end of 2012. And while the number of homes in foreclosure remains at near record-high levels, the number of seriously delinquent mortgages has been falling for over a year. Similarly, vacancy rates for most commercial property types have peaked and are starting to fall—implying that nonresidential construction will continue to be a mildly positive force for growth.

This is not to say that the markets will quickly regain lost ground. Much of the decline in equity values reflects the simple fact that the recovery of the financial market was far too aggressive given the slow pace of economic recovery. P/E ratios had climbed back to high levels from a historical context, risk spreads had shrunk to pre-recession levels, and the frenzy started to spill into the real estate markets as cap rate spreads on trophy properties started to fall even though rents had not yet stabilized and vacancies remain at high levels. A correction was clearly needed in order to realign equity prices with where the U.S. economy is at this moment in time.

Indeed the correction has had some beneficial side effects—namely, causing the price of oil to fall by over \$30 per barrel and causing interest rates to drop yet again to record low levels, both of which are stimulative for the economy.

While we are optimistic in the short term, we also acknowledge that there are substantial problems the nation will eventually have to address. As noted in the “Key Findings” section above, the U.S. economy is still far behind where it should be at this stage in the business cycle, explaining much of the weakness in the labor markets. Yet even as the economy starts to close the gap, there are issues that give us pause regarding how fast the recovery can occur.

Some of these issues are still left over from the massive imbalances that pushed the U.S. economy into the recession in the first place. But most stem directly from the massive government intervention in the economy that pulled us out of the downturn. In some cases, these policies prevented the U.S. economy from getting back on a normal footing—that is, they were good for supporting the economy in the short run, but they ultimately left some of the painful but necessary readjustments to be dealt with in the future. In other cases, the problems are the direct results of these programs—namely, the Federal budget deficit and loose money policies by the Federal Reserve.

- While housing has turned the corner, the recovery will be slow. It isn't a lack of credit or the number of foreclosures that is the problem, but a lack of equity left over from the over-borrowing of the last decade. Americans use equity in their current homes to put down payments on bigger houses and pay the moving costs. This lack of equity will hamper the move-up market for years, in turn reducing the demand for new homes, particularly at the higher end.
- The American consumer continues to overspend, spurred on by low interest rates that discourage savings and by tax cuts from the federal government. This in turn has maintained the still worryingly large U.S. trade deficit. While closing the deficit and shrinking consumer spending will ultimately help the U.S. economy resume a strong path of growth, the transition will be painful for some industries, particularly retail and logistics.
- The federal government will need to fix its deficit problems as well. And while the parties battle over whether tax increases or spending cuts will constitute the majority of the fix, either way it's going to cause transitory pain for the U.S. economy. Moreover, future generations will need to grapple with the trillions of dollars in debt racked up over the last decade.

- Some voices in the financial world have called for another round of monetary easing on the part of the Federal Reserve. But over the last few months, the basic measures of the money supply have shown an accelerating pace of growth. This is a good sign for the economy in the short run, as it means that monetary velocity is picking up, which is in turn an indication that the recovery is beginning. But at the same time, it means that inflationary pressures may start to become a problem within two years. The Fed has plenty of time to remove the excess liquidity, but it has to be cognizant of the impact that this action might have on the markets, regardless of whether such a move would have any real impact on the economy. Bernanke is surely starting to lay exit plans and will not pursue any further easing. In the meantime watch out if the bond markets begin to fear the potential of inflation more than the potential of a second downturn, as bond rates could quickly reverse themselves.
- The labor markets are weak in part because of the weak recovery, but also because there is a large skill mismatch between those out of work and the needs of the current economy. With sectors that employ low-skilled workers likely to be those experiencing a sluggish recovery, expect the unemployment rate to fall painfully slowly regardless of the growth rate for overall GDP. But also remember that this is a social crisis—not an economic one. It needs to be dealt with through social policies, not tax cuts and monetary easing. Sadly the best social tools seem to be the first to be axed during tough fiscal times.
- While we do not think that there will be a major default in Europe, the problems in Portugal and Greece may cause some minor ones. This will not spill over to the U.S. banking system—Europeans learned the lesson of Lehman Brothers as much as U.S. regulators did, and will surely use a TARP-type program to recapitalize European banks. But such a development would cause the U.S. dollar to appreciate and would hurt the recovery just as the current appreciation of the Japanese yen and Swiss franc have had a detrimental impact on those economies.

