

Current Conditions and Outlook for the U.S. and Connecticut Economies: 2012-2014



Connecticut
Department of Labor
Office of Research
200 Folly Brook Blvd.
Wethersfield, CT 06109

WRITTEN BY
DANIEL W. KENNEDY, Ph.D.
SENIOR ECONOMIST

DIRECTOR
Andrew Condon, Ph.D.

COMMISSIONER
Sharon Palmer

DEPUTY COMMISSIONER
Dennis Murphy

June
2013



Connecticut Department of Labor
Labor Market Information
www.ctdol.state.ct.us/lmi

Current Conditions and Outlook for the U.S. and Connecticut Economies: 2012-2014

June 2013

**Economic Analysis and Forecasting Group
Office of Research, CT. Department of Labor**

Andrew Condon, Ph.D., Director of Research

PREPARED BY: Daniel W. Kennedy, Ph.D., Senior Economist

CONTRIBUTING ECONOMISTS:

**Sarah Pilipaitis (Executive Summary), Matthew Krzyzek
(Editor), and Manisha Srivastava, Economists, Office of
Research**

Thank You to the First Expanded Economists' Panel

To critique and advise in setting the assumptions for the economic outlook and Connecticut's Short-Term Industry Employment forecasts, a panel of economists from the Office of Research, and economists from outside the agency, from business, academia, and the non-profit sector, convenes every year in the Spring to assess the current and near future conditions and prospects for the U.S. and Connecticut economies. This year, our panel was expanded by adding additional economists to our panel and extending invitations to a broader group of observers, including to representatives from the Legislature and the media. In addition, this year we were also joined by the Commissioner of the Connecticut Department of Labor, Sharon Palmer, and for the second year, by Deputy Commissioner Dennis, Murphy, and by the Commissioner of the Connecticut Department of Economic and Community Development, Catharine Smith. The Office of Research thanks them for their time and effort in participating in this process. As always, any errors are the responsibility of the author of this outlook.

Putting the Economists' Panel Together

Office of Research staff were critical in putting together the Panel, they are, in alphabetical order: Debbie Barr, Administrative Assistant, Andy Condon, Ph.D, Director, Office of Research, Patrick Flaherty, Economist, Jonathan Hand, Systems Developer, and economists Matt Krzyzek and Sarah Pilipaitis.

Economists' Panel (April 2013 Participants)

The table on the following page lists the members of the 2013 Economists' Panel and their affiliations, in alphabetical order.

CTDOL ECONOMISTS' PANEL FOR 2013: Members and Affiliations

PANELIST	AFFILIATION
Susan Coleman, Ph.D.	Professor of Finance, University of Hartford, former member Governor's Economic Council
Andy Condon, Ph.D.	Director, Office of Research, Connecticut Department of Labor (CTDOL)
Ken Couch, Ph.D.	Associate Professor of Economics, University of Connecticut
Ed Deak, Ph.D.	Professor and former Economics Department Chair, Fairfield University, CT Forecast Model Mgr. New England Economic Partnership, and former member of the Governor's Economic Council.
Alissa DeJonge	Director of Research, Connecticut Economic Resource Center (CERC)
Tom Fiore	Section Director, Economics, Capital and Revenue Forecasting, CT Office of Policy and Management
Patrick Flaherty	Economist, Office of Research, Connecticut Department of Labor (CTDOL)
Peter Gioia	Chief Economist, CBIA.
Don Klepper-Smith	Chief Economist, DataCore Partners, and Economic Advisor to Farmington Bank, former Chair of the Governor's Economic Council.
Matt Krzyzek	Economist, Office of Research, Connecticut Department of Labor (CTDOL)
Steve Lanza, Ph.D.	Editor, <i>The Connecticut Economy</i> , Adjunct Professor of Economics, University of Connecticut, and former member of the Governor's Economic Council
Stan McMillen, Ph.D.	Contributing Editor, <i>The Connecticut Economy</i> and Adjunct Professor of Economics, University of Connecticut, former Managing Economist, CT DECD, and former member of the Governor's Economic Council.
Dennis Murphy	Deputy Commissioner, Connecticut Department of Labor (CTDOL)
Sharon M. Palmer	Commissioner, Connecticut Department of Labor (CTDOL)
Nick Perna, Ph.D.	Managing Director & Chief Economist, Perna Assoc, Visiting Lecturer, Economics, Yale University, and Economic Advisor to Webster Bank
Sarah Pilipaitis	Co-Editor, <i>Connecticut Economic Digest</i> and Economist Office of Research, Connecticut Department of Labor (CTDOL)
Orlando Rodriguez, M.A.	Senior Policy Fellow, Connecticut Voices for Children
Nandika Prakash, Ph.D.	Senior Economist, Connecticut Department of Economic and Community Development (DECD)
Catherine Smith	Commissioner, Connecticut Department of Economic and Community Development (DECD)
Manisha Srivastava	Economist, Office of Research, Connecticut Department of Labor (CTDOL)

FOREWORD

What follows is the outlook for the U.S. and Connecticut economies for 2013 and 2014, which is prepared by the Office of Research, Connecticut Labor Department (CTDOL). After review by a panel of economists from academia, business, non-profits, and government, the U.S. and Connecticut outlooks are revised, updated, and then used as the basis for setting the assumptions for the next round of Short-Term Connecticut, Industry-Employment Forecasts, and is posted on the CTDOL Website. In addition, every year the U.S. and Connecticut outlooks are forwarded, as required, to the U.S. Labor Department.

As this is written, in June 2013, it has been four years since National Bureau of Economic Research (NBER)-designated the official end of the 2007-09 Recession in June 2009. This recovery has followed the first U.S. systemic banking panic since the 1930's, the first collapse of a shadow banking system since 1907, and the first succession of collapses in asset bubbles in housing and the stock market, in conjunction with unsustainable levels of household debt since the 1920's. This resulted in what has been called a *Balance Sheet Recession*. The Great Depression was a balance-sheet recession, as was the recession that followed the collapse of Japan's real estate bubble in 1989. Balance sheet recessions are steeper and last longer than non-balance-sheet recessions, and they are followed by weaker recoveries. This is the direct consequence of households and unincorporated businesses paying down unsustainable levels of debt to rebuild their Net Worth. This process has been referred to as *Deleveraging*.

At the time of writing, the economy seems to be at a juncture. But, the question is: What juncture? Is this a Turning Point, as the Economic Cycle Research Institute claims, and the economy is heading toward, or already in, recession? Or, is this an Inflection Point, where the apparent recovery in housing, which began in 2013, is not only for real, but gains traction in 2013, transitioning the economy from a weak-and-halting recovery to a stronger, sustained recovery? Or, is it more of the same? That is, a continuation of the fits-and-starts nature of this recovery so far: periods of stronger growth, followed by a weakening of growth, which is then followed by another burst of stronger growth?

Several drag forces, lurking in the background, have from time-to-time reasserted themselves throughout this recovery each time it looked like the economy was about to break free from the gravitational pull of the recent crisis/recession. One of the most significant drag forces on the economy has been the long slog of especially, middle- and working-class households rebuilding their Net Worth after the collapse of the Housing Bubble, and the accumulation of unsustainable levels of debt, a process referred to as *deleveraging*, which has pulled the momentum of the economy down each time it appeared that stronger growth was under way. This is why, if housing has really recovered, it is the key to whether or not the economy has transitioned to a stronger recovery. A critical role in this weaker recovery is that even though consumers have been repairing the liabilities side of their balance sheets by paying down debt and reducing credit demand, housing prices, effected by continued foreclosures (including the robo-foreclosure scandal), the shadow inventory, and high unemployment, have been held down, which means that the asset side, especially for median and lower income households, was still not recovering and this presented a major impediment to rebuilding their net worth. This is why, if housing has recovered, it would be critical to strengthening the current recovery and putting it on a stronger path.

However, there is a note of caution with regard to housing's potential contribution to strengthening this recovery. Even if housing is turning around, the latest research indicates that it might not serve as the spending platform that it has in previous Post World War II recoveries. This diminished role for housing equity as a driver of consumer spending is a result of the residual damage done by the bursting of the housing bubble. Case, Quigley, and Shiller, in a 2012 update of their earlier research at the Cowles Foundation, , found that their original conclusions, that changes in housing wealth have a much bigger impact on consumer spending, were strengthened. This is particularly critical for the current recovery because unlike the previous expansion/bubble (2001 to 2007), homeowners are not using their properties as ATM machines to boost spending and they are increasingly paying down the principal and shortening the maturities of their mortgages. In fact, "*Cash-In*" refinancings outnumbered *Cash-Outs* by more than two-to-one in the fourth quarter of 2012, according to FREDDIE MAC. In addition, the Wealth

Effect appears to be much smaller, according to recent research by Amir Sufi, at the Booth School of Business, and published in April 2013. Because of the residual effects of the housing bubble-bust, each dollar increase in housing wealth may yield as little as an extra cent in spending compared to the 3-to-5-cent estimates before the recent crisis/recession.

Another significant drag casting a shadow over a possibly stronger economic recovery is the return of the ideology of austerity. This is reflected in the fact that there is no possibility of any active fiscal stimulus getting through the Congress, and with the stimulus from the *American Recovery and Reinvestment Act (ARRA)* pretty much wound down, especially critical support to local governments (which, unique to this recovery, are a drag on economic growth), the prospects of any new economic stimulus over forecast horizon seems highly unlikely. The second big manifestation of the ideology and politics of austerity is “Sequestration” that went into effect on March 1, 2013. The consequence of the disgusting display over the debt ceiling in mid-2011 was the *The Budget Control Act of 2011*. The spending cuts took effect on March 1st because of the failure of the so-called “Super-Committee” to come up with bi-partisan-agreed-to spending cuts as of November 2012. However, the mandated cuts were modified by *The American Taxpayer Relief Act of 2012*, or the “Fiscal Cliff” deal. Cuts in both, Defense and Non-Defense spending were reduced from the original amounts required under the BCA, nevertheless, they are still substantial, and they are cumulative. The Fiscal Cliff deal reduced the level of the FY2013 Joint Committee Sequester to about \$85 billion, with estimated reductions of about \$42.7 billion each for both Defense and Non-Defense spending.

Connecticut could be significantly impacted by the Sequester, especially over the 2012-2014 Forecast Horizon. However, over the longer-run, beyond the forecast horizon, Connecticut might fare better than most states, in general, with regard to reductions in military spending. According to a 2012 study by George Mason University, Connecticut would account for 2% of total cuts nationally, while only accounting for 1.23% of all U.S. Non-Farm jobs in 2012. This would be driven by Defense job cuts where the State would account for 3.32% of defense-related job-cuts in FY 2013. However, for long-term, more

strategic oriented programs, Connecticut will be minimally impacted according to the State's Office of Military Affairs. For instance, the Navy's contract with General Dynamics for Ohio-class replacement subs will be little affected by Sequestration.

These austerity-imposed spending cuts: the Sequestration, the end of the Payroll Tax Holiday as part of the Fiscal Cliff deal, and even before the Congressional Budget Office's May 2013 Budget Outlook showed a faster reduction in the Federal deficit than previously projected, their November 2012 showed that the U.S. Federal Deficit, as a percent of GDP, had declined by 3.71 percentage-points between 2009 and 2012, the fastest rate since the U.S. demobilization in the late 1940's, pulling almost \$400 billion of spending out of the economy, have all acted as fiscal drags on the economy, by reducing spending, and therefore, reducing income.

As noted above, with the winding down of AARA support to state, and especially local, governments, in the face of collapsing revenues, to balance their budgets, are raising taxes, cutting spending, and laying off workers, all of which, withdraws spending from the economy, and subtracts from, and therefore cancels out, some of the job-growth in the Private Sector, which, in turn, drags down the total monthly-job-growth numbers.

Though the housing bubble and bust did not impact Connecticut to the extent it did other areas of the country, particularly the epicenter regions, such as Miami, Phoenix and Las Vegas, Connecticut was still affected, and in particular, it ranked among the top five states in foreclosures as a percent of total homes with a mortgage (4.1%), as of May 2013. Even though Connecticut's budget got a much-needed shot in the arm from the strong stock market performance and increase in the Federal capitals gains rate increase, the payroll component of the income tax revenue was down, and budgetary cushions from Federal support to the states, particularly for education, public safety, and Medicaid has declined significantly over the past three years.

At the beginning of the current recovery, Connecticut's job-growth was relatively stronger than that for the U.S. throughout 2010, but, in 2011, the U.S. and Connecticut

traded places and Connecticut's job-growth fell below that of the nation. Then, Connecticut benefitted from the burst of job-growth in the beginning of 2012, but both U.S. and Connecticut job-growth slowed going into the middle of 2012. Once again, job-growth seems to have returned, as Connecticut has added jobs at a strong pace over the first three-quarters of 2013. This strong growth, followed by a loss in momentum, which is then followed by another surge in growth seems to be the persistent pattern over this recovery.

The following passage from the forward to last year's outlook seems just as relevant to this year's forward:

Maybe even more than the previous two years (the base period for the current forecast), the next two years, which coincide with this outlook's forecast horizon, are going to be very critical in determining the fate of the Connecticut, U.S., and World economies for decades to come.

That outlook's forecast horizon was 2010-2012. Clearly, the last year of that forecast, the base period for the current forecast, and the year of the Presidential election, was a critical juncture for the Connecticut, U.S., and World economies. Nevertheless, 2013 is now also presenting its share of manufactured crises, from the Sequester at the beginning of the year, to the re-runs of the government shut-down and debt-ceiling clown-shows as we move into September and October.

Both, the U.S. and Connecticut economic outlooks, which follow, and the critique and recommendations formulated in the Economists' Panel process set the assumptions for the Connecticut Short-Term Employment Forecasts.

Table of Contents

CURRENT CONDITIONS AND OUTLOOK FOR THE CT ECONOMY: 2012-2014

EXECUTIVE SUMMARY	1
I. INTRODUCTION: Turning Point, Inflection Point, or More of the Same?	15
PART 1: CRITICAL FACTORS DRIVING CONNECTICUT'S CURRENT BUSINESS CYCLE	18
II. WHY THE STEEP RECESSION AND WEAK RECOVERY?	19
III. "SEQUESTRATION" AND CONNECTICUT'S ECONOMY	21
IV. THE 2013 BENCHMARK OF CT NON-FARM EMPLOYMENT	26
PART 2: IDENTIFYING THE CURRENT STAGE OF THE BUSINESS CYCLE (Spring 2013)	31
V. CURRENT ECONOMIC CONDITIONS: Spring 2013	32
VI. HAS CONNECTICUT'S HOUSING MARKET TURNED THE CORNER?	115
PART 3: WHERE IS THE STATE'S ECONOMY GOING IN 2013 AND 2014?	137
VII. WHERE DO WE GO FROM HERE? The Outlook for 2012Q4-2014Q4	138

**Current Conditions and Outlook for
the Connecticut Economy:
2012-2014**

June 2013

EXECUTIVE SUMMARY: Current Conditions and Outlook for the Connecticut Economy 2012-14

Prepared by Sarah Pilipaitis, Economist, CT Dept. of Labor

INTRODUCTION: Turning Point, Inflection Point, or More of the Same?

The current recovery officially began in the second quarter of 2009, however, the U.S. and Connecticut labor markets turned around three quarters later in the first quarter of 2010 (2010Q1). As of 2013Q1, this puts Connecticut's recovery at 12 quarters, or three years. With the first collapse of housing and credit bubbles since the 1920's, and the first systemic banking panic since the 1930's, this cycle, including the current recovery, has behaved differently than even other Post Cold War cycles which have been much weaker than other Post World War II Era recoveries.

In particular, the behavior of Connecticut's current recovery has been one of successively declining rates of growth in Non-Farm Employment over each four-quarter segment of the first 12 quarters of economic recovery, from 2010Q1 to 2013Q1, the last period of available data at the time of writing. Connecticut came out of the gate very strongly the first four quarters of recovery (2010Q1 to 2011Q1), but then, in the second four-quarter segment (2011Q1-2012Q1) of the current recovery, Connecticut's job-growth rate fell below that of the U.S. Over the last four quarters to 2013Q1, the State's job-growth rate fell flat. Given possible seasonal distortions because of extreme weather conditions, Connecticut had slightly stronger job-growth performance in the first half of 2013, compared to the first half of 2012. So, just where are, the U.S. and State economies, at this point of the recovery: a Turning Point, an Inflection Point, or more of the same? The answer to this question is addressed in the following outlook and forecast.

WHY THE STEEP RECESSION AND WEAK RECOVERY?

Before proceeding, it will be helpful to put the current, struggling recovery in context. This is the first *Balance Sheet Recession* for the U.S. since the Great Depression. A



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Balance-Sheet Recession follows the popping of Asset and Credit Bubbles. In addition, the U.S. had its first Systemic Banking Panic since the 1930's. That is why this has not been a "normal" recession. In a "Normal" Recession", a slowdown in economic activity results in slowing output growth and rising unemployment due to either the Fed raising interest rates, a build-up of inventories, or some other drag on economic activity that results in a slowdown from a FLOW Perspective. Also, recessions can also be brought on by external shocks such as the Oil Embargo that ushered in the 1973-75 Recession. But, unlike an external-shock induced recession, or a "normal recession" (described above), a Balance-Sheet Recession is brought on when one, or more, major sectors of the economy become INSOLVENT. This is from a STOCK Perspective. That is, instead of a decrease in flows (i.e., declines in income, or other indicators), over time, or an external shock, a Balance Sheet recession follows the collapse of Asset Values, unsustainable debt levels, or both, that wipe out Net Worth, which are Stock concepts.

"SEQUESTRATION" AND CONNECTICUT'S ECONOMY

Added to the drag on this recovery from the collapse of asset and credit bubbles, is a series of manufactured crises that have battered the economy. One of these manufactured crises, Sequestration, is a slow-moving disaster, with cumulative effects. But, before discussing the impact of Sequestration on Connecticut's Economy, it will be helpful to explain the term "Sequester". A "Sequester" is an order issued by the President, as required by law, to enforce statutory budgetary limits, and it provides for the automatic cancellation of previously enacted spending, making largely across-the-board reductions to non-exempt programs, activities, and accounts. The hit to Connecticut from the Sequester would be relatively significant. The State would account for 1.96% of total cuts nationally, while only accounting for 1.23% of all U.S. Non-Farm jobs in 2012. Connecticut's biggest exposure would be in the Defense job cuts where the State would account for 3.32% of defense-related job-cuts in FY 2013.

THE 2013 BENCHMARK OF CT NON-FARM EMPLOYMENT

The 2013 Benchmark added a month to Connecticut's 2008-10 recession length, making 23 rather than 22 months, and shaved off one month from the current recovery, making it



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

34 months rather than 35 months. The 2013 Benchmark also increased the number of jobs that Connecticut lost over its 2008-10 Recession from 116,900 to 121,200. However, the 2013 Benchmark also increased the number of jobs gained back, from the trough (February 2010) to December 2012 from 28,100 to 47,900. Finally, this reduced the jobs deficit, as of December 2012, from 88,800 to 73,300. The result is that, based on the 2013 Benchmark, Connecticut's recession was longer, and steeper than originally thought, but, though the recovery has been shorter than originally thought, it has been a little stronger than originally thought.

CURRENT ECONOMIC CONDITIONS: Spring 2013

On June 6th, the U.S. Bureau of Economic Analysis (BEA) released the 2012 State GDP estimates. Though they are subject to revision the numbers for Connecticut did not look good. Connecticut was the only state in which GDP contracted between 2011 and 2012. Between 2011 and 2012, Connecticut's GDP contracted by 0.1% and ranked 50th of the states and the District of Columbia. In fact, Connecticut's only year of positive growth since the trough in 2009, was the +1.2% in 2010.

As a consequence of the performance of Connecticut's Real GDP growth over the recession-recovery phases of this cycle, Connecticut's Economy has declined as a share of, not only the U.S. Economy, but also as a share of the Tri-State and New England regional economies between 2007 and 2012. In 2007, Connecticut's Real GDP was 1.59% of the U.S. Economy in 2007, by 2012, the State's share of the U.S. Economy had dropped to 1.47%, a decline of 0.13 percentage points, or 13 basis points (100 basis points = one percentage point). Connecticut went from 12.57% of the Tri-State Region's Economy in 2007 to 11.79% in 2012, a decline of 0.79 percentage points (79 basis points). The most dramatic decline was as a share of New England's Economy. In 2007, Connecticut's Real GDP was 29.40% of New England's Real GDP, by 2012, the State's share of the New England Economy had fallen to 27.35%, a decline of 2.05 percentage points, or 205 basis points.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

The Connecticut Manufacturing Production Index (CMPI) peaked in August 2007, at 134.64, over the last expansion, and bottomed at 78.41 in June 2009, the NBER-designated trough of the last recession. That represents a 41.76% decline in industrial output, and a compounded, annualized rate of decline of 25.54%. By August 2012, the CMPI had recovered to 103.59, a 32.11% increase, which represents a strong 26.96% compounded, annualized growth-rate over the first 14 months of recovery. This is consistent with Connecticut's other economic indicators, such as GDP, Real Industry Earnings, and Non-Farm Employment, which show that with recovery, the State's economy came out of the gate strongly, but then lost momentum. Connecticut's industrial output once again had a strong spurt of growth reaching 104.36 in August 2012, the highest level of output reached by the CMPI in the current recovery. But, by April 2013, the last period of available data at the time of writing, Connecticut's manufacturing output had fallen by 20.66% (a 29.33% compounded, annualized decline), to 82.90, the second lowest level of industrial output over the current recovery

Turning to the indicator of Connecticut's overall business conditions, as reflected in the Business Economic Scorecard (BESC), it appears that the driver of the strong performance of the Net Rising Index (NRI = percent rising minus the percent not rising) in 2010 was Average Weekly Hours in Manufacturing, which after declining, YTY, in January and February 2010, turned in positive numbers for eight consecutive months before declining in November, and then barely returning to positive growth in December. And, not surprisingly, given the performance of Average Weekly Hours in Manufacturing, the Connecticut Manufacturing Production Index (CMPI), after a shaky start to the year, beginning in March 2010, save May, the CMPI had positive YTY growth in all the remaining months of 2010.

But, as confirmed by the behavior of other indicators, Connecticut's initially strong recovery from the recession/crisis began to wane. The two components of the BESC's NRI that began to turn in strongly negative YTY growth after 2010, and into 2013, are the Average Weekly Hours in Manufacturing and the related CMPI. And, after recovering in the last half of 2010 and save January 2011, Air Passenger Counts



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

continued to have positive monthly YTY growth until the end 2011, from that point on, the YTY, monthly growth-rate in Air Passenger Counts has been negative in 15 of the last 18 months up to April 2013, the last period of available data at the time of writing. Since their streak in 2010, Exports have been up-and-down. From January 2011 to March 2013 (there was no data available for April 2013 at the time of writing), the dollar-value of Connecticut's Exports, on a YTY basis, were up 12 months, and down 14 months over the 26-month period. And, on a YTY basis, Gaming Revenues, as of April 2013, have been down for 24 straight months. In addition, Air Cargo Tons were up YTY, for 20 straight months between Jan 2011 and August 2012. In the eight months to April 2013, Air Cargo Tons have been down in five of those months.

CONNECTICUT'S LABOR MARKET

The current recovery officially began in the second quarter of 2009, however, the U.S. and Connecticut labor markets turned around two quarters later in the first quarter of 2010 (2010Q1). As of 2013Q1, this puts Connecticut's recovery at 12 quarters, or three years. The behavior of Connecticut's current recovery has been one of successively declining rates of growth in Non-Farm Employment over each four-quarter segment of the first 12 quarters of economic recovery, from 2010Q1 to 2013Q1, the last period of available data at the time of writing. Connecticut came out of the gate very strongly the first four quarters of recovery, adding 25,500 new jobs between 2010Q1 and 2011Q1, a growth-rate of 1.60%, which surpassed the U.S. growth-rate, which was less than 1.00%. Then, in the second four-quarter segment (2011Q1-2012Q1) of the current recovery, Connecticut's job-growth rate fell to 1.26%, and fell below that of the U.S. Over the last four quarters to 2013Q1, the State's job-growth rate fell to a flat 0.26%. The 2013 Benchmark did show that Connecticut did a little better measured on a fourth-quarter basis (2011Q4-2012Q4): adding 10,800 jobs, which is a 0.67% growth-rate. One factor that could have played a role in the job-growth performance over the 2012Q1-2013Q1 period is the weather. The base period, 2012Q1, includes the warmest winter on record, and the end period, 2013Q1, included blizzards in February and March 2013. These weather extremes clearly had a disruptive effect on normal seasonal patterns in job growth. Given this qualification, on a quarterly basis, over the first half of 2012,



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Connecticut added 9,867 new Non-Farm jobs (a 0.61% increase), on a seasonally-adjusted basis. Between 2012Q4 and 2013Q2, the State's Economy added 10,233 new jobs, representing a 0.62% over the first half of 2013. Though a slightly stronger performance than over the same period a year ago, it was not enough to best the 0.93% growth-rate in U.S. Non-Farm Employment over the first half of 2013. So, just where are, the U.S. and State economies, at this point of the recovery: a Turning Point, an Inflection Point, or more of the same?

CONNECTICUT'S JOBS MARKET: First Half of 2013-- At what stage of the business cycle Connecticut and U.S. economies are over the first five months of 2013 is hard to discern. Both Connecticut and U.S. job-growth seem to be picking up steam, even as capital markets worldwide have been roiled by Bernanke's statement about the Fed ending its bond-buying program (Quantitative Easing 3) in 2014 (depending on the economy's performance), and concern about China's banking system and possible slowing in growth. Further, the third estimate of first-quarter GDP was revised downward from 2.4% to 1.8% by the U.S. BEA. Nevertheless, U.S. and Connecticut job-growth seems to be picking up steam as we head toward the middle of 2013. Critical to where the current recovery goes from this point on is whether or not the housing market has really turned around.

HAS CONNECTICUT'S HOUSING MARKET TURNED THE CORNER?

Though housing has always been a critical part of the business cycle, playing a major role in driving both the expansion and contraction phases of the cycle, due to the inflating, and subsequent popping, of the housing asset-bubble, it has played a particularly critical role over the current cycle. If, in fact, the housing market is now recovering, does this represent a critical turning point in this cycle? And, is Connecticut's housing market participating in the recovery? If, as the data for the last half of 2012 and into the first half 2013 seems to suggest, that, in fact, the housing market is back, both nationally, and in Connecticut, it would be a critical inflection point in the current recovery.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Why Housing is Critical to a Stronger Recovery--As noted above, a “Normal Recession” is brought on by a slowdown in economic activity, which results in a slowing of output growth and consequently rising unemployment. This can be the result of the Fed raising interest rates to slow down what it perceives as being an overheated economy; it could be brought on by an Inventory Buildup that results in cutbacks in production to bring inventories down to acceptable levels, or other factors that that are from a *FLOW* Perspective. And, external shocks can also induce a recession, such as the Oil Embargo and the 1973-75 Recession. But, in a ***Balance-Sheet Recession***, such as the recent recession/crisis, the Great Depression, which was the consequence of, among other domestic and international factors, the collapse of real estate bubbles (housing in 1926 and commercial in 1929), and the collapse of Japan’s real estate bubble in 1989, the collapse of asset values, usually accompanied by the accumulation of unsustainable levels of debt, which decimates the balance sheets of one or more major sectors of the economy and renders them *INSOLVENT*, which is from the *STOCK* Perspective, as opposed to the flow perspective discussed above. The result is a collapse in spending as households and business pay down debt to repair their Net Worth to re-gain access to credit markets. But, unlike the stock market, an asset bubble in housing has much broader implications for the economy. It is wealthier households that tend to directly own stocks, and, in fact, whose assets are mostly in the form of financial assets. For the vast middle-income, and working-class households, most, and in many cases, all of their wealth is in their house. Therefore, the popping of a housing bubble would affect a much greater number and proportion of households than the popping of a stock market bubble.

The Current State of Connecticut’s Housing Market-- To gauge whether or not Connecticut’s housing market has joined the apparent national housing turnaround, there are several regularly tracked indices of the State’s housing markets that may tell us how the housing market is doing in Connecticut. Quarterly data on housing prices, the Year-to-Year (YTY) percent-change, and the number of sales transactions by Connecticut’s Labor Market Areas (LMA’s), and statewide, weighted averages are published by the Center for Real Estate and Urban Economic Studies (CREUES) at the University of Connecticut for Connecticut. CREUES divides the sale prices up into three tiers: High



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Tier, Middle Tier, and Low Tier. Due to the different length of their cycles, the different behaviors of the three tiers are put on the same footing by looking at the compounded, annualized growth-rates of their price changes. Based on their compounded, annualized growth-rates, the three tiers' prices grew at pretty much the same pace over the six-year bubble period. From 2000Q1 and 2006Q1, all three tiers, prices grew at a compounded, annualized rate of about 9.5%, with the Low Tier grew the fastest at 9.61%. However, it was the Middle Tier that contracted the fastest on a compounded, annualized basis. Though the Middle Tier had the shortest contraction-period of prices, 23 quarters, its contraction was the steepest as prices declined at a compounded, annualized rate of 6.12%. Further, even though the Middle Tier has had the longest recovery in prices, compared to the other two, its recovery has been the weakest, growing by an anemic compounded, annualized rate of 0.92% for five quarters, as of 2013Q1. The High and Low Tier "recoveries" have been one quarter in duration as of 2013Q1. But the strongest recovery in house prices has been for the Low Tier, though only one quarter, as of 2013Q1, prices for this tier increased at an annualized rate of 22.91%. Further, in Prudential Connecticut Realty's report on Connecticut's housing activity in the fourth quarter of 2012. Their assessment of the State's housing market in 2012Q4 was that "Our real estate market in Connecticut is showing strong momentum as we round out the year" Their outlook for 2013 was upbeat.

Two other important indicators of housing-market activity are Housing Starts and Housing Permits. Both Permits and Starts changed at similar rates until 2012. Then the growth in the two series significantly diverged. With the apparent turnaround in housing in 2012, Connecticut Housing Permits began growing at a much faster rate than Housing Starts. Between January 2012 and May 2013, the 12-Month Moving Average (12-MMA) of Housing Permits increased from 256 to 482, an increase of 226, or +88.28%. Over the same period the 12-MMA of Housing Starts increased from 171 to 211, an increase of 50, or +29.24%. That is, for every one-unit increase in the 12-MMA of Housing Starts, there was a 4.52 increase in the 12-MMA of Housing Permits. Clearly, the growth in permits has been accelerating at a much faster pace than the growth in actual starts. Are expectations getting ahead of actual market conditions?



CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

Some Possible Impediments to Connecticut's Housing Recovery--There are some possible problems waiting in the wings that could derail the apparent turnaround in the housing market. Of particular concern is what is called the "shadow inventory". Shadow Inventory refers to the inventory of homes not yet for sale that will eventually come to market in the near future. There are several reasons why there would be an inventory of homes not yet for sale but will eventually come on the market. One reason is what are known as Real Estate Owned (REO) assets on banks' balance sheets. Since regulators do not require banks to mark-to-market their REO assets on their balance sheets they carry the value of the house they obtained through foreclosure based on what the foreclosed homeowner paid for it. If a house were purchased during the housing bubble for \$500,000 then the bank would value that house as a REO asset of \$500,000 on its balance sheet, as a non-performing asset. But, if the bank were to allow the foreclosed homeowner to sell it in a short-sale, then that sale, on average would get the bank about one-third of the value for the house, or \$166,667. If the bank sells it through a foreclosure auction, it typically gets about one-quarter of the value for that type of sale, which for our example would be \$125,000. In many cases, rather than take these losses, the bank would rather hold on to the house. Some banks are now renting out these houses, but some are just holding on to them. And, in its June 2013 report, the National Association of Realtors (NAR), in addition to commercial banks and mortgage holders, Fannie Mae, Freddie Mac, and other Federal housing agencies as about 1.7 million borrowers have missed more than one payment on their government-backed mortgages. Another source of shadow inventory is homeowners who are either literally underwater, or effectively underwater. *LPS Mortgage Monitor*¹ reports monthly the number of mortgage holders with *Negative Equity* (owe more on their mortgage than their house is worth), and those with *Effective Negative Equity*. Those who are not technically underwater but either do not have 20% equity in their homes, or would not be able to come up with the fees and commissions required to sell their houses.

¹ LPS, MORTGAGE MONITOR < <http://www.lpsvcs.com/LPSCorporateInformation/CommunicationCenter/DataReports/Pages/Mortgage-Monitor.aspx> > Accessed on July 5, 2013)



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Further, as a result of the Robo-Foreclosure scandal in which the nation's largest lenders signed off on foreclosure documents without verifying their accuracy. A wide-ranging investigation by state and federal officials has resulted in settlements in the tens of billions. The majority of Connecticut properties with active filings, 73% of them were on loans originated between 2004 and 2008, the period of the housing-market bubble characterized by loose lending standards and some predatory loans. As a consequence, Connecticut's foreclosure inventory is 4.1% of total homes with a mortgage, the fifth highest in the nation.

Has Housing Lost Its Punch?-- But, even if housing is turning around, the latest research indicates that it might not serve as the spending platform that it has in previous Post World War II recoveries. This diminished role for housing equity as a driver of consumer spending is a result of the residual damage done by the bursting of the housing bubble. And, it certainly will not provide the boost to consumer spending that it did over the recent bubble period, which was a significant contributor to the 2001-07 Expansion. Because of the residual effects of the housing bubble-bust, each dollar increase in housing wealth may yield as little as an extra cent in spending. That compares with a 3-to-5-cent estimate by economists prior to the recession.

WHERE IS THE STATE'S ECONOMY GOING IN 2013 AND 2014?

It appears that, though the economy is struggling to gain strength, it is still fragile enough that periodic setbacks can endanger the recovery. Though the housing market appears to be recovering, there are some possible short-circuits that could abruptly end it: the shadow inventory and the wealth effect from increased housing values may only be a fraction of what it was before the housing bust. Further, markets are easily spooked. This was apparent when Bernanke announced that if economy data improved, then by the middle of 2014 the Fed might end its current policy of purchasing Mortgage-Backed Securities (MBS) and other assets in its QE3 program. The news of the Fed's possibly ending its deflation-fighting policy sent the markets reeling. In fact, Bernanke only stated what has been the Fed's policy, all along. Nervousness over China's Economy and Europe's on-going depression (in the periphery) has kept markets worried about the



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

World Economy's prospects, and, in fact, the IMF has lowered its World Economic Outlook in its July 2013 update.

Nevertheless, auto sales are strong, the housing market seems to be, at least, back from the bottom, and the U.S. jobs report for June 2013, though not spectacular, was certainly above expectations. So, the employment outlook for Connecticut for 2012-14 is expecting, as the baseline forecast, basically more of the same: a recovery proceeding in fits-and-starts, but a strong likelihood that it can be sent back into recession. Particularly, since lurking in the background, which was clearly brought-to-the-fore by the markets' reaction to Bernanke's statement, is the underlying fear that deflation will set in. This coupled with the realization that any possibility for a fiscal stimulus bill to get through the current Congress is virtually zero, and that any change in Congress with the 2014 elections will not be reflected until after January 2015, implies that any dramatic change in the current trajectory of the economy, save being knocked back into recession by a Government shutdown, or the U.S. defaulting on its debt in October over House GOP efforts to stop the implementation of the *Affordable Care Act*, seems highly unlikely.

THE OUTLOOK FOR 2012-2014: 4th Qtr-to-4th Qtr Forecasts

The outlook for the forecast horizon, 2012Q4 to 2014Q4, assumes that the Sequester (discussed below), will be a drag on the U.S. and Connecticut economies in 2013. It is expected that there will be somewhat of a rebound in growth in 2014. Thus, the forecast assumes stronger growth in 2014 than in 2013.

Over the 2008Q4-to-2010Q4 recession period, 80% of Connecticut's job losses were in the Goods Producing and Non-Financial Private Services sectors. While, so far, the only sector making a positive contribution to job-growth over the current recovery/base period is Non-Financial Private Services. The remaining three major sectors all subtracted jobs between 2010Q4 and 2012Q4. This pattern is expected to continue over the forecast period. The forecast projects that Non-Financial Services will, once again be the only major sector to add jobs between 2012Q4 and 2014Q4. Nevertheless, job-growth in this sector is expected to decelerate slightly, resulting in a modest slowing of total job-growth



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

from 22,733 jobs over the 2010Q4-2012Q4 base period to a more modest 20,213 jobs between 2012Q4 and 2014Q4. This is largely due to the above noted expected slowdown in growth in 2013, with somewhat of a modest bounce-back in job-growth in 2014. Between 2010Q4 and 2012Q4 Connecticut Employment grew by 1.39%, because of the expected 2013 slowdown, that growth is projected to decelerate to 1.22% over the 2012Q4-2014Q4 Forecast Period.

The principle driver of growth in the Private Non-Financial Services major sector, as was the case over the base period, is the demographic/trend-driven Health Care and Social Assistance Sector (HCSA). HCSA is expected to add 8,160 jobs between 2012Q4 and 2014Q4, and account for 35.44% of all the jobs added by the Non-Financial Private Services major sector. Admin and Support, driven by the expanded use of temporary workers, is projected to add 3,887 jobs and account for 16.88% of the growth in Non-Financial Private Services Continuing a pattern that began with the current recovery, driven by its Food Services and Drinking Places Sub-Sector, Accommodation and Food Services is expected to add 3,714 jobs over the forecast period and account for 16.13% of the job-growth in Private Non-Financial Services. Finally, Retail Trade and Professional and Technical Service together projected to account for 17% of the new jobs in the Private Non-Financial Services major sector.

The forecast expects the Goods Producing, Financial Services, and Government major sectors to continue to be drags on growth over the forecast horizon. As over the current recovery, the Manufacturing Sector is expected to decline, especially in Non-Durable Goods over the forecast period. This will be off-set by continued growth in Construction (although a principle driver, Residential Building Construction, began shedding jobs again in 2012). The net result will be the continued modest decline in Goods Producing jobs. Insurance is expected to continue to lose jobs over the forecast horizon. And, losses in Credit Intermediation should be mitigated somewhat as it was partly driven by reclassifications within the NAICS coding system. Securities, Commodities and Brokers had large losses in 2012, which should subside somewhat. The net result: the Financial Sector is expected to shed another 2,518 jobs between 2012Q4 and 2014Q4. Finally, the



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

pattern of Government job-losses is expected to continue into the forecast period, driven, in part by Federal budget issues, including the Sequester, but, also in Connecticut, by State Budget issues and continued declining slot revenues at the tribal casinos. The net result: the forecast expects Government job-losses to double to 1,340 over the 2012Q4-2014Q4 Forecast Period, compared to the base period.

RISKS TO THE FORECAST

The biggest Positive Risk to the forecast is housing. If the recovery has traction and provides a bigger boost to spending than anticipated, then the forecast will be too pessimistic. And, if the end of the Payroll Tax Holiday, and Sequester impacts do not have their expected drag on consumer spending, particularly, if the labor market continues to strengthen, then the forecast will be too pessimistic.

There are several Negative Risks to the forecast. Of course, if the ECRI is correct, then we are already in another recession. With the cumulative effects of the Sequester and the end of Payroll Tax Holiday, in conjunction with declining PI, noted above, the forecast could very well be overly optimistic. This could also be the case if the EU Crisis flares up again. Even without another flare-up, two of Connecticut's three largest export destinations are EU members France and Germany, both skirting recession. And, of course, the possible Government shutdown, or the U.S. defaulting on its debt, or both would make the forecast overly optimistic.

SEQUESTER AND THE CONNECTICUT ECONOMY

Finally, two risks to the forecast warrant separate treatments, Sequestration, discussed in this section, and the State Budget, discussed below. A significant risk to the forecast is the Sequester, which was part of the *Budget Control Act of 2011* (BCA) and modified by *The American Taxpayer Relief Act of 2012* (the "Fiscal Cliff" deal). Cuts in both Defense and Non-Defense spending went into effect on March 1, 2013. Though the "Fiscal Cliff" deal reduced total amount of the cuts as originally required under the BCA, they are still substantial. The Fiscal Cliff deal reduced the level of the FY2013 Joint Committee



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Sequester to about \$85 billion, with estimated reductions of about \$42.7 billion each for both Defense and Non-Defense spending.

Connecticut's biggest exposure would be in the Defense job cuts where the State would account for 3.32% of defense-related job-cuts in FY 2013. Though the estimated levels were made before the Fiscal Cliff deal, it is assumed that the disproportionate shares of cuts would still hold. However, for long-term, more strategic oriented programs, Connecticut will be minimally impacted according to the State's Office of Military Affairs.

THE STATE BUDGET AND THE CONNECTICUT ECONOMY

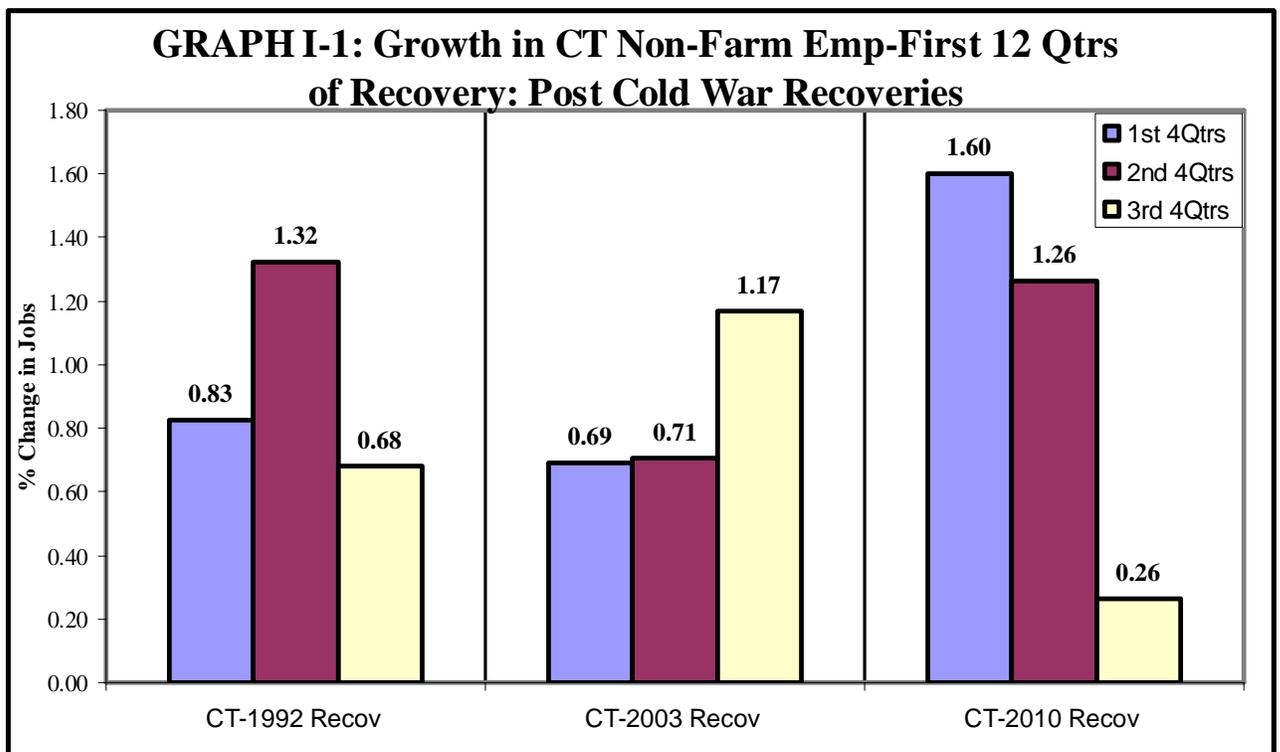
After being flat in 2010, Connecticut's total tax revenue grew by \$1.1 billion in 2011 and \$2.0 billion in 2012. And, in his September 2013 report on Connecticut's Budget, The Comptroller announced that Fiscal Year (FY) 2013 (i.e., June 30, 2013) will end with a surplus of approximately \$398.79 million.

Two significant issues will require close monitoring over the coming months and may impact future expenditure projections: expenditure trends in the Medicaid program appear to be on track to exceed projected levels and the implementation of the Affordable Care Act in January could impact health care expenditures in the Department of Social Services and in other agencies, to the extent that actual costs deviate from projections used in constructing the budget. Another set of factors that could impact the State's budget is the possible return of two more manufactured crises by extremists in the House of Representatives. The first would be a shutdown of the Government September 30th, the end of the Fiscal Year, over attaching an effort to defund the *Affordable Care Act* as a "poison pill" in the continuing resolution. The other would be to attempt the same poison-pill strategy over raising the Debt Ceiling in October, which would be part two of the clown show of Mid-2011.



I. INTRODUCTION: Turning Point, Inflection Point, or More of the Same?

The current recovery officially began in the second quarter of 2009, however, the U.S. and Connecticut labor markets turned around three quarters later in the first quarter of 2010 (2010Q1). As of 2013Q1, this puts Connecticut’s recovery at 12 quarters, or three years. With the first collapse of housing and credit bubbles since the 1920’s, and the first systemic banking panic since the 1930’s, this cycle, including the current recovery, has behaved differently than even other Post Cold War cycles which have been much weaker than other Post World War II Era recoveries. This is apparent for Connecticut as well, as depicted in Graph I-1.



SOURCE: CT DOL-Research, U.S. BLS, and Author’s calculations.

The behavior of Connecticut’s current recovery, as depicted in Graph I-1, is clearly one of successively declining rates of growth in Non-Farm Employment over each four-quarter segment of the first 12 quarters of economic recovery, from 2010Q1 to 2013Q1,



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

the last period of available data at the time of writing. Connecticut came out of the gate very strongly the first four quarters of recovery, adding 25,500 new jobs between 2010Q1 and 2011Q1, a growth-rate of 1.60%, which surpassed the U.S. growth-rate, which was less than 1%. Then, in the second four-quarter segment (2011Q1-2012Q1) of the current recovery, Connecticut's job-growth rate fell to 1.26%, and fell below that of the U.S. Over the last four quarters to 2013Q1, the State's job-growth rate fell to a flat 0.26%. The 2013 Benchmark did show that Connecticut did a little better measured on a fourth-quarter basis (2011Q4-2012Q4): adding 10,800 jobs, which is a 0.67% growth-rate. One factor that could have played a role in the job-growth performance over the 2012Q1-2013Q1 period is the weather. The base period, 2012Q1, includes the warmest winter on record, and the end period, 2013Q1, included blizzards in February and March 2013. These weather extremes clearly had a disruptive effect on normal seasonal patterns in job growth. Nevertheless, the strong growth of the first four quarters has, so far, not returned. So, just where are, the U.S. and State economies, at this point of the recovery: a Turning Point, an Inflection Point, or more of the same?

TURNING POINT?