We think that the U.S. economy will ultimately overcome these challenges and will make up some of the lost ground of the last few years. But clearly the road is going to be bumpy.

DOUBLE DIP? WE DON'T THINK SO...

The Great Recession came to an end over two years ago, but the economy remains the central focus of many current policy discussions. It isn't that the U.S. economy isn't growing—we have had eight straight quarters of increases in economic output. Yet it is clear that the United

States has yet to fully recover from this downturn that was fueled by credit and spending. Consider the last two serious downturns in the mid-1970s and early 1980s, when the economy contracted by 3.2% and 3.6% from peak to trough, respectively. After these downturns ended, the economy grew at a much greater than average speed in the following two years, giving the economy a chance to catch up with its long-run growth path.

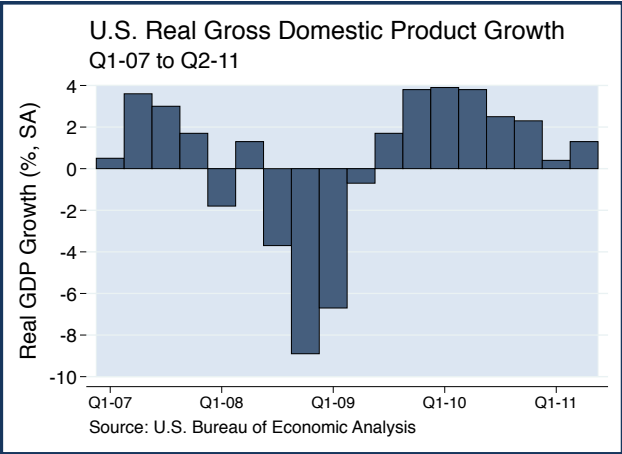
**U.S. Real GDP Growth
During and After Recessions**

Recession	Peak to Trough Decline Percent (%)	Average SAAR Growth 2-Years After Percent (%)
1973-74	-3.2	4.7
1981-82	-3.6	6.6
2008-09	-5.1	2.4

Source: U.S. Bureau of Economic Analysis

Contrast this to today. With the recent revisions to the GDP figures, the 2008–09 recession is now estimated to have cost the U.S. economy over 5% of output. Even worse, growth in the following two years has been slower than average, not faster. The gap between the current path of growth and the long-run path is growing wider rather than shrinking, and the U.S. economy is still producing less in the way of goods and services than it did prior to the recession. It’s little wonder that the unemployment rate remains stubbornly high.

On top of this looming challenge, 2011 has started out with a fizzle. The growth of over 3% seen in 2010 slowed to a crawl in the first half of the year, averaging just 0.7%. This, combined with the problems in Europe, caused a sudden reversal in the bull market that started in late 2009. The markets are down nearly 15% from the peak seen in May, risk spreads have yet again widened, and 10-year bond rates have fallen to below inflation levels as investors seek safety.



With the decline in confidence, that old specter the “Double Dip” is yet again being splashed across the headlines. And along with the headlines have come the oddsmakers—the folks in my profession who like to attach probabilities to economic events. Claims that the chance of another recession will occur have ranged from 30% to near certainty depending on which analyst you listen to. These claims are mainly based on the slowing of growth. In response the president has rolled out his latest stimulus plan—a nearly half trillion program of tax cuts, direct aid, infrastructure investments, and tax incentives for hiring and investment.