According to the Economic Cycle Research Institute (ECRI), the U.S. Economy is already in recession. That is, according to ECRI, the U.S. Economy hit a turning point in the fourth quarter of 2012. Back in 2011, they called a recession by the end of 2012. And, they contend that the advance GDP number released by the U.S. Bureau of Economic Analysis (BEA) in April strengthens their case.² They base their argument on the behavior of the Year-to-Year (YTY) growth-rate in Nominal GDP, which has been decelerating³ Clearly, the end of the Payroll Tax Holiday, as part of the "Fiscal Cliff" deal and the Budget Sequester that began to go into effect on March 1, 2013 are pulling spending out of the economy and therefore exerting drags on economic growth. And, U.S. BEA's April release of U.S. Personal Income (PI) for March showed that PI-growth slowed to 0.2% compared to February's 1.1% growth, Real Disposable Income (DPI)

² U.S. Bureau of Economic Analysis, GROSS DOMESTIC PRODUCT: FIRST QUARTER 2013 (ADVANCE ESTIMATE) (April 26, 2013) U.S. Department of Commerce: Washington

³ Economic Cycle Research Institute, Nominal GDP Growth Falls Again (April 26, 2013)

<<http://www.businesscycle.com/ecri-news-events/news-details/economic-cycle-research-nominal-gdp-growth-falls-again>> Accessed on May 8, 2013.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

growth slowed from 0.7% (February) to 0.3% (March), while Personal Consumption Expenditures (PCE) growth held steady, growing by 0.3% in both February and March⁴. These growth rates are also below the November numbers, which were the last before the gyrations in the December and January income numbers due to the impending “Fiscal Cliff”.

OR INFLECTION POINT?

On the other hand, the Employment Situation for April, released by the U.S. Bureau of Labor Statistics (BLS) on June 7th showed that the U.S. Economy added 175,000 jobs in May, which was higher than expected⁵. However, April’s job-gains were revised downward from +165,000 to +149,000, although March was revised upward from +138,000 to +142,000. However, by the first week of May, U.S. Initial Claims for Unemployment Insurance (UI) unexpectedly fell to a five-year low⁶. Despite the April downward-revision of the jobs-numbers, these signals from the labor market may indicate that the economy might be at an inflection point. If so, then the U.S. Economy might be transitioning from a halting recovery to a stronger expansion. So, is the recovery picking up: an Inflection Point? Are we heading toward recession: a Turning Point? Or, is this a continuation of the “fits-and-starts” pattern of this recovery: bursts of strong growth followed by weakening growth, which is then followed by another burst of growth? The key to the answer lies in what is actually happening in the housing market, which is taken up in more detail in Chapter IX below.

⁴ U.S. Bureau of Economic Analysis, PERSONAL INCOME AND OUTLAYS: MARCH 2013 (April 29, 2013) U.S. Department of Commerce: Washington.

⁵ U.S. Bureau of Labor Statistics, THE EMPLOYMENT SITUATION—MAY 2013 (June 7, 2013) U.S. Department of Labor: Washington. < <http://www.bls.gov/news.release/empsit.nr0.htm> > Accessed on June 10, 2013.

⁶ BLOOMBERG, *Jobless Claims in U.S. Unexpectedly Fall to Five-Year Low* (May 9, 2013) < <http://www.bloomberg.com/news/2013-05-09/jobless-claims-in-u-s-unexpectedly-decrease-to-five-year-low.html> > Accessed on May 9, 2013



PART 1: CRITICAL FACTORS DRIVING CONNECTICUT'S CURRENT BUSINESS CYCLE



II. WHY THE STEEP RECESSION AND WEAK RECOVERY? A Brief Recap of the Current Cycle

As the title to this part of the outlook suggests, Part 1-CRITICAL FACTORS DRIVING CONNECTICUT'S CURRENT BUSINESS CYCLE, turns to a discussion of the major factors that have contributed to the State's economic conditions in the first half of 2013, and where Connecticut's Economy might be going over the 2012-2014 Forecast Horizon. Two important factors addressed in the current section (Part 1) are Sequestration and its impact on Connecticut's Economy (Chapter III), and the implications of the 2013 Benchmark of Connecticut's Non-Farm Employment (Chapter IV). But, before addressing these factors, will be helpful to review how we got to the point where we are now. What follows reproduces the brief review of the recent crisis and recession, and the factors driving the current, weak recovery presented in Volume 1 of this outlook.

As noted in Chapter II. SEQUESTRATION: 2013 Kicks Off with Another Manufactured Crisis, Volume 1-OUTLOOK FOR THE U.S. ECONOMY 2012-2014, and expanded on in, IV. IS HOUSING BACK?, this is the first *Balance Sheet Recession* for the U.S. since the Great Depression (Japan also had a Balance Sheet Recession after their Real Estate Bubble Collapsed in 1989). A Balance-Sheet Recession follows the popping of Asset and Credit Bubbles. In addition, the U.S. had its first Systemic Banking Panic since the 1930's (And, since a shadow banking system collapsed, it had aspects of the PANIC of 1907). That is why this has not been a "normal" recession. In a "Normal" Recession", a slowdown in economic activity results in slowing output growth and rising unemployment due to either the Fed raising interest rates, a build-up of inventories, or some other drag on economic activity that results in a slowdown from a FLOW Perspective. But, unlike an external-shock induced recession (e.g., the Oil Embargo and the 1973-75 Recession) or a "normal recession" (described above), a Balance-Sheet Recession is brought on when one, or more, major sectors of the economy become INSOLVENT. This is from a STOCK Perspective. That is, instead of a decrease in flows (i.e., declines in income, or other indicators), over time, a Balance Sheet recession follows the collapse of Asset Values, unsustainable debt levels, or both, that wipe out Net



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Worth, which are Stock concepts⁷. Because, especially for middle- and lower-income households, their house is their most important, or only, asset, when the housing bubble popped in 2006, in conjunction with carrying historically-high debt-loads, liabilities suddenly exceeded the value of their assets, and their Net Worth was wiped out leaving many, especially middle- and lower-income households insolvent. As illustrated below, this left many households with decimated balance sheets:

$$\text{ASSETS} - \text{LIABILITIES} = \text{NET WORTH} < 0$$

$$\text{ASSETS} \downarrow (\text{Housing}) - \text{LIABILITIES} \uparrow (\text{Debt}) = \text{NET WORTH} < 0$$

To repair their Balance Sheets, Households and Non-Corporate Businesses began to pay down their debt, as a consequence the savings rate went up and aggregate spending fell:

$$\text{THE SAVINGS RATE} \uparrow \Rightarrow \text{AGGREGATE SPENDING} \downarrow$$

This, in turn (in conjunction with the shut-off of credit from the financial panic), resulted in a decline in income, output, and employment:

$$\text{OUTPUT} \downarrow \Rightarrow \text{INCOME \& EMPLOYMENT} \downarrow$$

With that brief recounting of what got us here, Chapter II turns to a discussion of Sequestration and its likely impacts on Connecticut's Economy, especially in 2013.

⁷ For a discussion of the nature of a Balance Sheet Recession, see Koo, Richard, *The World in Balance Sheet Recession: Causes, Cure, and Politics*, REAL-WORLD ECONOMICS REVIEW, Issue no. 58 (2011)



III. “SEQUESTRATION” AND CONNECTICUT’S ECONOMY

Before getting to the specific impacts of Sequestration on Connecticut’s Economy, the following reproduces part of Chapter II in Volume 1 to provide a brief background on Sequestration, what it is, and what its purpose is. The discussion then turns to how Connecticut may be impacted by Sequestration.

The first question that comes to mind is: What is “Sequestration”? A sequester is an order issued by the President as required by law to enforce statutory budgetary limits, and it provides for the automatic cancellation of previously enacted spending, making largely across-the-board reductions to non-exempt programs, activities, and accounts⁸ The idea of Sequestration was first used as part of the *Balanced Budget and Emergency Deficit Control Act of 1985* (Gramm-Rudman-Hollings Act; P.L. 99-177)⁹ The purpose of a sequester is to enforce certain statutory budget requirements, such as enforcing statutory limits on discretionary spending or ensuring that new revenue and mandatory spending laws do not have the net effect of increasing the deficit.

Sequestration is currently employed as the enforcement mechanism for *The Budget Control Act of 2011* (P.L. 112-25). It includes sequestration to enforce two separate budgetary requirements¹⁰:

1. It is included as the enforcement mechanism for newly established statutory limits on discretionary spending to either deter enactment of legislation violating the spending limits or, in the event that legislation is enacted violating these limits, to automatically reduce discretionary spending to the limit specified in law.
2. Sequestration is also included in the *Budget Control Act* to enforce the budgetary goal established for the Joint Select Committee on Deficit Reduction to either encourage agreement on deficit reduction legislation or, in the event that such

⁸ Lynch, Megan S, *Sequestration as a Budget Enforcement Process: Frequently Asked Questions* (February 27, 2013) Congressional Research Service: Washington, p.1.

⁹ *ibid*, p.1.

¹⁰ *ibid*, p.2



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

agreement was not reached, automatically reduce spending so that an equivalent budgetary goal would be achieved.

Consequences of Sequestration

As a result of the “Super-Committee” not reaching an agreement by November 2012, spending reductions were to be made equally from Defense and Non-Defense spending. The reductions required in each of these categories were to be divided proportionally between Discretionary and Mandatory spending¹¹. *The Budget Control Act* required a savings of \$1.2 trillion over a nine-year period, including \$216 billion (or 18%) of assumed savings due to debt service costs. The remaining \$984 billion of required savings was divided equally across each of the nine years, resulting in annual required spending reductions of approximately \$109 billion, split evenly between \$55 billion for each of defense and non-defense spending¹². *The American Taxpayer Relief Act of 2012* modified the Sequester mandated by the *Budget Control Act*. It reduced the level of the FY2013 Joint Committee Sequester by \$24 billion to about \$85 billion. Reductions are estimated to be about \$42.7 billion each for both Defense and Non-Defense spending.

Projected Impact on U.S. Employment in 2013

Using IMPLAN, Stephen Fuller, director of George Mason University’s Center of Regional Analysis, and Chmura Economics & Analytics in their study for the Aerospace Industries Association found that FY2012-FY2013 budget cuts of \$115.7 billion (in nominal dollars) due to implementation of the Budget Control Act might reduce employment throughout the economy by 2.1 million jobs in FY2013¹³. Budget reductions under the BCA in the following years were estimated to result in fewer annual job losses. Table III-1 presents the breakout of the estimated 2.1 million job losses¹⁴. It should be noted that the study done by Fuller and Chmura was before the Fiscal Cliff deal, which as

¹¹ *ibid*, p.6.

¹² *ibid*, p.6

¹³ Fuller, Ph.D., Stephen S, with Chmura Economics & Analytics *The Economic Impact of the Budget Control Act of 2011 on DOD & non-DOD Agencies*, (July 17, 2012) Center of Regional Analysis, George Mason University: Arlington, VA.

¹⁴ Levine, Linda, *Sequestration: A Review of Estimates of Potential Job Losses* (October 1, 2012) Congressional Research Service: Washington, p. 4.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

noted above, reduced the total amount of jobs effected but the relative shares between Defense and Non-Defense should still hold.

Based on the original \$115.7 billion in cuts mandated by the Direct Job Losses for Fiscal Year (FY) 2012-13 from cuts to Defense Spending were expected to be around 326,000. Because contracts with suppliers would also be cut, Indirect Job Losses were expected to be another 282,000 on top of the initial 326,000. In addition, the income that would have been spent by the workers losing their jobs from the Direct and Indirect effects of the cuts, known as the Induced Effect, would result in an additional 482,000 jobs lost, for a total of 1.090 million jobs lost in the U.S. Economy due to the cuts in Defense. This same process for the Non-Defense cuts would result in 421,000 Direct Job Losses, 151,000 Indirect Job Losses, and 476,000 Induced Job Losses, for a total of 1.048 million jobs.

SECTOR	Total Spending Cuts*	Fiscal Year	DIRECT JOB-LOSSES	INDIRECT JOB-LOSSES	INDUCED JOB-LOSSES	TOTAL JOB-LOSSES
Defense	\$56.7 Billion	2012-13	326,000	282,000	482,000	1,090,000
Non-Defense	\$59.0 Billion	2012-13	421,000	151,000	476,000	1,048,000
TOTAL	\$115.7 Billion	2012-13	747,000	433,000	958,000	2,138,000

*Pre-ATRA Spending Cuts.
SOURCE: CRS (February 2013), p. 6 and Fuller and Chmura Economics & Analytics (August 2012)

Fuller and Chmura also found that there would be two NAICS sectors that would be particularly impacted by the cuts to Defense and Non-Defense programs, and are depicted in Table II-2. The Defense cuts would fall most heavily on the Manufacturing Sector, with Direct plus Indirect effects resulting in a total of 223,000 jobs lost. The Non-Defense cuts would hit the Professional and Business Services Super-Sector hardest. Total Direct and Indirect job losses were estimated to be around 180,000.



TABLE III-2: Industries Impacted by Sequestration		
SECTOR	Industry	Direct + Indirect Job-Losses
	Defense Mfg	223,000
	Non-Defense Prof & Bus Serv	180,000
<p>NOTE: Federal Government employees could face much larger Direct + Indirect job losses as a result of cuts to Nondefense Budgets (268,000 jobs) vs. the Defense Budget (56,000 jobs)</p>		
<p>SOURCE: CRS (February 2013), p. 6 and Fuller and Chmura Economics & Analytics (August 2012)</p>		

In addition, Federal Government workers could face much larger Direct and Indirect impacts. Non-Defense cuts could result in 268,000 jobs, and Defense cuts could eliminate 56,000 Federal Government jobs.

SEQUESTRATION: The Impact on Connecticut Employment in 2013

As noted above, the Sequester, which was part of the *Budget Control Act of 2011* (BCA) and modified by *The American Taxpayer Relief Act of 2012* (the “Fiscal Cliff” deal). Cuts in both, Defense and Non-Defense spending went into effect on March 1, 2013. Though the “Fiscal Cliff” deal reduced total amount of the cuts as originally required under the BCA, they are still substantial. The Fiscal Cliff deal reduced the level of the FY2013 Joint Committee Sequester to about \$85 billion, with estimated reductions of about \$42.7 billion each for both Defense and Non-Defense spending.

According to the study by Fuller (2012)¹⁵ at George Mason University, cited and discussed above, the hit to Connecticut from the Sequester would be relatively significant. As presented in Table II-3, the State would account for just 1.96% of total cuts nationally, while only accounting for 1.23% of all U.S. Non-Farm jobs in 2012. Connecticut’s biggest exposure would in the Defense job cuts where the State would account for 3.32% of defense-related job-cuts in FY 2013. Though the estimated levels were made before the Fiscal Cliff deal, so that the total number of jobs lost may be less than Fuller’s projected 41,942 (see Table II-3), nevertheless, it is assumed that the disproportionate shares of cuts would still hold.

¹⁵ Fuller, Stephen S, *The Economic Impact of the Budget Control Act of 2011 on DOD and Non-DOD Agencies* (July 17, 2012) Center of Regional Analysis, George Mason University: Arlington, VA.



CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

TABLE III-3: Connecticut to Take a Hit from Sequestration				
	DOD Cuts	Non-DOD Cuts	TOTAL	Ann Ave 2012 NF Emp
CT	36,230	5,712	41,942	1,639,000
U.S. TOTAL	1,090,359	1,047,349	2,137,708	133,739,000
CT SHARES	3.32	0.55	1.96	1.23
SOURCE: CRS (February 2013), p. 6 and Fuller and Chmura Economics & Analytics (August 2012), Table 3				

However, for long-term, more strategic oriented programs, Connecticut will be minimally impacted according to the State’s Office of Military Affairs. For instance the Navy’s contract with General Dynamics for Ohio-class replacement subs will be little affected by Sequestration¹⁶ However, the State may feel a short-term impact from the cuts particularly over the 2012-14 Forecast Horizon. Total Defense Department (DOD) purchases in Connecticut declined by \$2.190 billion in 2012¹⁷. Over the forecast horizon years, 2013 and 2014, DOD purchases are projected to decline \$62 million in 2013, but then decline much more steeply by \$1.279 billion in 2014. Beyond the forecast horizon in 2015, DOD purchases in Connecticut are expected to begin to rise again¹⁸. Thus, Connecticut’s more strategic position in the defense procurement program should help in the long-run, but the State still may be subject to some cuts in the short-term, particularly over the forecast horizon.

¹⁶ Osborn, Kris, *Sequestration Poses Minimal Threat To Ohio-class Replacement Subs* (April 9, 2013) Connecticut Office of Military Affairs < <http://www.ct.gov/oma/cwp/view.asp?a=3422&q=522578> Accessed on April 22, 2013.

¹⁷ Ross, Robert T, ANNUAL REPORT 2011-2012, State of Connecticut, Office of Military Affairs, Figure 1, p. 8.

¹⁸ *ibid.*



IV. THE 2013 BENCHMARK OF CT NON-FARM EMPLOYMENT

The Current Employment Statistics (CES) program, also known as the Payroll, or Establishment Survey, is a Federal-state cooperative program that provides, on a timely basis, estimates of payroll employment, hours, and earnings for states and areas by sampling the population of employers from the Quarterly Census of Employment and Wages (QCEW). The QCEW is the database of employers who have at least one person employed and must therefore report the number of Wage and Salary workers to the Unemployment Insurance (UI) Tax Unit. The QCEW Database serves as the frame for drawing the sample of establishments for the Payroll Survey. Each month the CES program surveys about 145,000 businesses and government agencies, representing approximately 557,000 individual worksites, in order to provide detailed industry level data on employment and the hours and earnings of employees on nonfarm payrolls for all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and about 400 metropolitan areas and divisions¹⁹

In 2011, states' Non-Farm job estimates were taken over by the US Department of Labor, Bureau of Labor Statistics. This has resulted in an increase in the size and volatility of the benchmarks of states, Non-Farm Employment series, including those of Connecticut. To understand the changes in the volatility of the benchmarking process, the following reproduces the introduction to Chapter 2- II. THE 2012 BENCHMARK from last year's Connecticut Economic Outlook²⁰.

On April 18, 2011, with the release of the March 2011, Connecticut Non-Farm Jobs data, the following announcement appeared in the *Connecticut Labor Situation*:

¹⁹ Hadder, Brendan, Patrick Hoskins, and Daniel Stemp, *Revisions in State Establishment-based Employment Estimates Effective January 2013* (2013) U.S. Bureau of Labor Statistics: Washington

²⁰ Kennedy, Daniel w., *Current Conditions and Outlook for the U.S. and Connecticut Economies: 2011-2013: VOLUME II- THE CONNECTICUT OUTLOOK* (July 2012) Connecticut Department of Labor: Wethersfield, Chapter 2-THE 2012 BENCHMARK.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

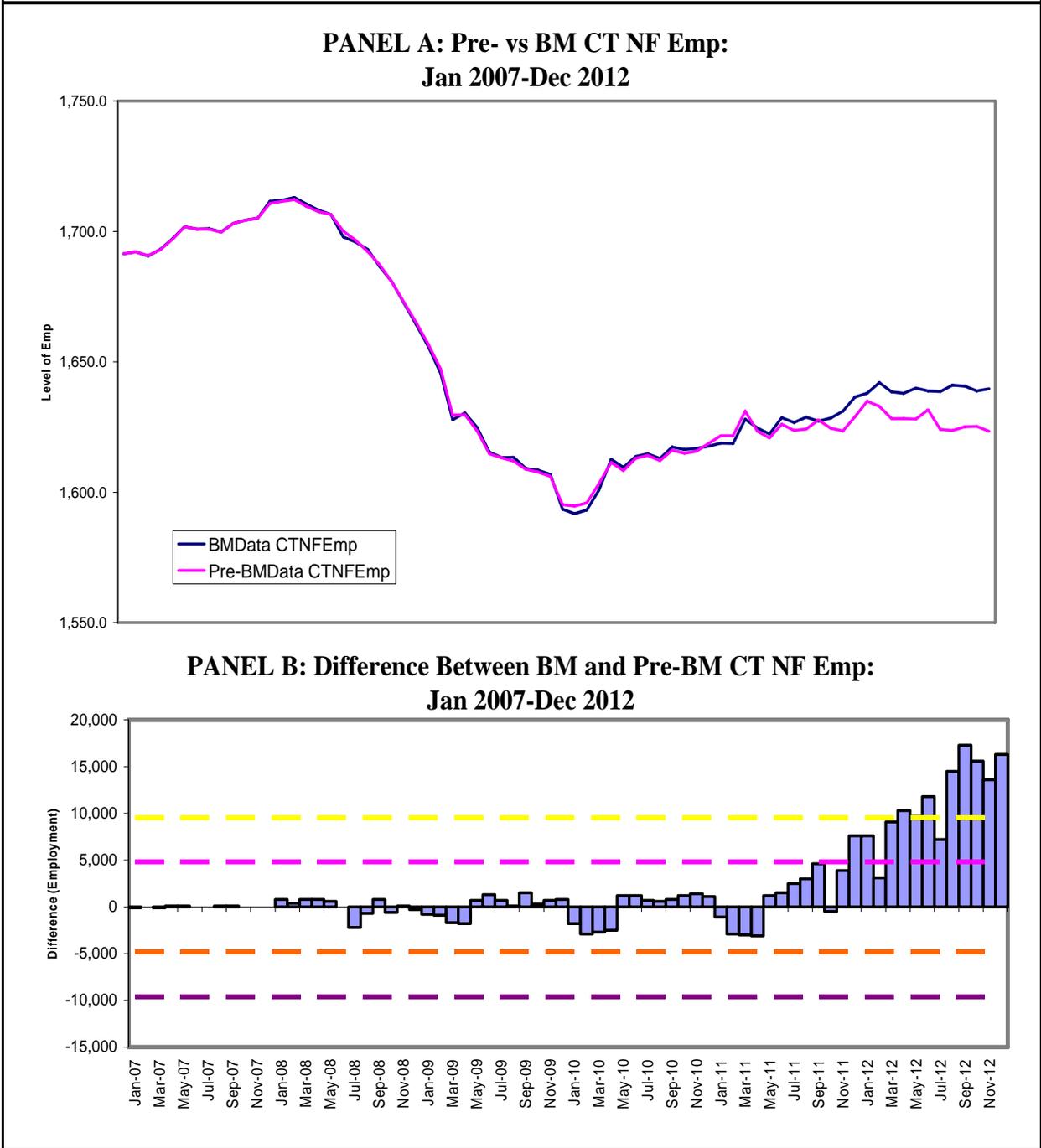
Starting with March, 2011, our monthly statewide and major LMA nonfarm job estimates have been taken over by the US Department of Labor Bureau of Labor Statistics. This is the final phase of transition in this program, which began in 2008. As a result of changes in the estimation procedures, you are likely to see more variability in month-to-month estimates of job counts. Caution should be used in interpreting any single month's estimate. The data are best interpreted to identify trends and cycles over several months and quarters²¹

In particular, the passage “As a result of changes in the estimation procedures, you are likely to see more variability in month-to-month estimates of job counts” in the citation above is clearly visible in the pre- and post-benchmarked data from the Benchmark (BM)-2013 Connecticut Non-Farm Employment data presented in Graph IV-1. Panel A tracks the level of both the pre- and post-benchmarked Connecticut Non-Farm Employment from January 2007 to December 2012. Note the pre- and post-BM'd levels of Non-Farm data began to significantly diverge in the beginning of 2011, and biased in the downward direction, a change from the previous pattern. This divergence is highlighted in Panel B, which tracks the difference between the Pre- and Post- 2012 BM'd Establishment Survey data. Panel B is a Shewhart-type control chart in which the differences are plotted against two warning tracks: the inner track represents one Standard Deviation (SD) from the mean, and the outer track represents 2 SD's from the mean. As is readily apparent, the size of the differences increases dramatically, and they are the revisions are consistently biased in the upward, and increase in size throughout 2011 and 2012, after the Establishment Survey is taken over by U.S. BLS. It is only after the centralization of the survey that the difference between the Pre- and Post-BM'd data exceed 2 SD's from the mean (i.e., go beyond the outer warning track). This is the visual manifestation of the increase in the volatility in the month-to-month estimates of the job-counts noted in the above citation from the *Connecticut Labor Situation*.

²¹ Office of Research, CONNECICUT LABOR SITUATION (April 18, 2011) Connecticut Department of Labor: Wethersfield, p. 4.



GRAPH IV-1: Differences Between the 2013 BM-ed CT NF Data and the Pre-BM-ed Series
(SOURCE: CT DOL-Research and author's calculations.)



CONNECTICUT’S RECESSION/RECOVERY AND THE 2013 BM

As can be seen from Table IV-1, the 2013 Benchmark, added a month to Connecticut’s 2008-10 recession length, making 23 rather than 22 months, and shaved off one month from the current recovery, making it 34 months rather than 35 months. The 2013 Benchmark also increased the number of jobs that Connecticut lost over its 2008-10 Recession from 116,900 to 121,200. However, the 2013 Benchmark also increased the number of jobs gained back, from the Trough (February 2010) to December 2012 from 28,100 to 47,900. Finally, this reduced the jobs deficit, as of December 2012, from 88,800 to 73,300. The result is that, based on the 2013 Benchmark, Connecticut’s recession was longer, and steeper than originally thought, but, though the recovery has been shorter than originally thought, it has been a little stronger than originally thought.

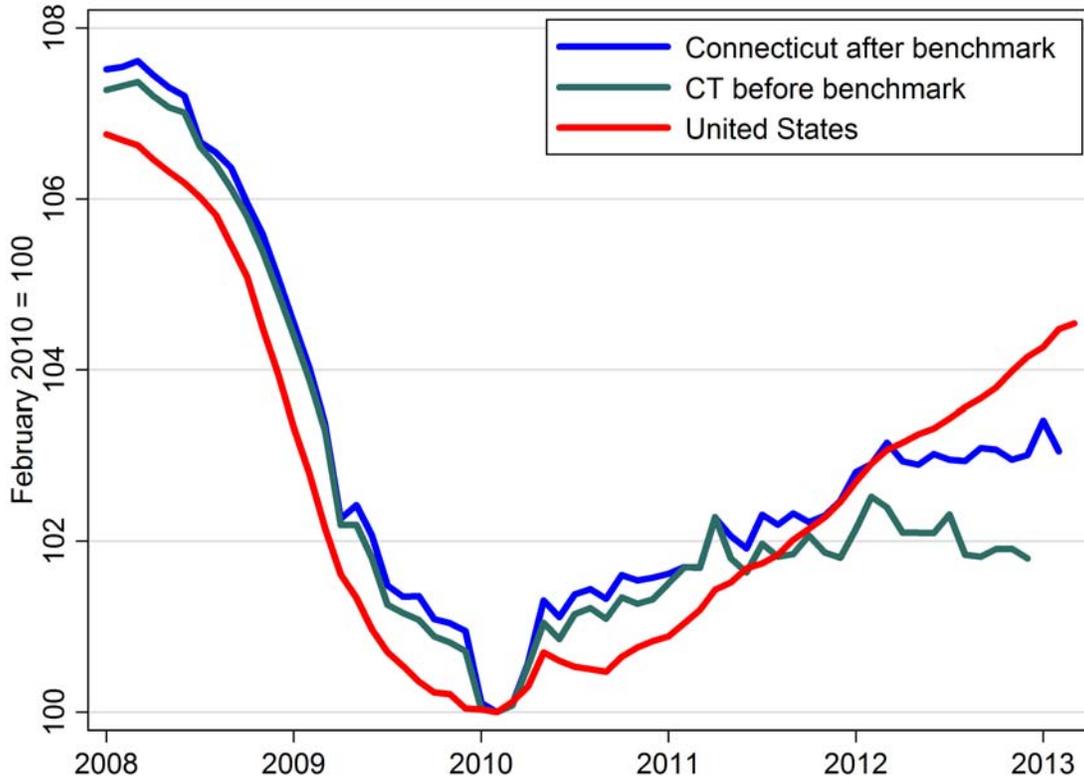
TABLE IV-1: Pre- and Post-BM CT. Recession Characteristics			
	<u>BM CT NF Emp</u>		<u>Pre-BM CT NF Emp</u>
	2008-10 RECESSION		2008-10 RECESSION
LENGTH	23 Months		22 Months
JOBS LOST	-121,200		-116,900
	<u>BM CT NF Emp</u>		<u>Pre-BM CT NF Emp</u>
	2010 RECOVERY		2009 RECOVERY
LENGTH (To Dec 2012)	34 Months		35 Months
JOBS REGAINED (To Dec 2012)	47,900		28,100
	<u>Peak-to-Dec 2012</u>		<u>Peak-to-Dec 2012</u>
Job Deficit	-73,300		-88,800

SOURCE: CTDOL-Reearsh and author's calculations.

Graph IV-2 tracks the pre- and post-benchmark Connecticut Non-Farm Employment series and the U.S. Non-Farm Employment Series, over the recession and recovery phases of the current cycle. Though the pattern of flattened growth, after 2010, in Connecticut Non-Farm Employment still holds, the Post-Benchmark series is at a higher level through 2011, 2012, and into 2013. And, in fact Connecticut’s jobs series does not fall below that of the U.S. until 2012 after benchmarking.



GRAPH IV-2: Payroll Employment in Recession and Recovery
Indexed to U.S. Employment Low (2007–2010 Recession)
(Graph drawn by Patrick Flaherty, Economist, CTDOL-Research)



PART 2: IDENTIFYING THE CURRENT STAGE OF THE BUSINESS CYCLE (Spring 2013)



V. CURRENT ECONOMIC CONDITIONS: Spring 2013

This chapter is the Connecticut outlook's counterpart to Chapter V-U.S. ECONOMIC CONDITIONS: Spring 2013, in *Current Conditions and Outlook for the U.S. and Connecticut Economies: 2012-2014 VOLUME I: U.S. OUTLOOK*.²² The approach employed in Volume 1 of this outlook to assess the current conditions in the U.S. economy, which provided a vehicle for organizing our thoughts about interpreting the set of signals sent from the economy, is used here to assess the current state of the Connecticut economy in the spring of 2013, and to gauge where it might be going. In following that framework, this section turns to reading the signals that economy is sending us. These *Signals*, known as, *Economic Indicators*, are sent from their *Source*, the economy, to *Receptors*, those of us observing the economy, participating in the economy, or more likely, both. Following the same framework as that for gauging the economic conditions in 2013 for the U.S. economy, the signals sent by the Connecticut economy are categorized by major macroeconomic functions and activities in the form of macroeconomic indicators. The indicators assessed reflect the levels and changes in aggregate economic activity including growth and output, and the contribution of major sectors, resources (natural and produced), and activities to the levels and growth in aggregate demand and aggregate supply in the Connecticut economy, and the implications for the current state of the economy (at the time of writing), and its likely trajectory over the forecast horizon.

Sections A and B assess the current state of the Connecticut economy by looking at the economic indicators from the flow standpoint.²³ Section A looks at the major indicators of aggregate economic activity: Growth and Output. Section B assesses the indicators of aggregate demand and aggregate supply.

²² See Kennedy, Daniel W., *Current Conditions and Outlook for the U.S. and Connecticut Economies: 2012-2014 VOLUME I: U.S. OUTLOOK* (June 2013) Connecticut Department of Labor-Office of Research: Wethersfield, Chapter V-U.S. ECONOMIC CONDITIONS: Spring 2013

²³ Since the Fed's Flow-of-Funds data is available only at the national level, only flow-based signals will be assessed here, which implies that there can be no analysis of sectoral balance sheets (a *stock* concept) at the state and regional levels.



a. INDICATORS OF GROWTH AND OUTPUT

This section focuses on the indicators of Connecticut's growth and output. Unlike U.S. Gross Domestic Product (GDP), which is defined as the dollar-value of all current-period production of goods and services, state and local level GDP is not produced at the quarterly frequency. State and local level GDP is only available on an annual basis. But, a proxy for state and regional output, at the state and regional level, and available at the quarterly frequency, is *Earnings by Place of Work* from the quarterly State Personal Income series.²⁴ However, like for the U.S., GDP (or Earnings by Place of Work) is not the only measure of growth and output for Connecticut's economy. As noted in Volume 1 of this outlook, GDP measures the goods and services produced over a given period, to meet *Final Demand*, but leaves out production to meet *Intermediate Demand* (i.e., industry goods and services produced for other industries, including themselves, who use this purchased output as inputs into the production of goods and services for final demand). Whereas, as noted in Volume 1, Industrial Production is calculated on a Gross Output (GO) basis that includes the intermediate inputs of purchased goods and services used in the production of final output. More specifically, in the analysis in Volume 1, the Manufacturing Industrial Production Index (IPI) was used rather than the Total IPI, in order to control for weather, and other factors that might distort the signals the economy is sending about the underlying level of manufacturing output. The Connecticut counterpart to the U.S. Manufacturing IPI, produced by the Federal Reserve Board, is the Connecticut Manufacturing Production Index (CMPI) produced by the Office of Research of the Connecticut Department of Labor.

²⁴ See Brown, Robert L., *Overview of the Bureau of Economic Analysis: Regional Accounts at the BEA*, PPT Presentation at Monitoring Mississippi: Data & Tools for Understanding Our State and Local Economies, Jackson, Mississippi on April 3, 2008.



**i. State GDP (Annual only, unless converted to
Quarterly)**

Since GDP, at the sub-national level, is only available on an annual basis, an attempt at gauging a more current assessment of the level of Connecticut's economic output (output in 2013) will be put off until sub-parts ii and iii in the discussions of real earnings by industry and the CMPI. Though State GDP is only available on an annual basis, with the release of data for 2012²⁵, a relatively current assessment of the performance of Connecticut's GDP over the current cycle can be made. To compare Connecticut's performance, the State's growth in real GDP is compared to its past performance, particularly over the current business cycle, and to other reference areas. In addition to the U.S., there are actually two sets of states that can serve as references for gauging Connecticut's economic growth performance. Connecticut is actually part of two regions: New England, and the Tri-State Region around New York City. And, in fact while seven of Connecticut's eight counties are in the Boston Federal Reserve District, Fairfield County is in the New York Federal Reserve District, so the State is split between two Federal Reserve districts, reflecting its two regional identities.

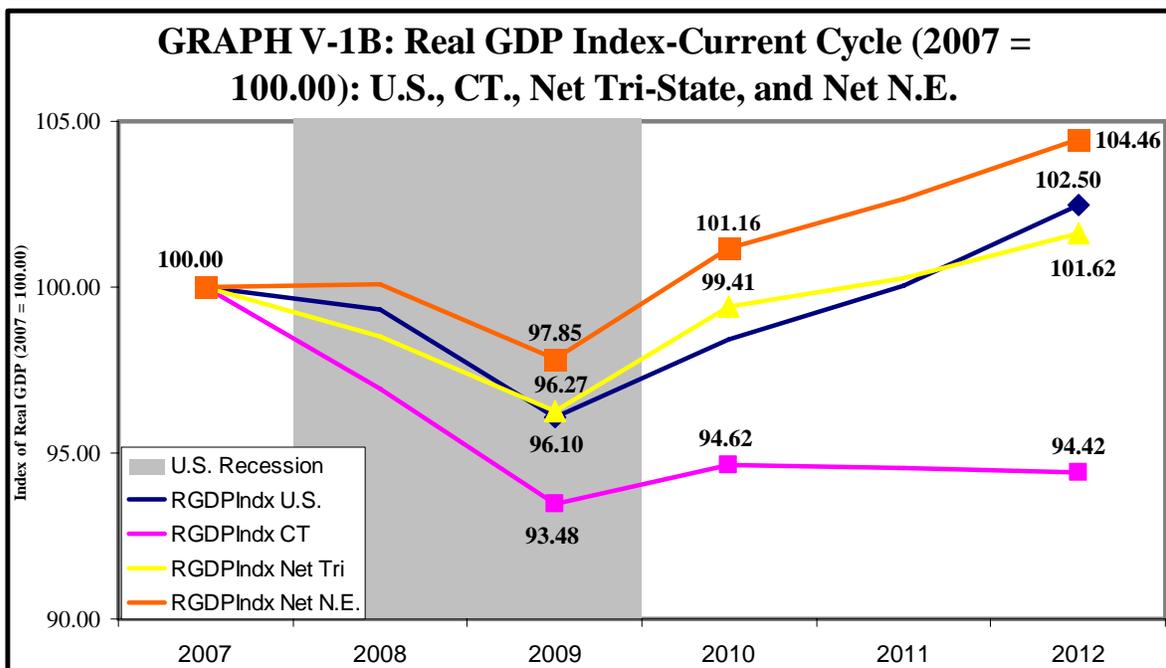
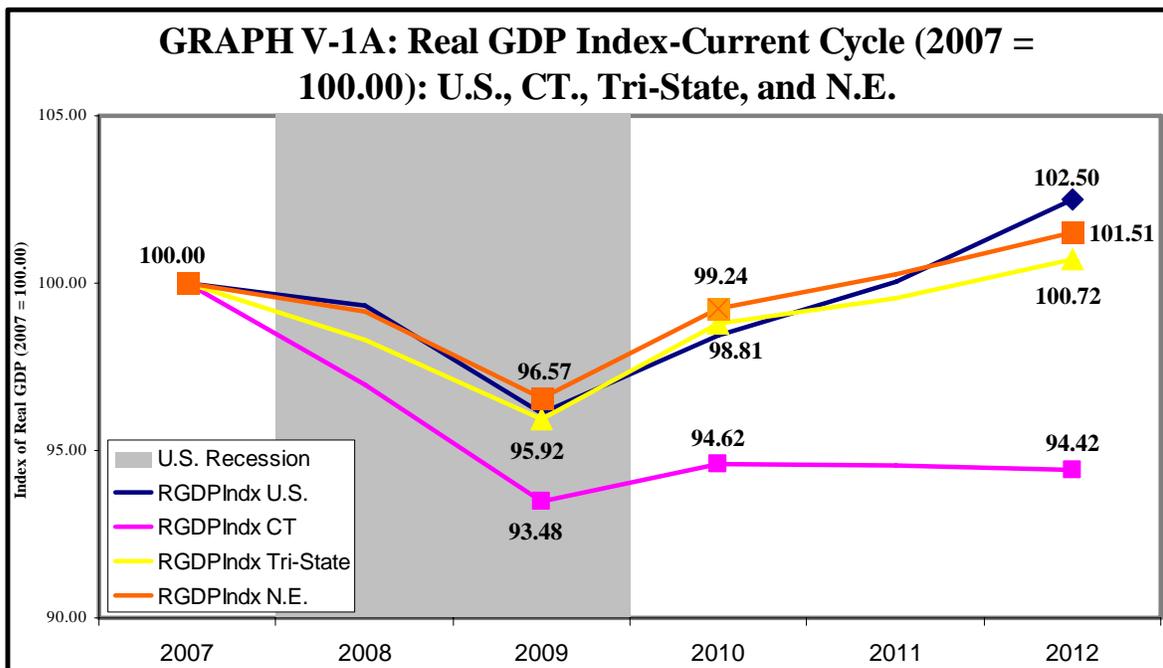
On June 6th, the U.S. Bureau of Economic Analysis (BEA) released the 2012 State GDP estimates. Though they are subject to revision the numbers for Connecticut did not look good²⁶. Connecticut was the only state in which GDP contracted between 2011 and 2012. Between 2011 and 2012, Connecticut's GDP contracted by 0.1% and ranked 50th of the states and the District of Columbia. In fact, Connecticut's only year of positive growth since the trough in 2009, was the +1.2% in 2010. Graph V-1A and V-1B track an index of the level of Real GDP, which is the ratio of the current year to the base year. For this analysis, the base year is the peak of the last expansion, 2007, and the index value is equal to 100.00 for that year. Graph V-1A tracks the index for Real U.S., GDP, Real New England (N.E.) GDP, and Real Tri-State Region GDP from 2007 to 2012, the last year of available data on State GDP.

²⁵ U.S. Bureau of Economic Analysis, WIDESPREAD ECONOMIC GROWTH IN 2012: Advance 2012 and Revised 2009–2011 GDP-by-State Statistics (June 6, 2013) U.S. Department of Commerce: Washington

²⁶ *ibid.*



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: U.S. BEA and Author's calculations.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

What stands out right away in Graph V-1A is that Connecticut's decline in Real GDP was steeper than that for the U.S., The Tri-State Region, or New England over the recent recession, and that Connecticut's Real GDP growth has not only been the weakest of the areas depicted in Graph V-1A, but after recovering by 1.22% between 2009 and 2010, it then declined by 0.21% between 2010 and 2012. Meanwhile, over both segments of the recovery, unlike Connecticut, the Tri-State Region, or N.E., the growth in U.S. Real GDP did not slow, or flatten, after 2010, it grew continuously (at least on an annual basis), increasing by 6.66% between 2009 and 2012, which is a compounded, annualized rate of 2.17%.

But, what is really striking is when the rest of the Tri-State Region (i.e., with Connecticut netted out), and the rest of New England, labeled "Net Tri" and "Net N.E." in Graph V-1B, are compared to Connecticut's Real GDP growth over the current cycle.

Connecticut's lagging growth becomes even more pronounced. For the Tri-State Region, excluding Connecticut ("Net Tri" in Graph V-1B), the growth rate, is much stronger over the 2009-10 segment of the current recovery: 3.26% compared to 2.27% when

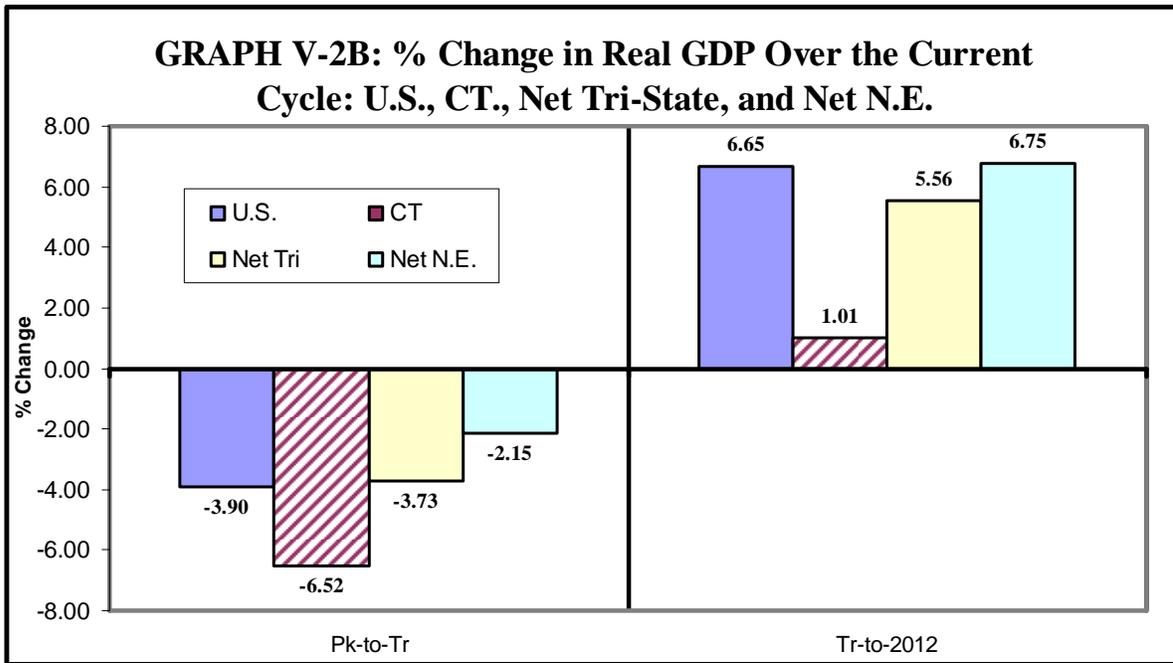
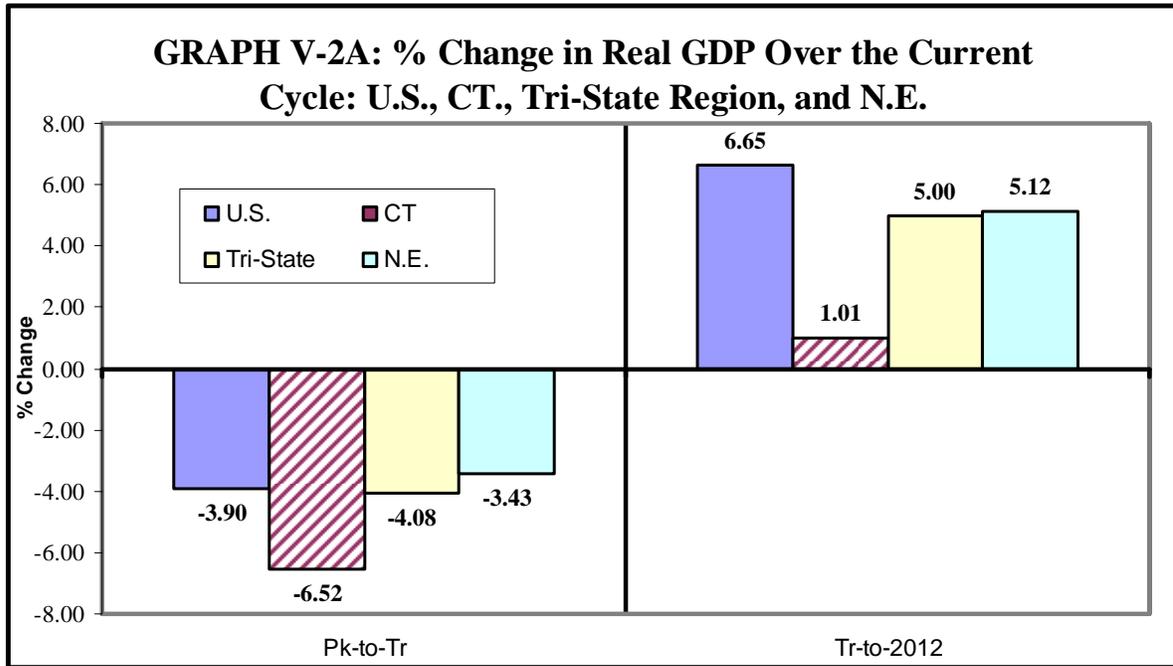
Connecticut is included. However, with Connecticut netted out, the Tri-State Region's growth-rate over the second segment, 2010-12, actually declines. The Region's growth-rate falls from 2.67% to 2.22%. The results are similar for the New England Region.

Once Connecticut is netted out, New England's Real GDP growth is much stronger over the 2009-10 segment of the recovery depicted in Graph IV-1B. New England's Real GDP, excluding Connecticut, grew by 3.38%, compared to 2.76% when Connecticut is included, but like the Tri-State Region, excluding Connecticut depresses growth over the 2010-12 segment of the recovery. The growth-rate falls from 3.28% to 3.26%. However, even in their netted-out forms, both the Tri-State and New England regions' Real GDP growth still outperforms Connecticut over both segments of the current recovery (see Graph V-1B).

The summary of the growth-rate in Real GDP for the U.S., Connecticut, The Tri-State Region, and New England over the recession-recovery phases of the current cycle are presented in graphs V-2A and V-2B.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: U.S. BEA and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

From Graph V-2A, it is apparent that, on an annual basis, the steepest decline over the recession years between 2007 (the year of the Peak of the last expansion) and 2009 (the year of the Trough of the last recession), was Connecticut's Real GDP, which contracted by 6.52%, much steeper than the U.S. decline of 3.90%. The Tri-State Region also contracted more steeply than the U.S., Real GDP declined by 4.08%. The New England Region fared better than the U.S, Connecticut, or the Tri-State Region, New England's Real GDP fell by 3.43%. Over the recovery phase of the current cycle (2009-12), U.S. Real GDP has grown by 6.65%, which stronger than that for Connecticut, The Tri-State Region, or New England. However, the Tri-State (+5.00%) and New England (+5.12%) regions' Real GDP did both grow by more than 5% between 2009 and 2012. However, Connecticut's growth has been weak; Real GDP has increased by an anemic 1.01% over the current recovery. Thus, Connecticut's Real GDP declined the steepest, and has grown the weakest over the recession-recovery phases of the current cycle.