But a slowing economy is not a contracting economy. Before we get spooked by these bearish claims, yank all of our money out of the markets, and start stashing it in gold bars buried in the backyard, I would suggest there are a couple of more “D’s” we need to look at—namely, Drivers and Data. Both would point not to an economy about to tip into another recession, but rather one that has simply hit a soft spot. This isn’t to say that the United States doesn’t have serious challenges—it clearly does. But worrying about a double dip would, in our opinion, divert attention from focusing on more pressing issues. But before we examine these, let’s take a closer look at why we don’t see a downturn in the economy in the near future.

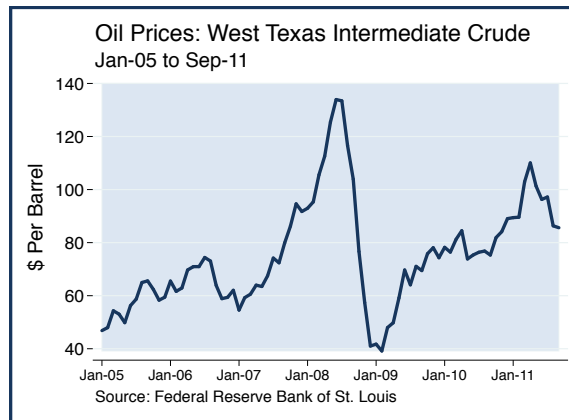
Economies don’t randomly fall into recessions. Rather they are pushed there by a negative shock. A shock has to have three characteristics: it must be large, rapid, and sustained. All recessions can be traced back to such a shock—oil prices in the mid-1970s, the fight against inflation in the early 1980s, the real estate bust and S&L mess in the early 1990s, and the pullback in tech spending in 2001 after years of bubble-driven over-investment.

The cause of the last downturn was twofold, with both problems stemming from the unsustainable increase in asset prices in the U.S. that occurred from 2003 to 2007. First, consumer spending on goods and housing returned to normal levels after asset prices sagged to historical norms, removing the wealth effects that had driven up spending in the first place. The second shock came out of the financial system itself, which had leveraged up during the boom years to a record level. When asset prices collapsed back to earth, the collapse set off a credit crisis that the nation is still working its way through.

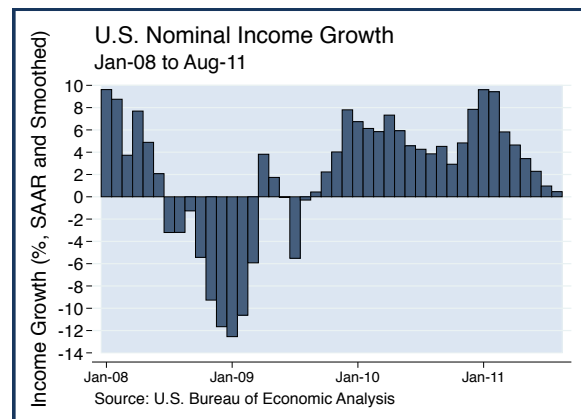
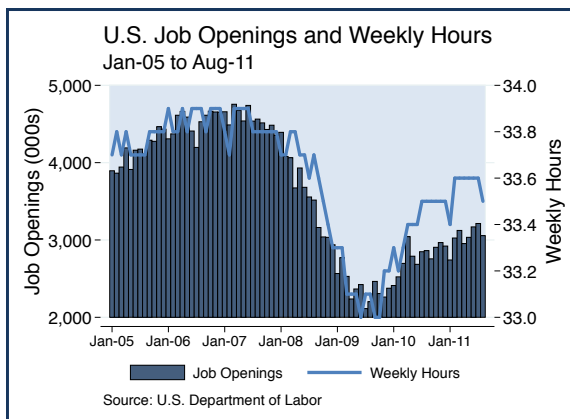
So for all of the bears out there calling for another downturn we ask—what is the driver? Because no driver, no downturn.

- Some might say oil prices. But the United States is more resilient to oil prices than ever before. Energy spending is a smaller share of consumption that it has ever been, and, if necessary, Americans can learn to park the pickup truck and start driving a Prius (admittedly it doesn’t have the same degree of machismo, but we all have to make sacrifices somewhere). Furthermore, with the market turbulence, prices are down \$30 per barrel

from the peak reached earlier in the year. Now that Libya is falling under rebel control, prices could come down even further.