When Connecticut is netted out of the Tri-State and New England regions, once again, the performance of Real GDP is significantly altered. Excluding Connecticut, the Tri-State Region's decline in Real GDP is 3.73%, rather than 4.08%, over the 2007-09 Recession phase and the Region's growth over the 2009-12 Recovery period is 5.56%, rather than 5.00%. For the New England Region, the differences in Real GDP growth are even more dramatic. Excluding Connecticut, New England's Real GDP declined by 2.15%, rather than 3.43% over the recession, and increased by 6.75%, rather than 5.12% over the recovery to 2012.

As a consequence of the performance of Connecticut's Real GDP growth over the recession-recovery phases of this cycle, Connecticut's Economy has declined as a share of, not only the U.S. Economy, but also as a share of the Tri-State and New England regional economies between 2007 and 2012. In 2007, Connecticut's Real GDP was 1.59% of the U.S. Economy in 2007, by 2012, the State's share of the U.S. Economy had dropped to 1.47%, a decline of 0.13 percentage points, or 13 basis points (100 basis points = one percentage point). Connecticut went from 12.57% of the Tri-State Region's Economy in 2007 to 11.79% in 2012, a decline of 0.79 percentage points (79 basis



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

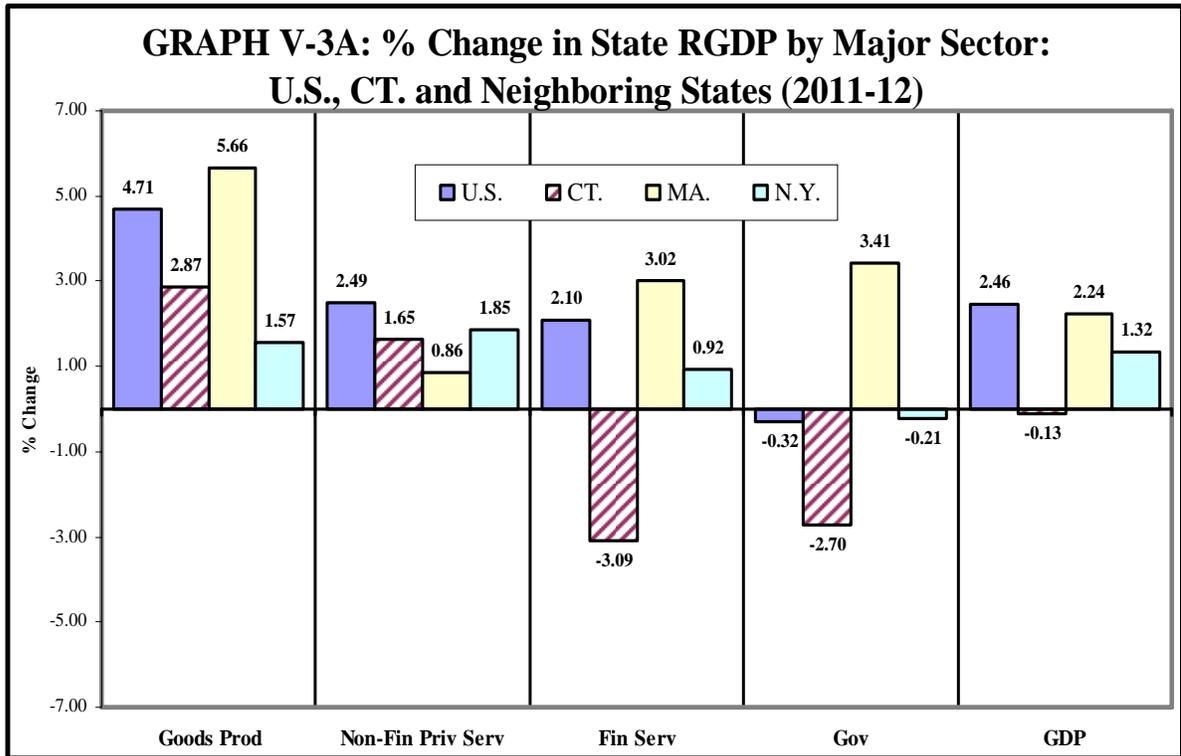
points). The most dramatic decline was as a share of New England's Economy. In 2007, Connecticut's Real GDP was 29.40% of New England's Real GDP, by 2012, the State's share of the New England Economy had fallen to 27.35%, a decline of 2.05 percentage points, or 205 basis points. In 1997, Connecticut was 30% of New England's Economy, by 2000, Connecticut's share of the New England Economy had fallen slightly to 29.09%, a decline of 0.91 percentage points, or 91 basis points. As noted above, by 2007, after the 2001 Recession (2000-03 for Connecticut), and subsequent recovery and expansion, Connecticut's share of New England's Economy was 29.40%, a slight increase of 0.31 percentage points, or 31 basis points. So, the 205 basis-point decline in Connecticut's share of the New England Economy, within a five-year period, is quite a dramatic decline.

CONNECTICUT'S SLOW GROWTH I: Drilling Below the Surface

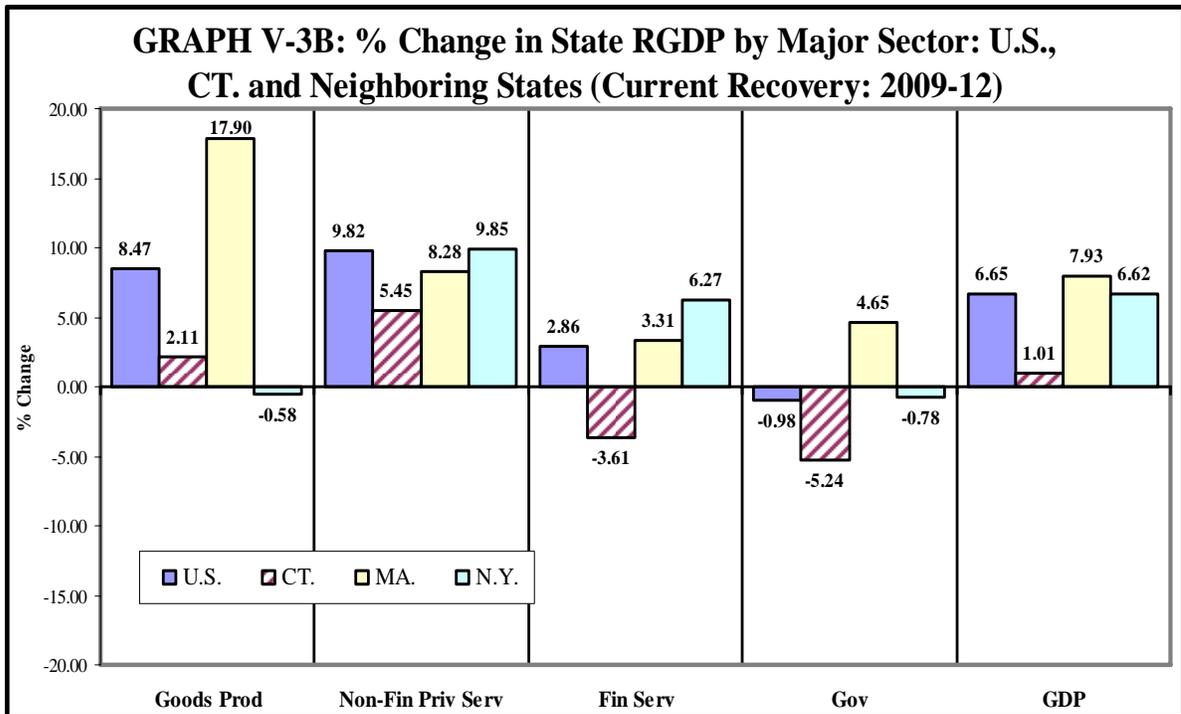
Graph V-3A shows the growth in Real GDP and four major sectors (Goods Producing, Non-Financial Private Services, Financial Services, and Government), for Connecticut, the U.S., and two neighboring states, Massachusetts and New York in 2012, the latest period of data released by the U.S. BEA on June 6th. Graph V-3B shows the same information, except that it covers the entire 2009-12 Recovery Period. From Graph V-3A, it is clear that even though Connecticut's growth in both the Goods Production and Non-Financial Private Services sectors, it was Financial Services and Government where Connecticut's Real GDP actually contracted between 2011 and 2012. And, in fact, both declines were quite steep: -3.09% in the Financial Services Sector and -2.70 in the Government Sector. Though the U.S. (-0.32%) and New York (-.21%) also had Real GDP declines in their Government sectors, between 2011 and 2012, they were both less than ½ %. Further, from Graph IV-3B, it is clear that the steep declines in Connecticut's Financial and Government sectors has been maintained over the entire 2009-11 recovery period and not just the change from 2011 to 2012. Though Connecticut's slow growth of 2.11% between 2009 and 2012 was better than New York's 0.58% contraction, it lagged behind the strong 8.47% growth in the U.S. Goods Production Sector, and far behind Massachusetts's explosive 17.90% Real GDP growth in its Good Producing Sector over the 2009-12 recovery period.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: U.S. BEA and Author's calculations.



SOURCE: U.S. BEA and Author's calculations.



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

And, though all areas appearing in Graph V-3B had positive growth in their Non-Financial, Private Services sectors, including Connecticut, the State's services sector performance nevertheless, was the laggard, growing by 5.45% between 2009 and 2012. Even with the longer view in Graph V-3B, it is still the Financial Services and Government sectors that appear to be Connecticut's Achilles Heel when it comes to, not only Real GDP growth, but as will be discovered below, these two sectors will also be the major drags on the State's employment growth. Of the areas appearing in Graph V-3B, Connecticut's Financial Services Sector was the only one where Real GDP contracted (-3.61%) between 2009 and 2012. And, though except for Massachusetts, in which Government Real GDP grew by 4.65%, the U.S., Connecticut, and New York all had slight Real GDP declines in the Government Sector (less than 1%), Connecticut's was the steepest, contracting by 5.24% between 2009 and 2012.

As a consequence of the above results, as depicted in Tables V-1 and V-2, the correlation between Real GDP growth among Connecticut's major, two-digit NAICS sectors and the U.S. is much lower than that between the U.S. and Massachusetts NAICS sector, and the U.S. and New York NAICS sectors. This is true for both the recent 2011-12 segment of the recovery, and for the entire 2009-12 current-recovery period.

TABLE V-1: CORRELATION: % Change in RGDP by NAICS Sector (2011-12)

	U.S.	CT.	MA.	N.Y.
U.S.	1.0000			
CT.	0.4336	1.0000		
MA.	0.3919	0.0818	1.0000	
N.Y.	0.7167	0.1347	0.5429	1.0000

TABLE V-2: CORRELATION: % Change in RGDP by NAICS Sector (2009-12)

	U.S.	CT.	MA.	N.Y.
U.S.	1.0000			
CT.	0.5634	1.0000		
MA.	0.8545	0.4128	1.0000	
N.Y.	0.8048	0.2469	0.7972	1.0000

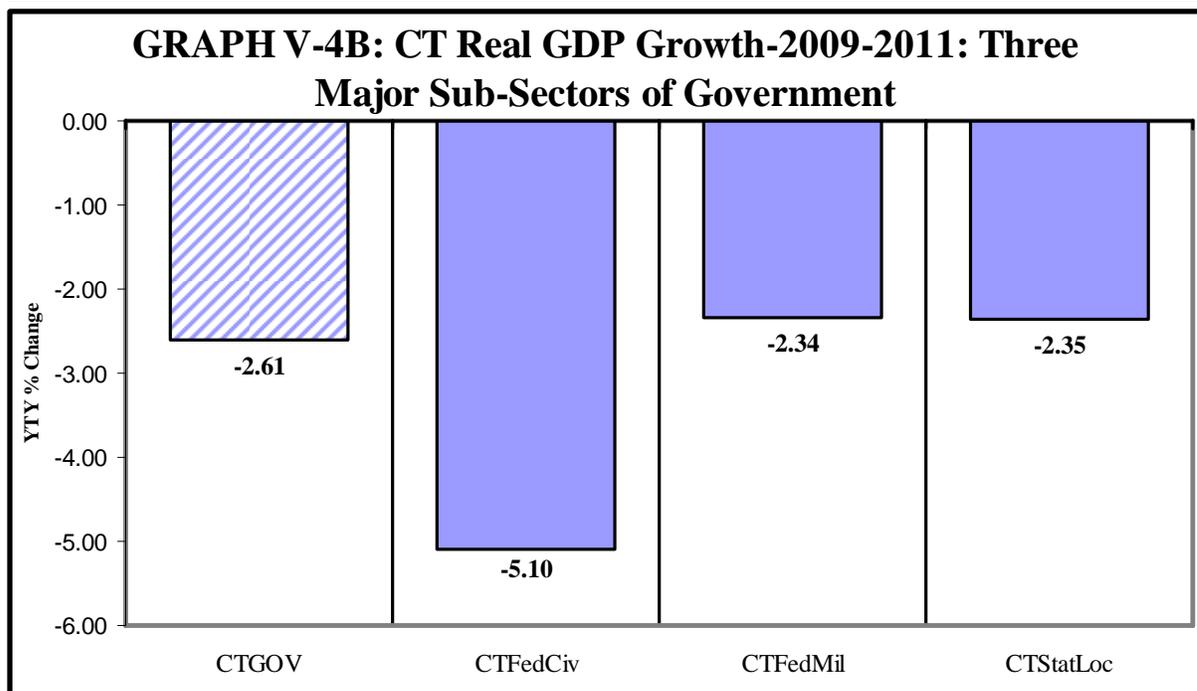
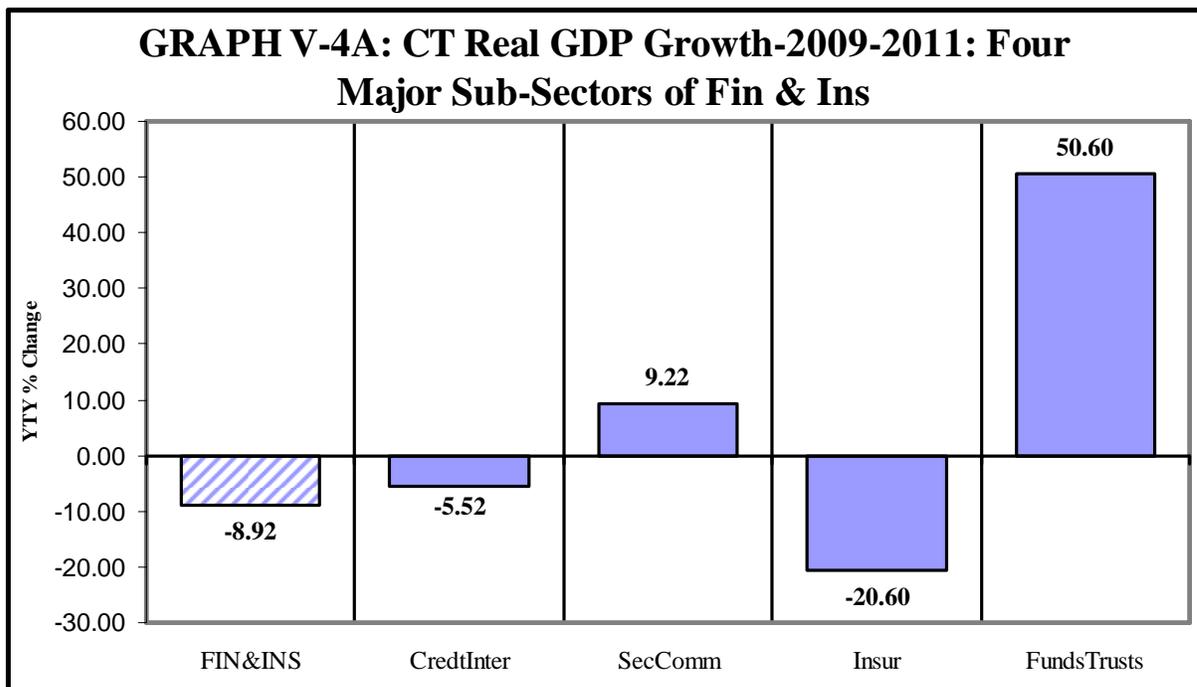


CONNECTICUT'S SLOW GROWTH II: Drilling Deeper

To drill deeper down into Connecticut's Real GDP growth performance, graphs V-4A and 4B look at Connecticut's growth-rates at the three-digit level for the Financial and Government Sectors. Unfortunately, though the NAICS two-digit industry level of detail is available up to 2012, the latest data available at the NAICS three-digit level is 2011. But, we still may be able to glean something from the available data.

From Graph IV-4A, it is clear that real output in Connecticut's Financial Sector contracted by 8.92% over the current recovery between 2009 and 2012, as discussed above. But, what drove the decline? Driving the decline in real output in Connecticut's Finance and Insurance Sector has been the decline in, both Real GDP and employment in the sectors two largest industries. The steepest contraction was in the Insurance Sector (-20.60%). When the current recovery began in 2009, Connecticut's Insurance Industry accounted for 61.03% of the Finance and Insurance Sector's total output. By 2011, that had fallen to 53.21%. Insurance lost share, not only because its output declined, but also because Real GDP in the Securities, Commodities, and Brokers Industry grew by 9.22%, increasing its share of the Financial Sector's Real GDP from 19.52%, in 2009, to 23.42% in 2011. In addition to the large Insurance Industry in Connecticut's Finance and Insurance Sector, Credit Intermediation had been the second-largest industry, in terms of the Finance and Insurance Sector's real output until the recent financial crisis, accounting for 23.90% of Connecticut's Finance and Insurance Real GDP in 2002. By 2011, with the financial crisis from 2007 to 2009, and the rise of the Securities, Commodities, and Brokers Industry, especially in Fairfield County (see discussion above), real output in Credit Intermediation, after declining by 5.52% between 2009 and 2011, declined as a share of the Finance and Insurance Sector's Real GDP, falling to between 15%-16% by 2010 and 2011. In addition, as a share of real output in the Finance and Insurance Sector Credit Intermediation had fallen from second to third, behind Securities, Commodities, and Brokers by 2011.





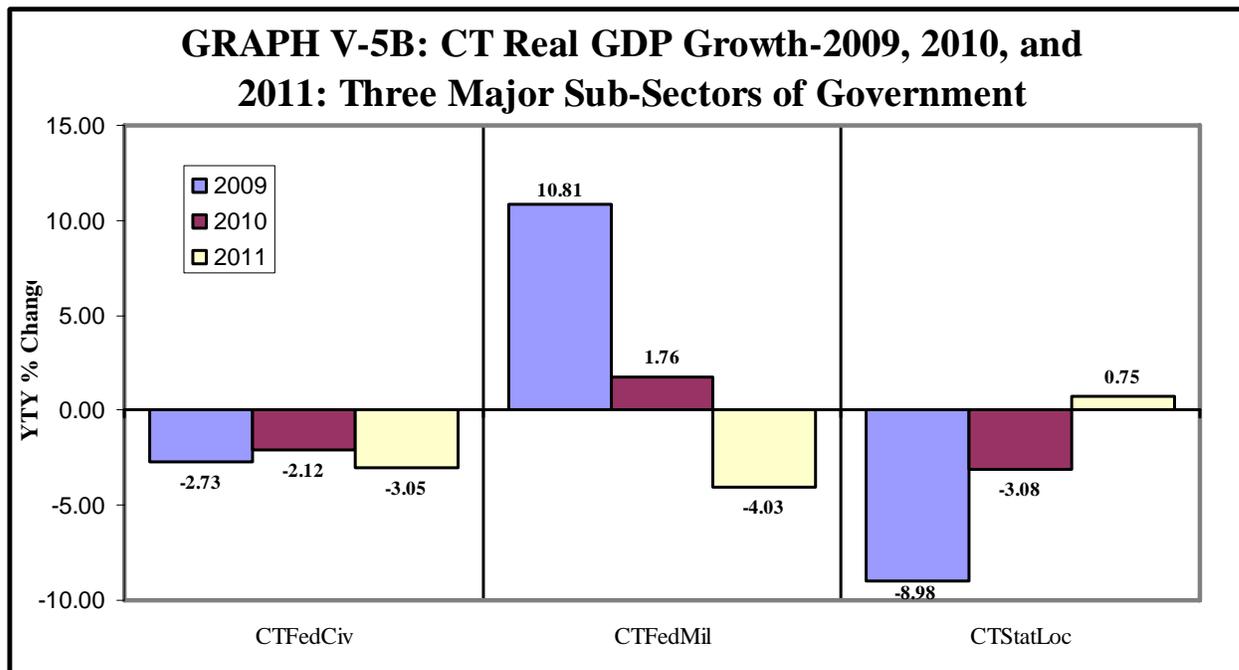
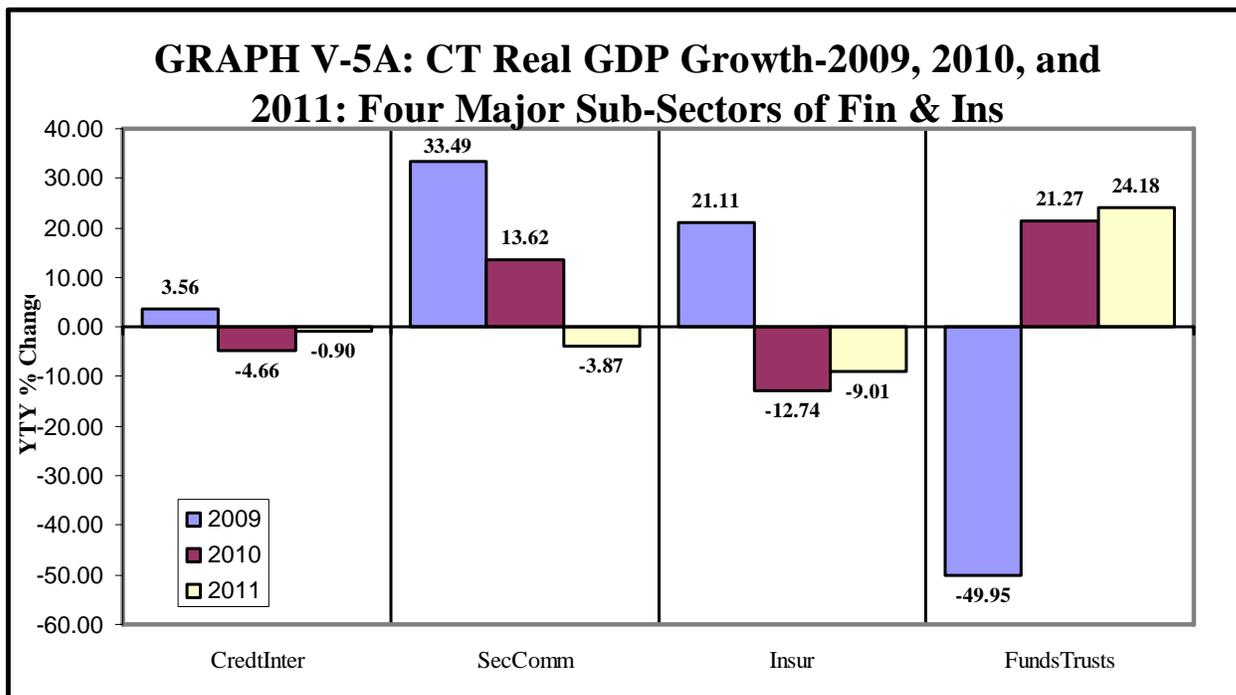
SOURCE: U.S. BEA and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Funds and Trusts, though growing the strongest of Connecticut's Financial Sector industries, is a small industry, both in terms of output and employment. As a consequence, small absolute changes can result in large percent changes. Funds and Trusts grew by 50.60% between 2009 and 2011, but only accounted for a high of 10.50% of Connecticut's Finance and Insurance Real GDP in 2008, to a low of 4.63% in 2009, and then back up to 7.65% of the Finance and Insurance Sector's real output in 2011.