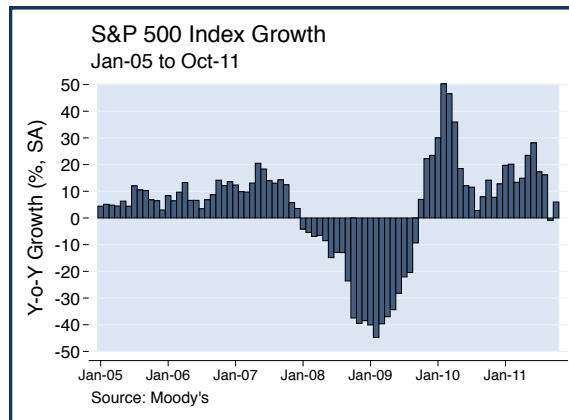


- How about the weak labor markets? Well, labor markets are a lagging indicator, not a leading indicator. They sag *after* the economy does, not the other way around. They don't cause recessions—they are caused by them. Even though growth in employment has slowed, this is simply reflecting the weakness in the first half of the year. Job openings are increasing slowly and weekly hours worked remain high—all indicative of a market that is stable, not weakening. Employment growth will pick up in the fourth quarter. In any case, as relevant as the labor numbers are, so too are the income numbers—and real incomes will start to grow again as prices for energy products fall.

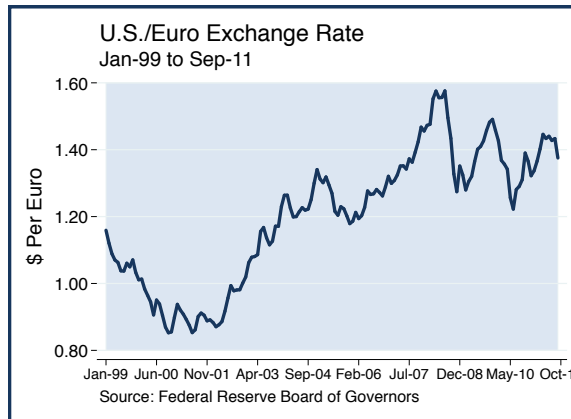


- And the stock markets? It is true that financial turbulence doesn't help the economy, but there has never been a stock market crash that caused a recession by itself. Rather, stock market crashes occur along with the driver of a recession—such as the massive number of bank failures during the Great Depression, the large pullback in business spending at the

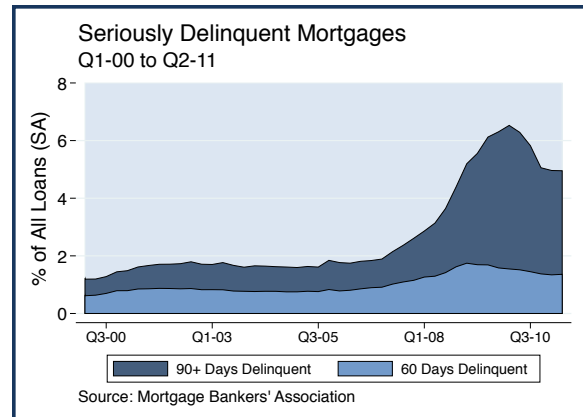
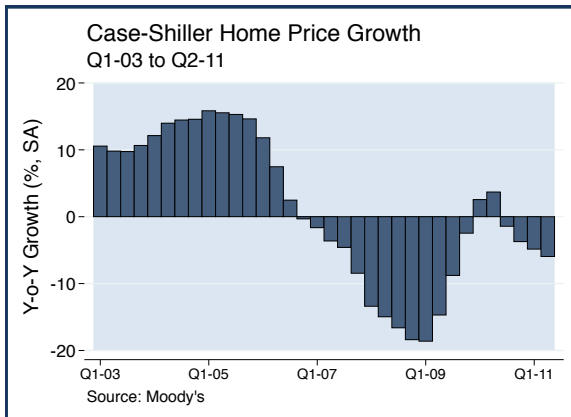
end of the tech bubble, or the drop in consumer spending and the credit crisis in 2008. There are other cases, such as in 1988 when the market dropped precipitously without a secondary driver—and no recession occurred. In any case, the declines to date have been simply a retraction of the bull market from the start of the year. Keep in mind that even with the recent declines, year over year the market is still up by double digits.