Graph V-4B presents the same breakdown of Connecticut's Government Sector that appeared in Graph IV-4A for the State's Finance and Insurance Sector, above. Note that for the Government Sector, all three sub-sectors, Federal Military, Federal Civilian, and State and Local had declines in Real GDP between 2009 and 2011. This follows the same pattern that has been observed in Government-Sector Employment over this recovery. It is the only recovery to see significant reductions in Government Employment over the expansion phase of the cycle in the Post World War II Era. Connecticut's real output in the Government Sector in both, Federal Military and Federal Civilian have been effected by cuts in defense spending in the state, as evidenced by Graph V-4B, even before the Sequester, which did not go into effect until 2013 (beyond the period analyzed in Graph V-4B). The decline in State and Local Government output in Connecticut, not only matches the decline in U.S. State and Local Government real output and employment, but the decline in Local Education is a larger share of overall State and Local declines, and, in addition, the declines that have hit the Connecticut casinos, in both Real GDP and employment, do to the recession and weak recovery, as well as, new regional competition in the gambling industry, are classified under Local Government.





SOURCE: U.S. BEA and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graphs V-5A and V-5B break the growth-rates, in Real GDP, of the three-digit NAICS industries in Connecticut's Finance and Insurance Sector (Graph V-5A), and the State's Governments Sector (Graph V-5B), into each individual year of the current recovery: 2009, 2010, and 2011 (the most recent period of available data).

From Graph V-5A, again, as noted above, Funds and Trusts is the smallest industry in Connecticut's Finance and Insurance Sector, so the large swings in the percent-change in Real GDP, in 2009, 2010, and 2011, should be taken with the proverbial grain of salt. However, as also noted above in the discussion of Graph V-4A, the State's Insurance Industry is a different story. It is still, as of 2012, the industry that accounts for the largest share of Real GDP in Connecticut's Finance and Insurance Sector. And, though it grew at a 21.11% clip in 2009, the officially designated first year of the current recovery, over the next two years (see Graph V-4A), Real GDP, in Connecticut's Insurance Industry contracted by 12.74% (2010), and 9.01% (2011). Credit Intermediation also had declines in real output: -4.66% in 2010 and -0.90% in 2011. Securities, Commodities, and Brokers after strong growth in 2009 (+33.49%), then had decelerating growth in 2010 (+13.62%), and Real GDP actually declined in 2011 (-3.87%). However, the net result still put Securities, Commodities, and Brokers in positive-growth territory over the 2009-11 recovery period (see Graph V-4A). Though there were code changes to the NAICS classification system that effected the growth in Connecticut's Finance and Insurance Sector between 2011 and 2012, this was not the case for the entire 2009-12 current-recovery period. And, it appears that Connecticut's anemic Real GDP growth (+1.01%) over the current recovery period has been driven by the declines in real output in the State's Finance and Insurance Sector and its Government Sector (discussed below). Further, the declines in real output in Connecticut's Finance and Insurance Sector, in particular, seem to be driven by declines in Real GDP in the Credit Intermediation and Insurance sub-sectors.

Turning to Graph V-5B, the Government Sector, the other of the two-digit NAICS sectors that, along with Finance and Insurance have been major drivers of Connecticut's slow growth in Real GDP over the current recovery, Federal Civilian real output has



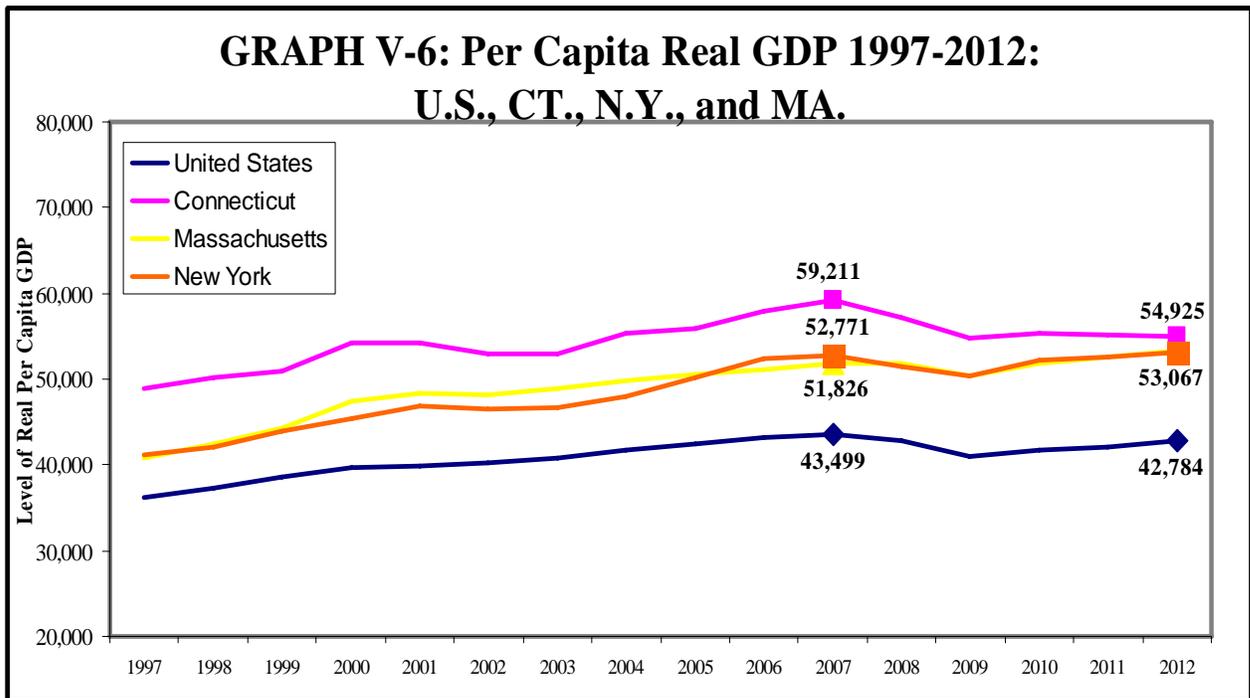
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

declined for three years since the economy bottomed in 2009, and Connecticut's Federal Military Real GDP decelerated in growth in 2009 and 2010, and then declined by 4.03% in 2011. However, these two sub-sectors combined only account for about 15% of the State's Government-Sector Real GDP. Nearly 85% of Connecticut's Government-Sector Real GDP is in State and Local Government, which includes the tribal nations. Real GDP, in Connecticut's State and Local Government Sub-Sector declined by nearly 9%, in 2009, and by 3.08% in 2010. Growth was essentially flat in 2011 (+0.75%). In addition to following the national trend, over the current recovery, where State and Local Government has seen the largest declines, in both real output and employment, Connecticut's declines in Real GDP in the State and Local Government Sub-Sector is also being driven by the declines in revenues, employment, and output at the tribal nations' casinos.

Connecticut's Real Per Capita GDP Is Losing Ground

The slow growth in Connecticut's Real GDP over the current recovery, and even decline over the last year of available data (2012), has resulted in the State's losing ground relative to the U.S. and neighboring states. Graph V-6 tracks Connecticut's per capita Real GDP from 1997 (the earliest year of U.S. BEA, NAICS data for State GDP, and 2012, the last year of available data. As is apparent from Graph V-6, the level of Connecticut's Per Capita, Real GDP has been above that for the U.S., New York, and Massachusetts over the entire range of data. However, it is also clear that the gap between Connecticut and U.S., Connecticut and New York, and Connecticut and Massachusetts has been closing. In 1997, Connecticut's Real, Per Capita GDP was 35% above that for the U.S., 20% above Massachusetts, and 19% above New York. By 2007, as the recession and financial crisis hit, Connecticut's per capita, Real GDP was still 36% above that for the U.S., but had declined relative to Massachusetts, at 14% above the Commonwealth's Real Per Capita GDP, had slipped to 12% above New York's Per Capita, Real GDP. After the recession and financial crisis, Connecticut began to lose ground much more rapidly. By 2012, the last period of available data, Connecticut's Per Capita Real GDP had declined relatively to 28% of U.S. Per Capita, Real GDP, and was now only 3% above Massachusetts's Real Per Capita GDP, and 4% above that of New York.

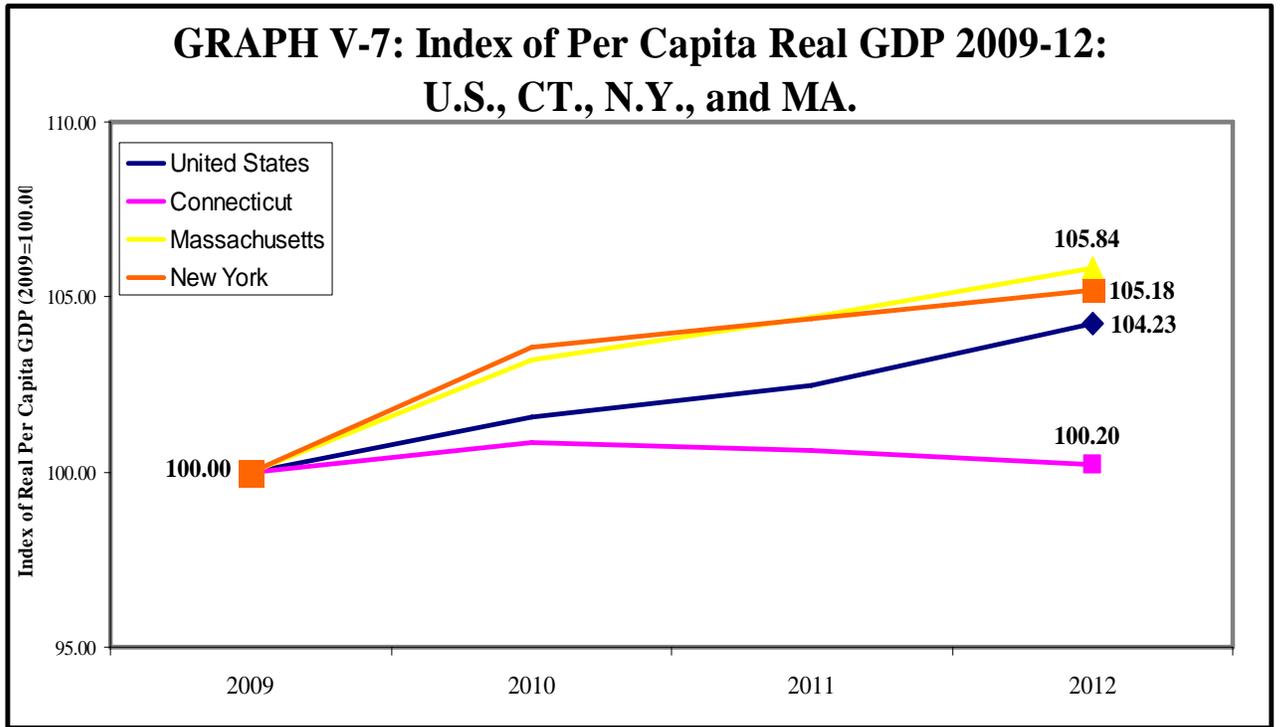




SOURCE: U.S. BEA and Author's calculations.

The failure of Connecticut's Per Capita, Real GDP over the current recovery, as depicted in Graph V-7, has caused it to, not only continue to lose ground, but, since 2009, at an accelerating rate. Graph V-7 tracks an index of Per Capita, Real GDP, which is a ratio of a selected current year to the base year, which, in this case is 2009, the year of the NBER-declared beginning of the current recovery, and is also where the index value is equal to 100.00. ;

From Graph V-7, after the bottom in 2009, Massachusetts's Per Capita, Real GDP increased by 5.84% by 2012. New York's Per Capita, Real GDP grew by 5.18%, and U.S. Real, Per Capita GDP had grown by 4.23%. Between 2009 and 2012, Connecticut's Per Capita, Real GDP virtually had no growth (+0.20%). By 2012, U.S. Per Capita, Real GDP was still 1.68% below where it was in 2007 as the crisis and recession were hitting. On the other hand, Massachusetts's Per Capita, Real GDP was 2.69% above it 2007 level by 2012, and New York's Real Per Capita GDP was 0.56% above its 2007 level. In 2012, Connecticut's Per Capita, Real GDP was 7.24% below its 2007 level.



SOURCE: U.S. BEA and Author's calculations.

The next section turns to a higher frequency, with more recently available data for gauging Connecticut's output of goods and services.

ii. Real Earnings by Industry (A Proxy for Output)

There are two problems with state GDP: the first is that it is annual, and the second is that the last available data is for 2012 so that no information for 2013 is available. A source of higher-frequency series that provides more timely information on the State's Economy, at least, through the first quarter of 2013 is from the State Personal Income series which is available on a quarterly basis. From the basic output-income identity we get:

$$\text{OUTPUT} = \text{INCOME}$$

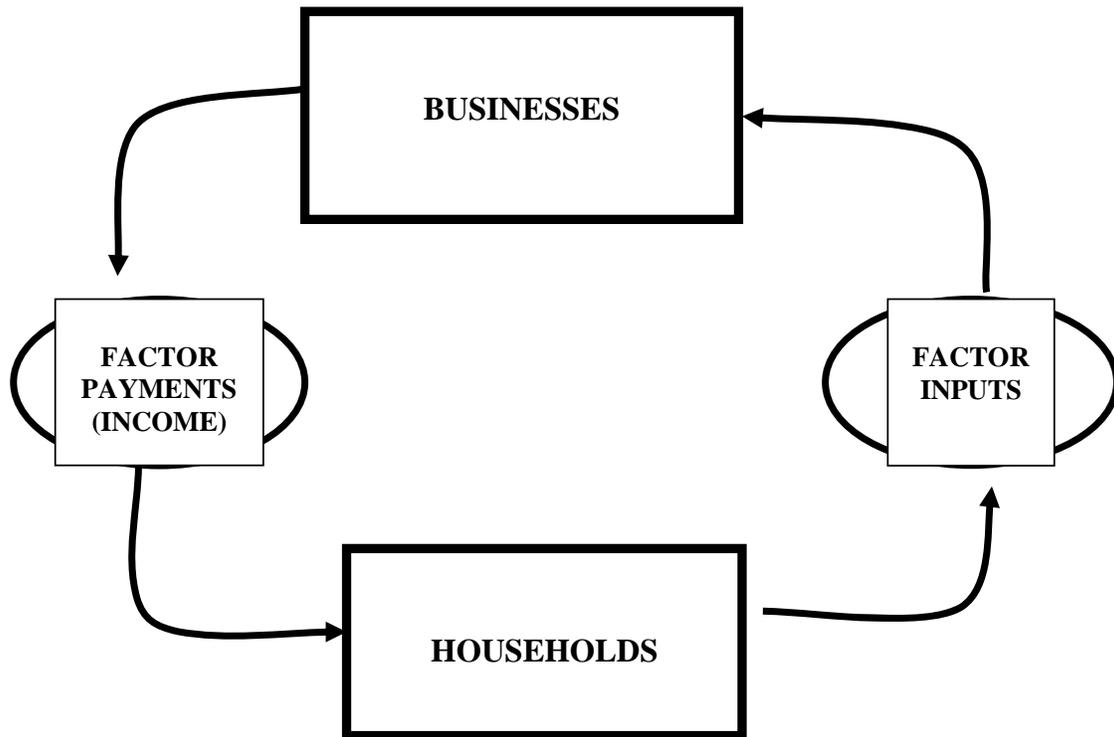
$$\text{Gross Domestic Product (GDP)} = \text{Gross Domestic Income (GDI)}$$

As illustrated in Figure V-1, Households provide Factor-Inputs to Businesses (Land, Labor, and Capital). Businesses, in turn, use Factor-Inputs to produce Goods and Services for sale back to Households. Thus, for every dollar of output by businesses, there is one dollar of income received by households in payment for providing the factor-inputs to the production process (Rent to Land, Wages to Labor, Interest to Capital, and Profits to Entrepreneurs), and therefore, Output equals Income: two sides of the same coin.

In actuality, unlike the textbook relationship described above, there will be differences in the output and income sides for, at least, two reasons: a statistical discrepancy do to the different data-sources for the two sides of the identity, and the different accounting methods used to record each side of the circular flow. The second reason the two sides will not be equal would remain even if there were no statistical discrepancy. That is because the output side [i.e., the Gross Domestic Product (GDP)] is recorded on an *Accrual Accounting* basis, and the income side [i.e., Gross Domestic Income (GDI)] is recorded on a Cash Accounting, or its flip-side a *Dispersal* basis. That is, GDP is recorded when it is generated, and income is recorded when it is received. Thus, a worker who generates Value Added on his or her job in December will have the output generated recorded in December, when it is generated. But, given that pay is usually held back a couple of weeks, the worker will receive the income (pay) for generating that output in January. Thus, the GDP is recorded in December and GDI-side in January.



FIGURE V-1: Circular-Flow of Factor-Inputs and Factor Payments



SOURCE: CTDOL-Research (Figure drawn by author).

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Earnings by Place of Work or, Earnings by Industry, represents the income earned by industries from selling their goods and services. As such, it is the flip-side of the value of those goods and services they have sold. And, as illustrated in Figure V-1, this implies that income earned from producing output can be used as a proxy for the value of output produced. And, in fact, Earnings by Industry are used as a proxy for output (i.e., GDP), at the state and regional level in order to get a more frequent and up-to-date, estimate of output, or GDP²⁷.

2

This sub-section extends the analysis in the previous sub-section on Connecticut's State GDP. Using Earnings by Industry as a proxy for State GDP, this sub-section turns to assessing the current and recent performance of Connecticut's output at the higher, quarterly frequency, and at a more up-to-date time-frame: the first quarter of 2013. Graph V-8 tracks Connecticut's Earnings by Industry over the current cycle from 2005Q1 to 2014Q4. Panel A depicts the level of Earnings by Industry, and Panel B shows the QTTQ percent-change, represented by the bars, and measured on the left vertical scale, and the YTY percent-change represented by the line, and measured on the right vertical scale.

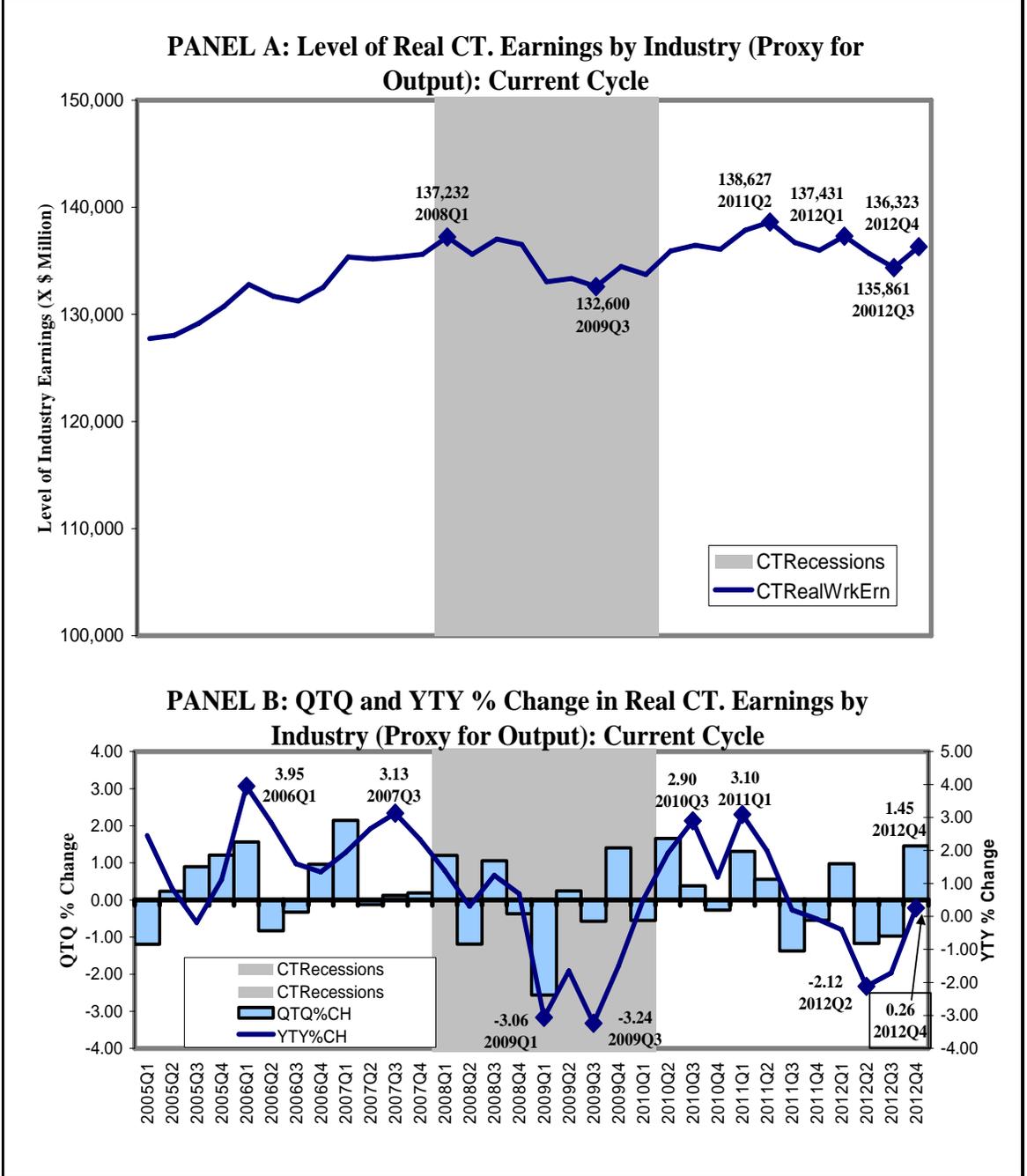
To obtain Real Earnings by Industry, current-dollar earnings were deflated by the Quantity Index for Price Consumption Expenditures (PCE). The quantity index, rather than the price index, was used in order to reflect the use of the earnings series as a proxy for GDP, or output. The milestones in the level of earnings are marked with diamonds, and labeled in Panel A in Graph V-8. Beginning in 2005Q1, the peak level of Connecticut's Real Earnings by Industry (hereafter, "Real Industry Earnings"), over the last expansion, was \$137.2 billion in 2008Q1. Over the next eight quarters, or two years, Connecticut's Real Industry Earnings fell by \$4.631 billion, or 3.37%, and bottomed at \$132.6 billion in 2009Q3. Over the next seven quarters, Real Industry Earnings recovered by \$6.027 billion or, 4.45% to \$138.627 billion by 2011Q2. But then, once again, Connecticut's output, as measured by Real Industry Earnings, contracted over the next five quarters. Real Earnings declined by \$4.258 billion, or 3.07%, falling to \$134.369 billion by 2012Q3, recovering in 2012Q4 by \$1.954 billion to \$138.323 billion.

²⁷ Brown (April 3, 2008).



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

GRAPH V-8: CT. Real Earnings by Industry (Proxy for Output): 2005Q1-12Q4



SOURCE: U.S. BEA and author's calculations.