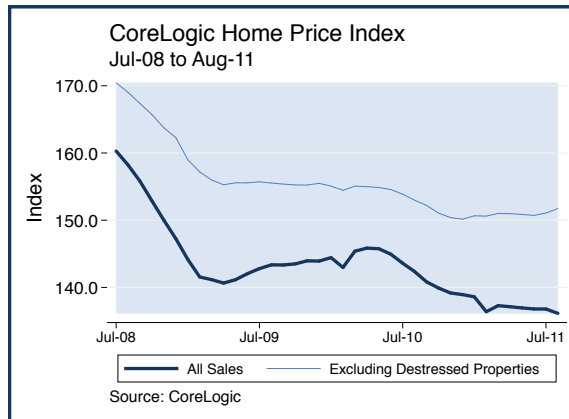


- Then there is Europe. With numerous European countries struggling with excessive public debt and slow-growth economies, there are financial jitters aplenty. But the shock—a default—has yet to occur. It would seem logical to wait for that to happen before we call for a European credit-crisis-led-double-dip recession on this side of the pond. And in any case, it seems highly improbable that Europe would allow any major bank in the euro zone to fail. European leaders are typically more liable to intervene in their economies at any time, and particularly while the lesson of Lehman Brothers is still fresh on the minds of regulators. In any case, it seems a small probability that any of the major European economies will be in trouble in the next year or so. Only lowly Greece is truly on the brink. Don't believe me? Take a look at the euro-dollar exchange rate. If the markets were truly betting on a major default, the euro would have dropped sharply.



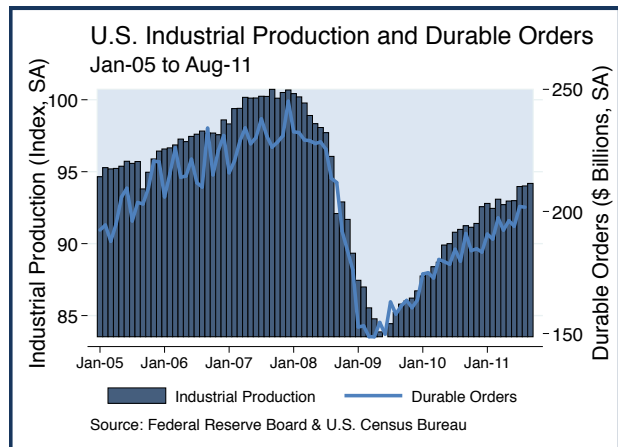
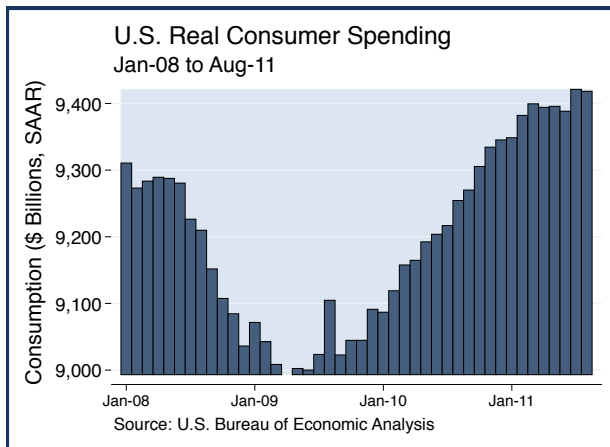
- Housing? The double dip here was more hype than reality. Home prices fell a whopping 4% from the mini-peak in 2010 according to the S&P/Case-Shiller index. And those declines have stabilized since the spring. Now all of the major price indexes, including Case-Shiller, CoreLogic, and the data from Fannie Mae and Freddie Mac all show home prices starting to rise slowly. And while sales of homes are softening a bit, the number of seriously delinquent mortgages is falling. The worst is clearly behind us.



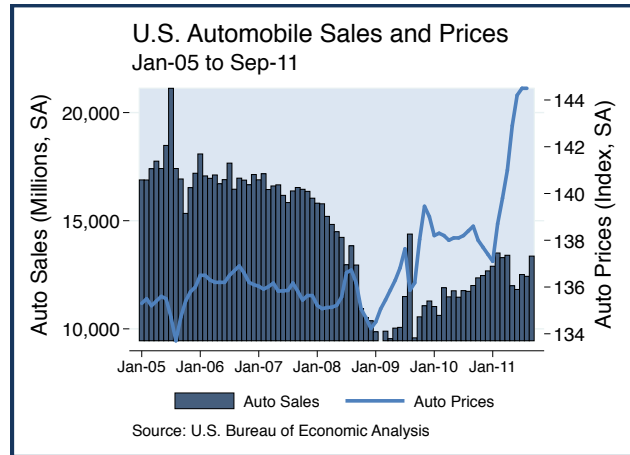


The most likely source of a new recession would have come from the federal government if it had failed to raise the debt ceiling. Although the nation would not have defaulted on its debt, it would have been forced into a severe austerity spending plan. This rapid cut in spending would surely have caused a downturn by the end of the year. But the ceiling was raised and the crisis averted. Nothing to see here folks, move along.

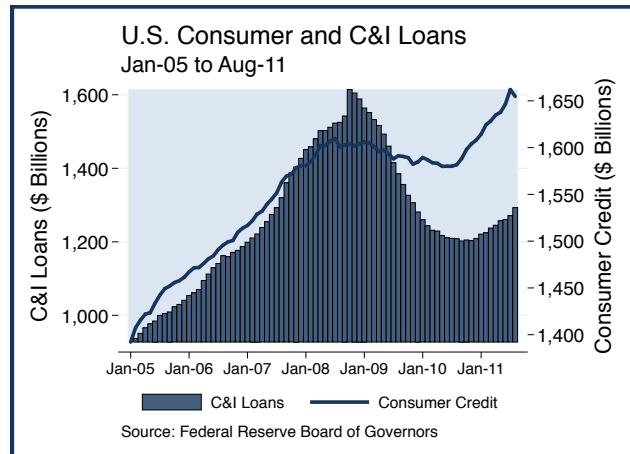
Then there is the data. The biggest source of weakness in the first half of 2011 was consumer spending—particularly in the second quarter. But this is largely due to the brief spurt in inflation that was driven by food and energy costs, combined with a lack of cars on dealer lots. In the former case, the pressure is now off for the aforementioned reasons. As for the latter, we know it was a supply issue because the price of cars has risen sharply in recent months—the exact opposite of the reaction we would expect if the decline in auto sales had been driven by demand. The supply chain is starting to move again, pushing sales and U.S. industrial production up in July. Oh, and retail sales grew as well. You may not have seen these numbers under the litany of negative press, but they are out there.



Moreover, the data regarding the leading indicators of consumer demand—namely, delinquency rates on consumer loans and growth in consumer credit—point to better times ahead, not worse. The labor market also picked up a bit of speed in July, and income growth remains decent. Another leading indicator of a downturn is falling home starts. They aren't falling—they have just been sitting on the bottom for a number of years. And nonresidential construction is picking up some speed. There is also good news on interest rates. Rates have come down so much in recent years that the financial obligations ratio—an estimate of the share of income households use to support their debt servicing and rent—is down to levels not seen since 1993. Americans are not credit constrained.