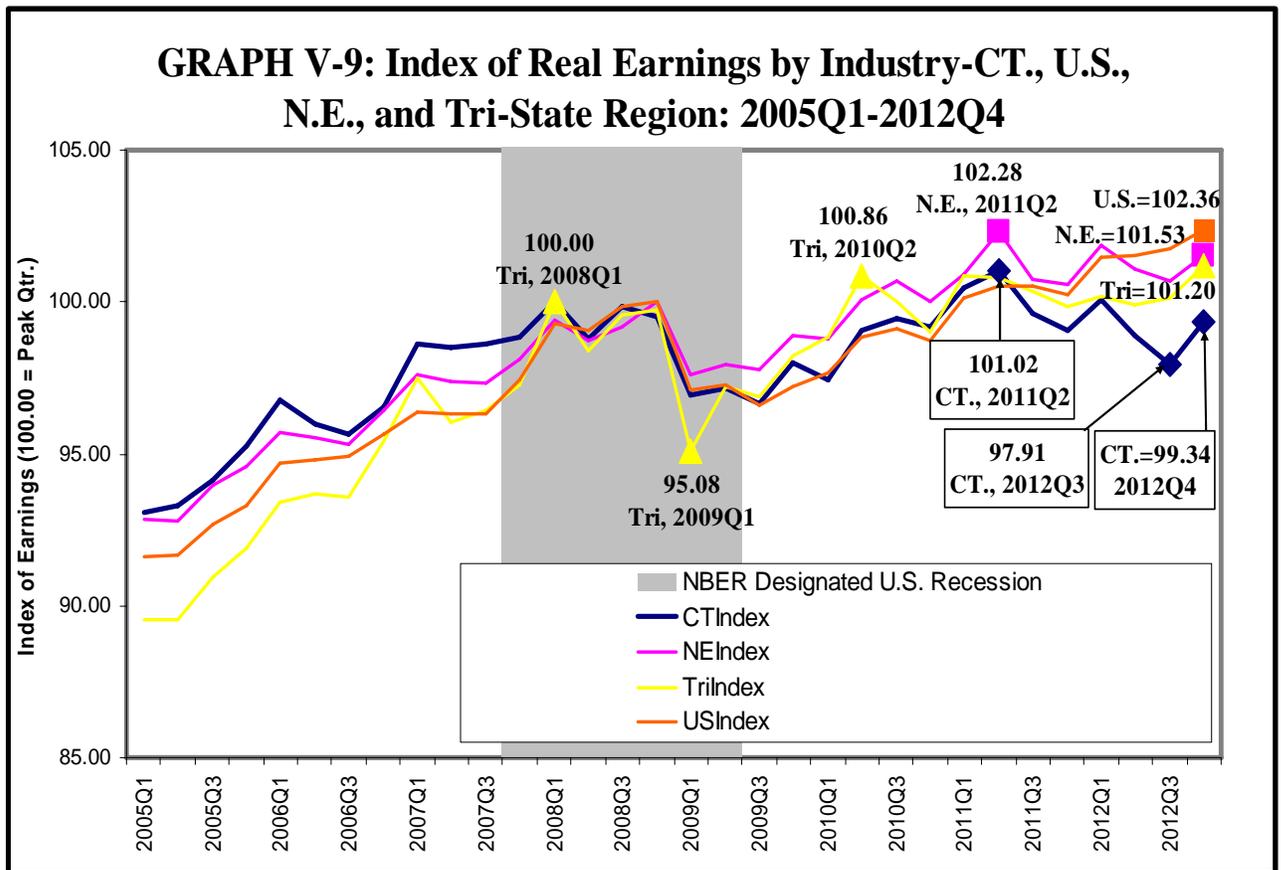
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

From Panel B in Graph V-8, it is clear why Connecticut's GDP performance was as weak as was reported in Part i of this chapter. The Quarter-to-Quarter (QTQ) growth-rate in Connecticut's Real Industry Earnings was negative in four of the the six quarters between 2011Q2 and 2012Q4, the last quarter of available data, at the time of writing. The QTQ growth-rate for 2012Q4 was 1.45%, or 5.93% on a compounded, annualized basis. This followed on the heels of two back-to-back declines in Connecticut's Real Industry Earnings. In 2012Q2, Real Industry Earnings contracted by 1.17%, which is a 4.60%, compounded, annualized decline, and in 2012Q3, earnings fell by 0.97%, or 3.82%, on an annualized basis. The revised data, to be released by the end of June will give a better indication as to whether or not the strong growth in Connecticut's Real Earnings, in 2012Q4, were distorted by the impending Fiscal Cliff Deal, which shifted income back into December (discussed in detail below, in the "Income" section of this chapter), or whether or not strong growth, and not just income-shifting, drove the apparent recovery in Connecticut's Industry Earnings in the fourth quarter of 2012. From the Year-to-Year (YTY) growth-rate standpoint (also depicted in Panel B, Graph V-8, right vertical scale), 2012Q4 was the first quarter of YTY positive growth, albeit anemic (+0.26%) since the third quarter of 2011 (which was also weak at 0.20%).

**HOW DOES THE CYCLICAL BEHAVIOR OF CONNECTICUT'S REAL
INDUSTRY EARNINGS COMPARE?**

Following the analysis of Connecticut's GDP performance in the previous sub-section, and to get a sense of the relative impact the recent panic/recession, and current, struggling recovery has had on Connecticut's Industry Earnings, the State Economy's performance is compared to that of the U.S. and the two regions compared above. Graph V-9 presents an index of Real Industry Earnings in order to compare earnings of different scales. The graph starts with the period 2005Q1, as the housing bubble was beginning to peak, and then pop, and then ends with the latest period of available data: 2012Q4. The index of Connecticut's Real Industry Earnings is compared to indices for the U.S., New England (N.E.) and the Tri-State Region (Tri-State). The peak in earnings, over the previous expansion, is where each index series is equal to 100.00.





SOURCE: U.S. BEA and Author's calculations.

The peak in Real Industry Earnings, over the previous expansion, for Connecticut and the Tri-State Region, around New York City, was in 2008Q1. Both the U.S. and New England had their peaks in earnings three quarters later in 2008Q4, the quarter of the financial panic. While Connecticut, New England, and the U.S. bottomed in 2009Q3, and began to turn around, the Tri-State Region, after a steep 4.92% contraction in Real Industry Earnings over the 2008Q1-2009Q1-four-quarter period, recovered after four quarters of decline, and two quarters before Connecticut, New England, and the U.S. Between 2009Q1 and 2010Q2, Tri-State Real Industry Earnings recovered by 6.09%, or at a 4.84% compounded, annualized clip. Also of note in Graph V-9 is the steep, upward slope to the index-series for the Tri-State Region over the 2005Q1-2008Q1 (its peak). In fact, Real Industry Earnings for the Tri-State Region (Tri-State) grew by 11.66%, compared to 7.43% for Connecticut over this same period. Also, Connecticut's growth in



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

earnings is clearly stronger than that for the U.S. and New England (N.E.). However, as is also apparent, the Tri-State Region's decline in Real Industry Earnings is steeper than that for Connecticut, the U.S., or N.E. And, it is clear that Connecticut's growth in Real Industry Earnings, over the current recovery, has not been below that of the Tri-State Region, the U.S., and New England, but in addition, Connecticut's Real Industry Earnings growth suffered a reversal between 2011 and 2012.

After bottoming in 2009Q3, Connecticut's Real Industry Earnings, as noted in the discussion above, recovered by \$6.027 billion or, 4.45% to \$138.627 billion by 2011Q2. But then, once again, Connecticut's output, as measured by Real Industry Earnings, contracted over the next five quarters. Real Earnings declined by \$4.258 billion, or 3.07%, falling to \$134.369 billion by 2012Q3. This represents a 2.46% compounded, annualized decline, which was a steeper rate of decline than the 2.26% during the recession and financial crisis. Until the reversal after 2011Q2, Connecticut's Real Industry Earnings had been 1.02% higher than it was at the peak of the last expansion in 2008Q1 (see Graph V-9, which is admittedly getting cluttered at the right area on the graph). However, since the reversal, Connecticut's index value is back below 100.00, which means that the level of real output is now below its 2008Q1 level. In fact, by 2012Q4, Connecticut's index value was 99.34, which implies that by the fourth quarter of 2012, Connecticut's level of Real Industry Earnings was still 0.66% below its 2008Q1 level.

On the other hand, the index values for the U.S., New England, and the Tri-State Region were all above 100.00 in 2012Q4. Thus, their levels of Real Industry Earnings were all above the levels that they reached at the peak of the last expansion. The U.S. Index value in 2012Q4 was 102.36, which implies that U.S. Real Industry Earnings were 2.36% above their peak level of the last expansion in 2008Q1. New England, with an index value of 101.53 was 1.53% above its level at the peak of the last expansion, and the Tri-State Region, with an index value of 101.20 was 1.20% above its peak level of Real Industry Earnings over the last expansion in 2008Q1. Unfortunately, the quarterly Real Industry Earnings data confirms the results from the annual Real GDP data.



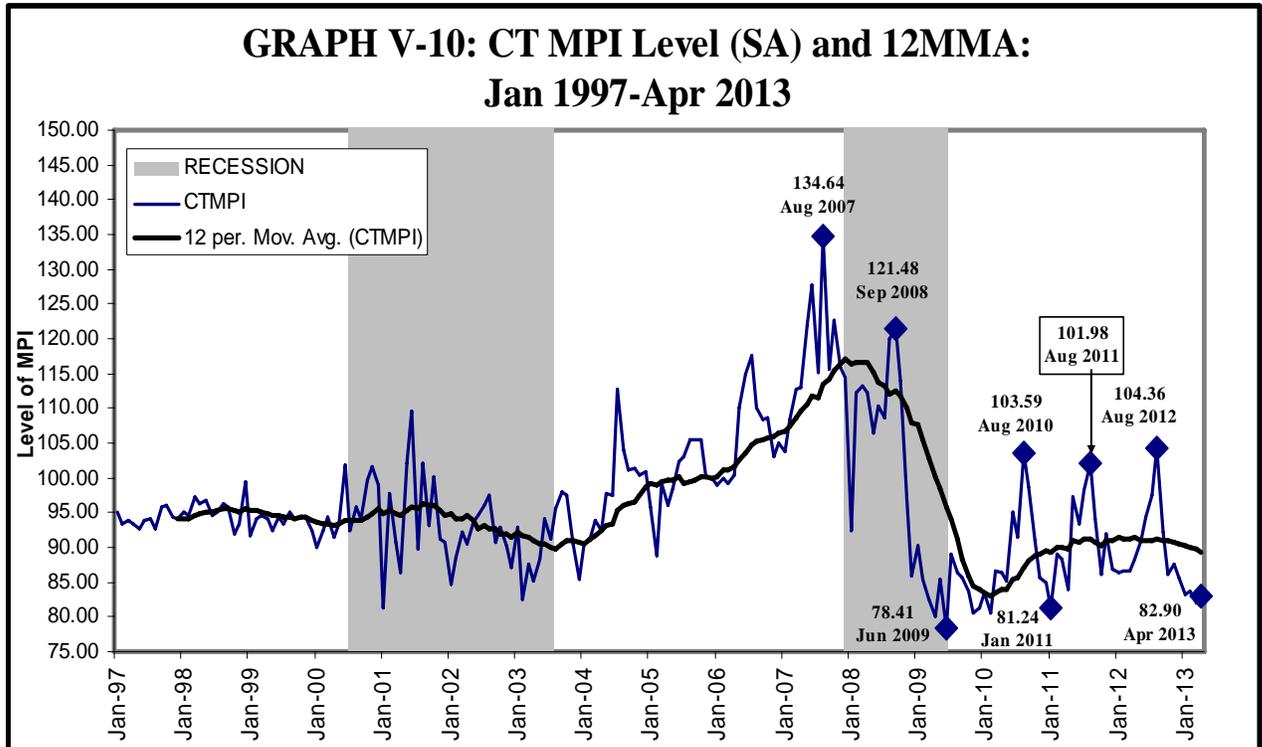
iii. CT Manufacturing Production Index (CMPI)

As noted in the introduction to Part A, above, GDP measures the goods and services produced over a given period, to meet *Final Demand*, but leaves out production to meet *Intermediate Demand* (i.e., industry goods and services produced for other industries, including themselves, who use this purchased output as inputs into the production of goods and services for final demand). As noted in Volume 1, Industrial Production is calculated on a gross output basis. That is, *Gross Output* (GO) includes, not only Final Demand, or GDP, but also the intermediate inputs used, in conjunction with the Primary Factors of Production [Land (Natural Resources), Labor, and Capital] to produce the goods and services to meet Final Demand. Thus, while the discussion of output, whether measures as GDP or Industry Earnings, was focused on the behavior of produced output to meet final demand in the broad economy. This section turns to focusing on a specific sector, but still an important sector, of the economy, and further, it focuses, not just on Final Demand, but Gross Output, that is total output, or the level of the sector's production of Intermediate Inputs *and* Final Demand.

As also noted in the introduction to Part A, in the analysis in Volume 1, the Manufacturing Industrial Production Index (IPI) was used rather than the Total IPI, in order to control for weather, and other factors that might distort the signals the economy is sending about the underlying level of manufacturing output. The Connecticut counterpart to the U.S. Manufacturing IPI, produced by the Federal Reserve Board, is the Connecticut Manufacturing Production Index (CMPI) produced by the Office of Research of the Connecticut Department of Labor. .

Graph V-10 tracks the Connecticut Manufacturing Production Index (CMPI), and to filter out the noise in the CMPI data, which has a strong seasonal component, Graph V-10 also tracks the 12-Month Moving Average (12-MMA) from Jan 1997 to the last period of available data, at the time of writing, April 2013. Milestones are flagged and labeled at various points in Graph V-10.





SOURCE: CTDOL-Office of Research and Author's calculations.

From Graph V-10, Connecticut's manufacturing output peaked in August 2007, at 134.64, over the last expansion, and bottomed at 78.41 in June 2009, the NBER-designated trough of the last recession. That represents a 41.76% decline in industrial output, and a compounded, annualized rate of decline of 25.54%. By August 2012, the CMPI had recovered to 103.59, a 32.11% increase, which represents a strong 26.96% compounded, annualized growth-rate over the first 14 months of recovery. This is consistent with Connecticut's other economic indicators, such as GDP, Real Industry Earnings, and Non-Farm Employment, which show that with recovery, the State's economy came out of the gate strongly, but then lost momentum. Not quite one year later, in June 2011, the CMPI had fallen to 81.24, a decline of 21.58%, or a steep 25.30% compounded, annualized decline. Fourteen months later, Connecticut's industrial output once again had a strong spurt of growth reaching 104.36 in August 2012, the highest level of output reached by the CMPI in the current recovery. But, by April 2013, the last period of available data at the time of writing, Connecticut's manufacturing output had fallen by 20.66% (a 29.33% compounded, annualized decline), to 82.90, the second

lowest level of industrial output over the current recovery. In addition, the 12-Month Moving Average (12MMA) began trending downward in the second half of 2012, and has continued its downward trajectory into 2013.

b. INDICATORS OF AGGEGATE DEMAND AND AGGREGATE SUPPLY

This section turns to the signals sent by the economy through the Aggregate Demand and Aggregate Supply framework. The economy operates below its potential if the demand for the goods and services produced by the economy falls below the full-capacity level of its ability to produce. This results in what is called a positive *Output Gap*, that is Full-Employment GDP minus Actual GDP is greater than zero (i.e., $GDP_{FE} - GDP_{Act} > 0$). If actual GDP, the output of goods and services in the economy, is equal to GDP_{FE} then the Output Gap is zero, and the economy is operating at full capacity utilization (i.e., full employment). Finally, if the demand for goods and services exceeds the economy's ability to produce, then there is an *Inflationary Gap*, that is, the Output Gap is negative, as the excess demand merely drives up prices as the economy's capacity to fill the demand is constrained by insufficient supply. Thus, assessing the state of Aggregate Demand and Aggregate Supply, at the time of writing, can reveal important strengths and weaknesses in aggregate economy activity, which, in turn, can relay important information that, in turn, has important implications for the current state of the economy, and its likely trajectory over the forecast horizon.

Table V-3 is a modified version of Table V-1 in Volume 1-U.S. ECONOMIC OUTLOOK, which summarizes the indicators that are analyzed in assessing the current conditions in the U.S. Economy. Since a number of the indicators available to assess the national economy are not available at the state level, Table V-3 adds two columns that do not appear in Table V-1. The last sub-columns, from the right, under the two major headings, "Aggregate Demand", and "Aggregate Supply" are titled "State Level?" and note whether of not the corresponding indicator is available at the state level.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

TABLE V-3: Indicators of Aggregate Demand and Aggregate Supply Conditions Available at the State Level

AGGREGATE DEMAND			AGGREGATE SUPPLY		
COMPONENT/FACTOR	SECTOR/MARKET	STATE LEVEL?	COMPONENT/FACTOR	SECTOR/MARKET	STATE LEVEL?
Consumer Spending	Household Sector	Partially	Capacity/Utilization	Physical Capital Stock	No
Business Activity	Business Sector	Limited	Labor	Human Resources	Yes
Government Spending	Public Sector	Yes	Imports	Foreign Sector	Partially
Export Demand	Foreign Sector	Yes, but Limited	Productivity	Factor Utilization	Limited



**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Those available are analyzed in the next two sub-sections to gauge the current state of Connecticut's Economy. Part i looks at the indicators of Aggregate Demand and Part ii looks at the indicators of Aggregate Supply.

i. AGGREGATE DEMAND

This section focuses on the left side of Table 6, the components of Aggregate Demand (AD). Under the "Component/Factor" column (first column from the left), under the "Aggregate Demand" heading, left side of Table 6, the first component of AD listed is "Consumer Spending" The next column lists the sector driving that component as the "Household Sector". Finally, the third column from the left, headed "State Level?" indicates whether or not this particular indicator is available at the state level. As noted in the entry for the availability of state-level indicators of consumer spending, this information is partially available. Personal Income, produced and published by the U.S. Bureau of Economic Analysis (BEA), and available at the quarterly frequency, is available at the state level. However, there is no state-level counterpart to Personal Consumption Expenditures (PCE), also produced by the U.S. BEA, which is available on a quarterly basis, but only at the national level. To try to "back into" consumer spending, at the state level, Retail Sales-Tax Revenue will be used in lieu of the PCE series. The first indicators of current economic conditions of Connecticut that are assessed are those that gauge the ability of the State's Households to spend. It is because consumer spending is the largest component of Aggregate Demand, that it is discussed first. Next, in the U.S. OUTLOOK came an assessment of the most volatile component of Aggregate Demand, Investment Demand. However, note that in Table 6, this sector is labeled "Business Activity" rather than "Investment Demand" (as it is in Table 1). This is because there is no state counterpart to the U.S. BEA's Investment-Demand component of the National Income and Product Accounts (NIPA) at the state level, and therefore, is no regularly produced and published data on business investment-demand at the state level. Nevertheless, there is some data available for assessing the current conditions of Connecticut's Business Sector. The Business Sector Economic Scorecard, as well as

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

selected component-series is available at the Connecticut Labor Department's Webpage for Labor Market Information (LMI) and provides some data on the State's Business Sector, which is discussed in the Business Activities component of AD below. The third component of Aggregate Demand, in Table 6, is Public-Sector spending by the Government Sector. As indicated in Table 6, data on government spending is available at the state level Government revenues and expenditures for state and local governments are available from the U.S. Census Bureau. And, specifically for Connecticut, government fiscal data are available from the Department of Revenue Services, the Office of Policy and Management, and other agencies of the Executive Branch, the Office of Fiscal Analysis in the Legislature, the New England Economic Indicators (NEEI) Website of the Boston Federal Reserve Bank, and non-profit sources such as the Connecticut Council of Municipalities. The fourth, and final component, of AD is Foreign-Demand, which is the Export Sector, that is, foreign demand for domestically-produced goods and services. There is limited data on Connecticut Exports available at the Boston Fed's NEEI Website.

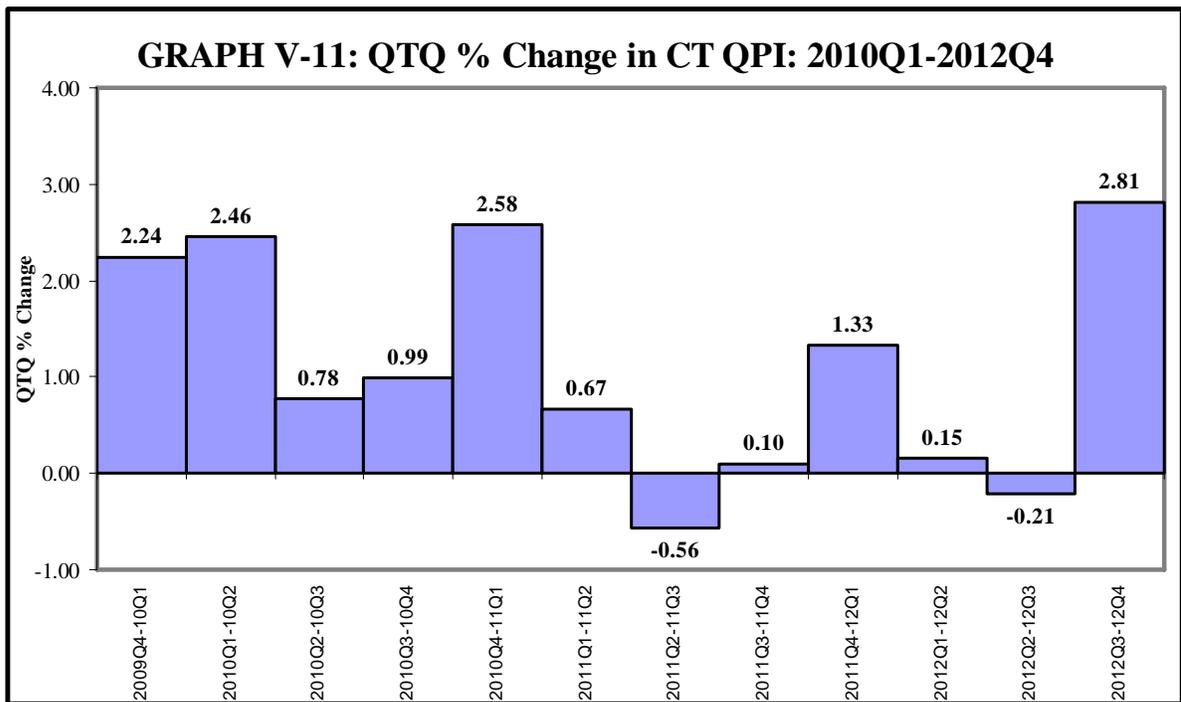
1. INCOME AND SPENDING (Household Sector)

Households' consumer demand is based on their ability and willingness to buy. As noted in Volume 1-U.S. OUTLOOK, surveys attempt to capture consumers' willingness to buy through consumer-confidence surveys. There are various opinions as to how well these surveys actually capture consumer confidence, or how much of a relationship actually exists between consumer confidence and their actually going out and spending. Two of the most well-know consumer-confidence surveys are those put out by the University of Michigan and the Conference Board. However, these surveys do not capture this information at the state level on a regular basis. Like for the U.S. Outlook, this section focuses on consumers' ability to buy. However, this section, unlike its counterpart in Volume 1, will focus exclusively on various measures of household income and spending patterns from the flow-concept approach, since data on households' balance sheets, from the stock perspective, are not available at the state level. The Federal Reserve's Flow-of-Funds produces data on sectoral balance sheets at the national level only.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

The most widely available income data available at the state, regional, and local levels is the State and Local Personal Income series produced and published by the U.S. Bureau of Economic Analysis (BEA). This section looks at the Quarterly Personal Income Series (QPI) produced by BEA for the U.S., the states, and regions.

The March 27, 2013 release of the fourth quarter of 2012 State Quarterly Personal Income (QPI), the latest release at the time of writing, showed a substantial bounce-back of CT QPI from the decline in the third quarter. The State’s income grew by 2.81% in the fourth quarter (2012Q4) and ranked first among the 50 states and the District of Columbia²⁸. However, due to The State’s flat growth of QPI in the second quarter (+0.15%) and the above noted contraction in 2012Q3 (-0.21%), and as depicted in Graph V-11, Connecticut’s growth in Annual PI in 2012 was only 2.0%, and the State ranked 49th in income growth²⁹.



SOURCE: U.S. BEA and Author’s calculations.

²⁸ U.S. Bureau of Economic Analysis, STATE PERSONAL INCOME: FOURTH QUARTER 2012 (March 27, 2013).