As for business spending—it never really came back much after the long downturn. Indeed, net business investment remains low from a long-run perspective. It seems unlikely that it could drop far enough to cause a big hit to the economy. And, after all, corporate America is sitting on tons of cash. It would seem that they would be able to weather most storms at the moment. Here is yet more good news: according to bank data from the Federal Reserve, the outstanding quantity of commercial and industrial loans grew sharply in the first half of August. Firms are borrowing for some reason.



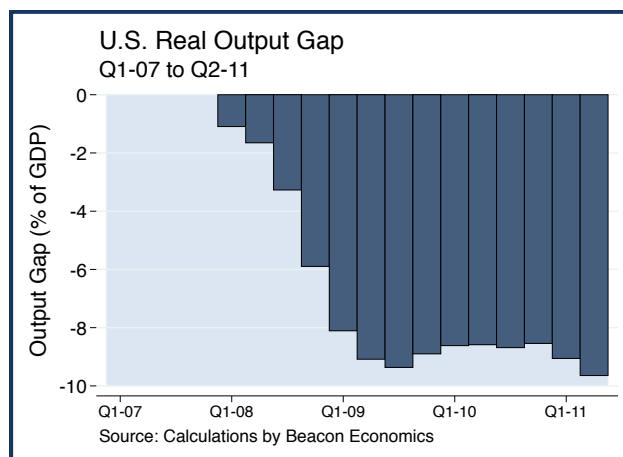
Add these up, and we have our own probability: the chance of a double-dip recession is pretty close to 0% for the second half of 2011, short of a major development not highlighted above. Now that is a number worth throwing out there.

THE OUTPUT GAP

In recent years the U.S. economy has grown by slightly less than 3% (in real terms) per year. If we apply this basic growth trend to the U.S. economy starting in 2008, and compare that to what has actually happened, we can see that the U.S. is “behind” by nearly 9% of GDP—roughly \$1.3 trillion of output in current values. This lack of production is the largest reason for the ongoing weakness in the labor markets. If the U.S. can catch up, many of these folks will go back to work.

In thinking about this issue, it is helpful to do a small thought experiment. Imagine that the United States was at something closer to full output—say at a level of production 8% more than the current levels. Then imagine that not only is the economy at full output, but equivalently the shares of spending in the economy are closer to historical norms. (In this example, we use the 1996 economy as our base.) If we then compare what is being spent by the various sources of demand in the economy to what is actually being spent, we can see where the “demand gap” is.

The following table highlights the results of this exercise, and the findings are quite enlightening. Housing and nonresidential construction account for one-third of the output gap. This is due to the tyranny of the inventory—the rapid pace of building occurred right up until the recession, leaving a large supply of excess homes and commercial space in the U.S. economy. The good news, as noted, is that the supply is slowly being consumed, and these parts of the economy will begin to grow back to normal levels in 2012.



U.S. Real Output Gap

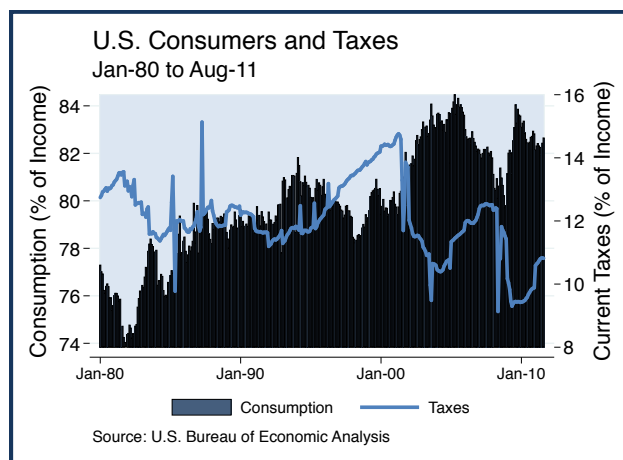
GDP Component	Gap \$ Billions	Share Percent (%)
Gross Domestic Product	-1,195	
Personal Consumption	-231	19.3
Durables	-242	20.3
Nondurables	-95	
Services	107	
Gross Private Investment	-677	
Nonresidential Structures	-72	6.0
Equipment/Software	-246	20.6
Residential	-354	29.7
Change in Inventories	-5	
Net Exports	-390	32.6
Exports	268	
Imports	658	
Government Consumption	103	
Federal	144	
State/Local	-41	

Source: Calculations by Beacon Economics

Encouraging consumer spending has continued to be one of the central focuses of stimulative policies by the federal government—with the common assumption being that since the U.S. consumer is such a large portion of the economy, it’s logical to start there. But while consumer spending is responsible for a portion of the gap, it’s less than one-fifth of the problem. And the weakness here is almost exclusively in durable goods, which is in part a function of the current supply-driven slump in auto sales and in part a function of the slow pace of homebuilding and resales. These weaknesses further limit the demand for other durables, such as furniture and appliances.

Indeed, when we look at consumer spending as a share of income, the percentage is still near an all-time high level. Consumer spending is not the problem—quite the opposite, consumers are still overspending relative to the current economy, largely as a result of the tax cuts they have received as part of the various stimulus efforts.

At the same time that consumer spending is still too high, the U.S. economy is running a trade deficit that is still too large. The ongoing trade gap is responsible for one-third of the output gap. If the United States could close this gap by shrinking imports and exporting more, it would go a long way toward helping the U.S. catch up. Why has this trade gap stayed so stubbornly wide? In part, the ongoing financial turmoil in Europe has kept the dollar stronger than it should be at this point in time. It’s also due to the intransigence of some nations in the developing world that look to trade surpluses as an important part of their economic development, using a variety of trade barriers and active interventions in the currency markets to achieve such goals.



But the primary reason for the problem is that the U.S. consumer continues to overspend. The degree of spending (as a share of income) and the trade deficit show a strong correlation. The marginal U.S. dollar goes to goods produced overseas. A large portion of the money spent to boost consumer spending in this economy goes not to U.S. production, but to overseas production. These efforts continue to keep consumer spending too high, putting off a portion of the necessary healing of the U.S. economy off into the future. As far as policy tools go, this has

a low return. Sadly, tax cuts and consumer spending continue to dominate policy debates in Washington, D.C.

Our feeling is that if such cuts were removed, and if the funding were instead used for infrastructure investments, it would have a much greater bang for the buck, since infrastructure spending will have less spillage into the world economy. Policymakers are calling for infrastructure spending, but the numbers are too small, and the complicated permitting and review process means that the money takes far too long to have a quick impact on the economy. More money and new policies to speed up the implementation process are needed.

The last part of the gap is business investment in equipment and software, accounting for the same gap as consumers, although overall it is a much smaller portion of aggregate demand. The proportionate shortage is thus much higher. The issues here are less clear. The weak economy is surely one reason—with an economy so far below full employment there is little need for new investment. The good news is that the basic force of capital depreciation will eventually imply investment will need to pick up. Additionally, the decline in the dollar will help close the trade gap, which will in turn stimulate demand for business investments to deal with exports. A boost in government infrastructure spending would also help. Some have postulated that the sheer uncertainty in both the recovery and the regulatory environment has made businesses shy about making any long-term investments. This may be the case, but measuring such confidence issues is at best tricky.

It is worth noting that the president is proposing to extend the program by which businesses can use an accelerated depreciation for new investments. The true stimulative value of such programs is weak, since taxes avoided today will need to be paid tomorrow. A program with more direct values—tax credits for investments for example—would seem to have more of an impact.

ABOUT BEACON ECONOMICS, LLC

Beacon Economics, LLC is an independent economic research and consulting firm with offices in Los Angeles and the San Francisco Bay Area. We deliver economic analysis and data sites that help our clients make informed, strategic decisions about investment, growth, revenue, policy, and other critical economic and financial issues. Our nationally recognized forecasters were among the first to predict the collapse of the housing market and foretell the onset and depth of the economic downturn that followed. Our core areas of expertise include economic and revenue forecasting, market and industry analysis, economic impact studies, economic policy analysis, and international trade analysis.

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CONTACT

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