²⁹ U.S. BEA, STATE PERSONAL INCOME 2012 (March 27, 2013)

BOX V-1: A New State Personal Income Series Based on Regional Price Differences

A prototype Real State Personal Income (PI) series was released by U.S. BEA on June 12, 2013. It adjusted the U.S. Personal Consumption Expenditures (PCE) price index, used to deflate current-dollar income, to obtain a more accurate estimate of Real Income for the states, regions, and metropolitan areas by taking into account regional and state differences in prices based on Purchasing Power Parity (PPP) methods. However, the latest data available for this series, was for 2011, a two-year lag. It showed that Connecticut's Real, Annual PI grew by 2.2% in 2011, compared to 2.7% for the U.S. For more information on the prototype state income series, see U.S. Bureau of Economic Analysis, *Real Personal Income for States and Metropolitan Areas, 2007-2011 (Prototype Estimates)* (June 12, 2013) U.S. Department of Commerce: Washington.

THE SOURCES OF CONNECTICUT'S INCOME PERFORMANCE

What accounts for Connecticut's strong fourth-quarter income-growth, but weak annual income growth? Part of the explanation may lie in what become known as the "Fiscal Cliff" deal over the expiration of the Bush Tax Cuts in December 2012. As the U.S. BEA noted in their April 2013 release of U.S. Personal Income and Outlays for March, the March, February, and January levels of private wages and salaries were reduced by \$15.0 billion (at an annual rate), which reflected the impact of accelerated bonuses in November and in December of 2012 in anticipation of changes to individual income tax rates³⁰ as part of the Fiscal Cliff deal. This would have also affected Connecticut's PI, particularly, QPI, by boosting fourth-quarter income levels as income was pushed back into 2012 that would have otherwise been paid out in 2013 (This issue is also discussed in Volume 1-U.S. OUTLOOK).

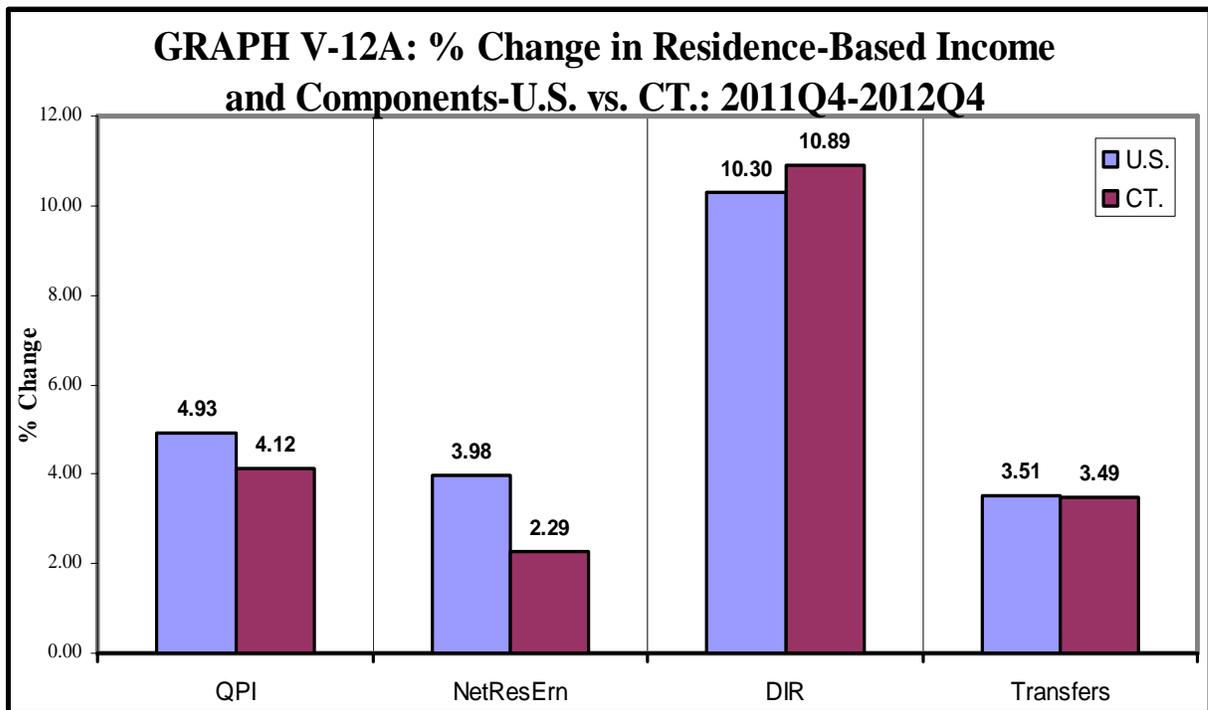
In order to explore other factors that may have also effected Connecticut's QPI growth in the fourth quarter of 2012, what follows, drills down below the surface from both the residence and income sides to uncover the dynamics behind the State's income-growth performance.

³⁰ U.S. Bureau of Economic Analysis, PERSONAL INCOME AND OUTLAYS: MARCH 2013 (April 29, 2013) U.S. Department of Commerce: Washington

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Connecticut's Residence-Based Income

Graph V-12A shows the growth of Current-Dollar CT QPI (i.e., not adjusted for prices), compared to that of the U.S., between 2011Q4 and 2012Q4. What jumps out right away in Graph V-12A is the strong growth in the Dividends, Interest, and Rent (DIR) component of the residence-based view of income, for both the U.S. and Connecticut. And, of course, this is no surprise given strong performance of the stock market over the last quarter of 2012. In fact, Connecticut's growth in DIR was slightly stronger than that of the U.S. And, both, Connecticut and the U.S., had equally modest growth in Transfer Payments. The significant difference in growth is Net Earnings by Residence (NetResErn). The growth in U.S. NetResErn was much stronger than that for Connecticut: 3.98% versus 2.29%, a difference of 1.69 percentage points.



SOURCE: U.S. BEA and Author's calculations.

Graph V-12B breaks out the contributions of each major component to the growth in residence-based, Current-Dollar CT QPI over the four quarters of 2012, and Graph V-12C shows the contributions to the growth in U.S. Current-Dollar QPI.

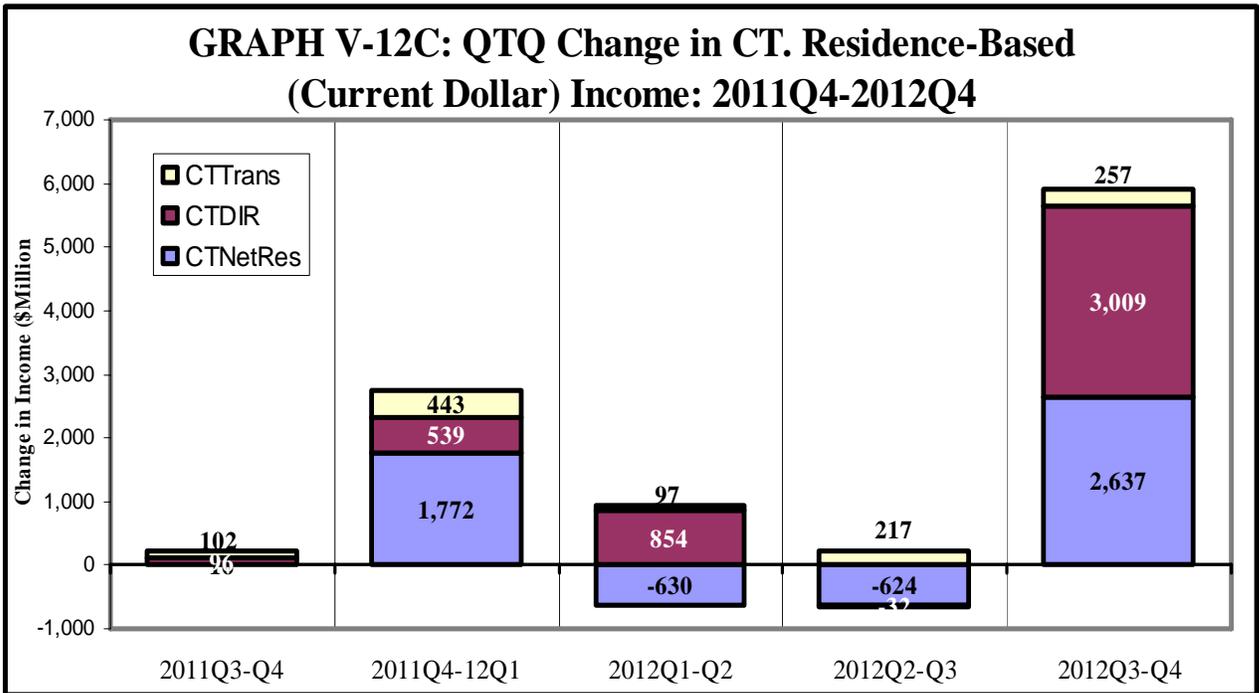
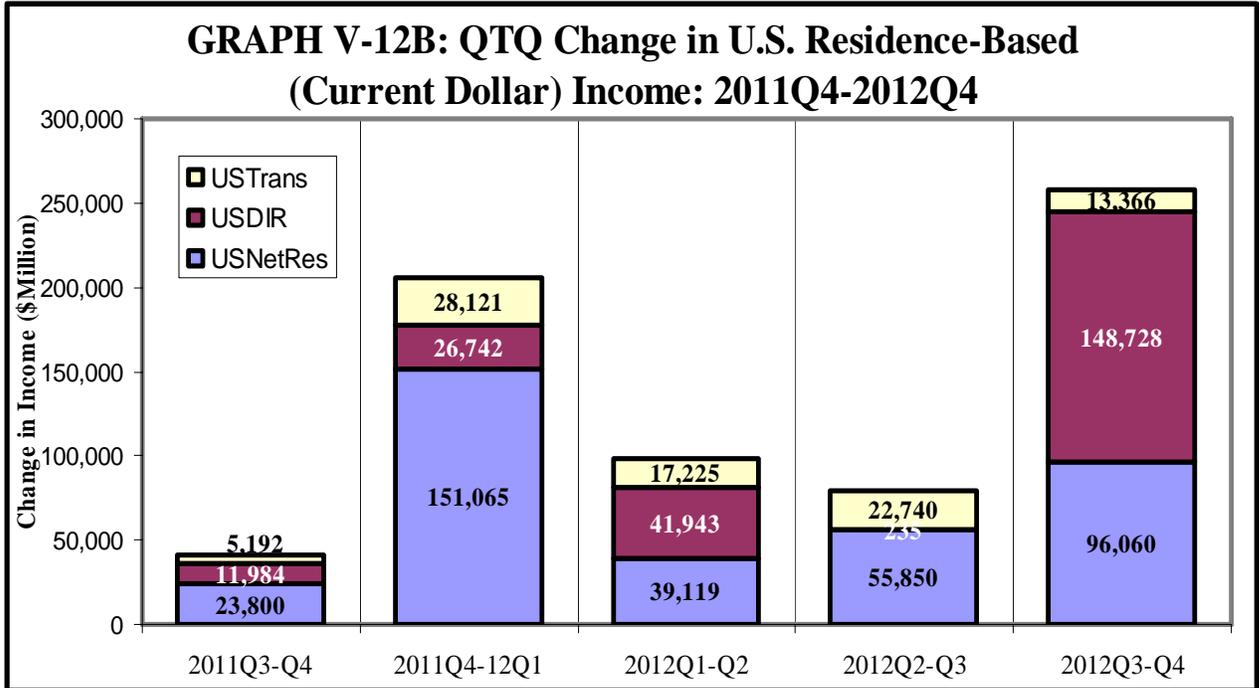
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Earnings by Place of Work (WorkErn) is composed of Wage and Salary Disbursements (W&S) and Supplements to W&S. Once WorkErn is adjusted for residence, known as the Residence Adjustment and Payroll Taxes, the result is Net Earnings by Residence (NetResErn). Net Earnings by Residence plus Transfer Payments (Transfers) and Dividends, Interest, and Rent (DIR) make up residence-based Quarterly Personnel Income (QPI). Graph V-12B shows the Quarter-to-Quarter (QTQ) growth in residence-based U.S. QPI from the fourth quarter of 2011 (2011Q4) to 2012Q4. In addition, it shows the contribution of each major component of residence-based income. Graph V-12C shows the same contributions, except to the growth in Connecticut residence-based income.

Before looking at the major components' contribution to residence-based income growth, there is an important point that should be introduced with regard to the slow growth in Connecticut's NetResErn depicted in Graph V-12A. Given that the Residence Adjustment grew by 7.28% between 2011Q4 and 2012Q4, the slow growth in Net Earnings by Residence must be driven by slow growth in Connecticut's work-based, and therefore the geographic-based side of the State's income. And, in fact, work-based Wages and Salaries (W&S) grew by an anemic 2.07% between 2011Q4 and 2012Q4. This issue will be returned to in the discussion of the work-based side of income, depicted in graphs V-3A to V-3C, below.

From graphs V-12B and V-12C, note that though income-growth slowed for both the U.S. and Connecticut after the national and state economies' "Arab Spring" in 2012Q1, the deceleration was much steeper for Connecticut, and, in fact, Connecticut's income contracted in the third quarter. And, while NetResErn slowed considerably for the U.S. in 2012Q2 and 2012Q3, it subtracted \$630 million from Connecticut's residence-based income growth in 2012Q2, and \$624 million in 2012Q3 (see Graph V-12C). NetResErn rebounded for both the U.S. and Connecticut in the fourth quarter. Connecticut's NetResErn grew by \$2.7 billion in 2012Q4, after contracting for the two previous consecutive quarters. Again, as noted above, the strong growth for the U.S. and Connecticut, in the fourth quarter, may have been effected by the Fiscal Cliff.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



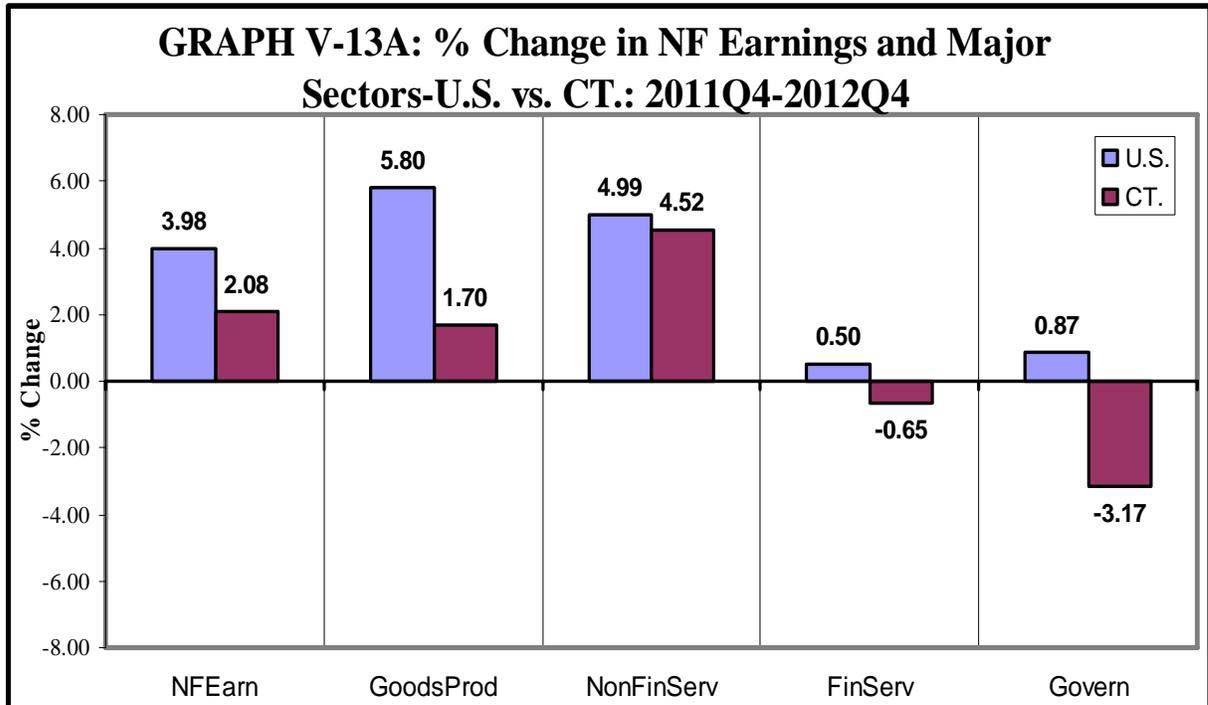
SOURCE: U.S. BEA and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Also contributing to residence-based, income-growth in the fourth quarter, for both the U.S. (Graph V-12B) and Connecticut (Graph V-12C) was Dividends, Interest, and Rent (DIR), driven by the surge in the stock market in the fourth quarter (and, which has continued into the first quarter of 2013). Connecticut's DIR grew by \$3.009 billion in 2012Q4. For both the U.S. and Connecticut, but especially Connecticut, there has been a significant decline in the growth in Transfer Payments over the four quarters in 2012.

Connecticut's Work (Geographic)-Based Income

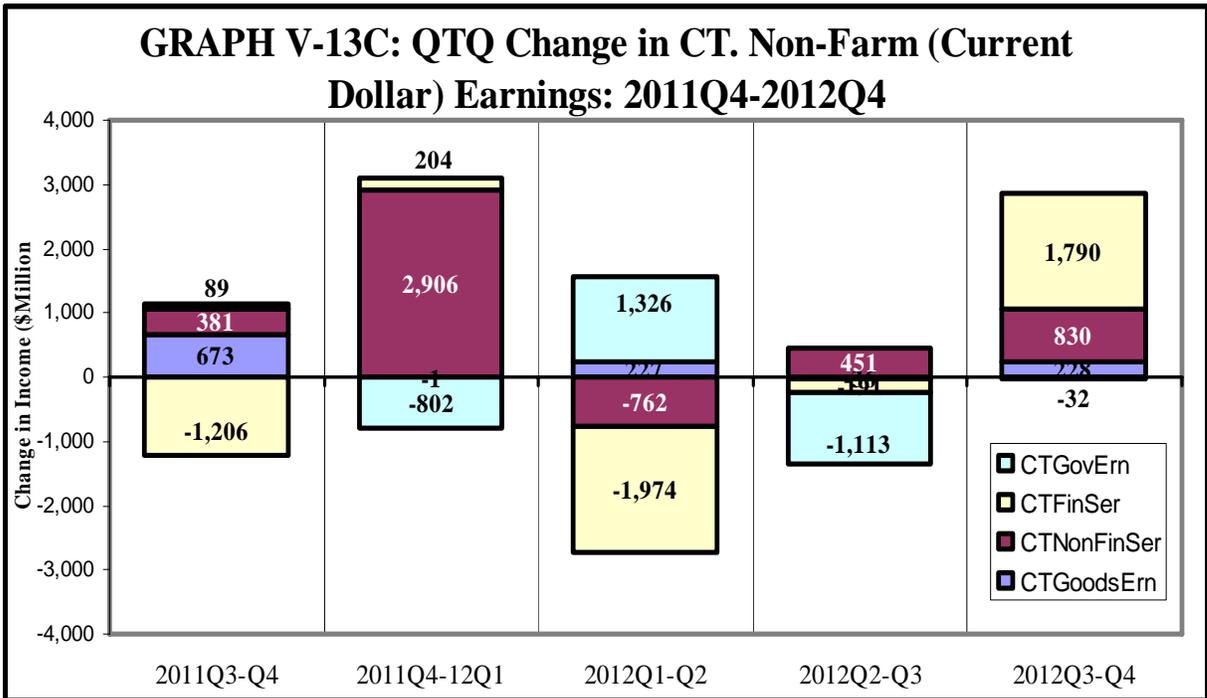
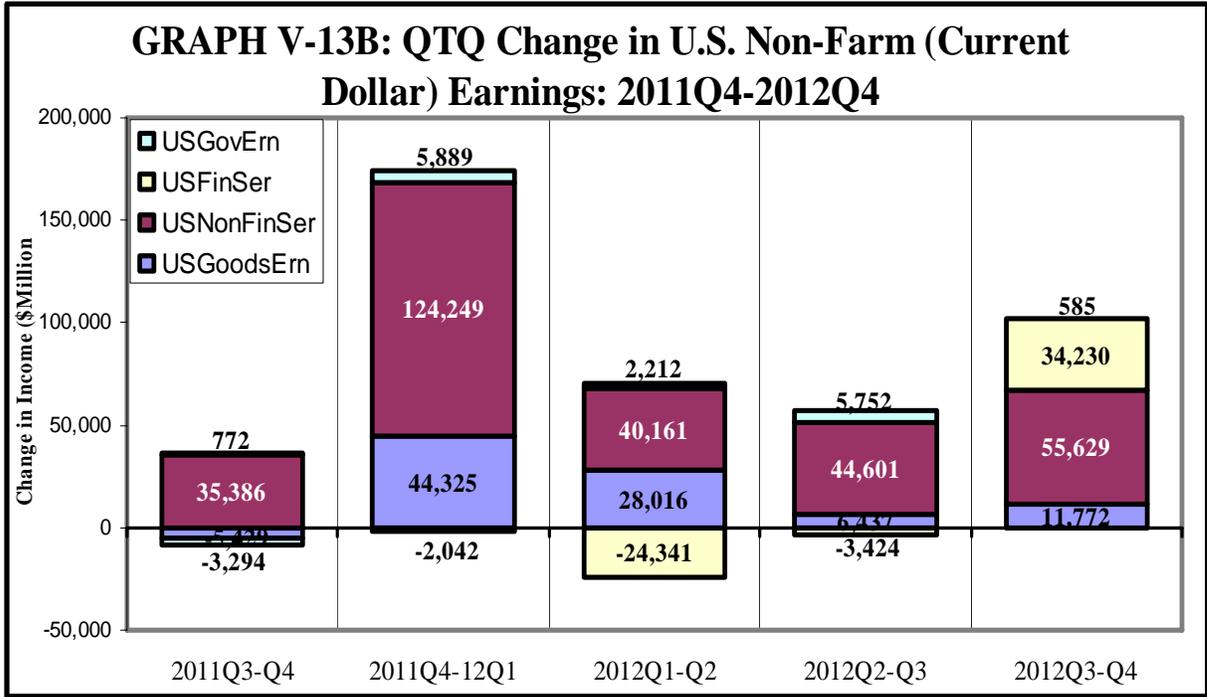
Graph V-13A depicts the growth in current-dollar, work-based, or geographic-based, U.S. and Connecticut income between 2011Q4 and 2012Q4. It can be seen that Connecticut's Non-Farm Earnings (NFEarn) grew by only 2.08% between 2011Q4 and 2012Q4, while U.S. NFEarn grew by nearly 4%. As noted above, this appears to be driven by Connecticut's slow growth in Wages and Salaries (W&S). Connecticut's growth in Goods Production Earnings was an anemic 1.70%, compared to the much stronger 5.80% growth for the U.S. Further, though U.S. growth of earnings in Financial Services was weak at 0.50%, Connecticut's Financial Services Earnings declined by 0.65%, though some of the decline may have been affected by NAICS-coding issues unique to Connecticut. Government was a significant drag on Connecticut's work-based earnings between 2011Q4 and 2012Q4. And, while U.S. Government Earnings grew at a weak 0.87% Connecticut's Government Earnings contracted by 3.17%. In addition to declines in local education, in which Connecticut is no different than the national trend, the State has also been effected by declines in the tribal nations' casino activity since the on-set of the recession and financial crisis, which are classified in Local Government.



SOURCE: U.S. BEA and Author's calculations.

Graphs V-13B and V-13C track the contributions of the four major sectors to the growth in U.S. work-based income (Graph V-13B) and Connecticut work-based income (Graph V-13C). Though much stronger for the U.S., nevertheless, Connecticut earnings in the Non-Financial Services Sector (NonFinServ) grew by nearly \$3 billion in 2012Q1, the economy's "Arab Spring" (Graph V-13C). And, though growth in NonFinServ slowed considerably for the U.S. in the second and third quarters, for Connecticut, NonFinServ Earnings declined by nearly \$2 billion in 2012Q2, while recovering slightly to +\$451 million in 2012Q3. Another big subtraction from work-based income growth for Connecticut in 2012Q2 was Financial Services, which had a nearly \$2 billion decline in earnings. Finally, after growing by \$1.326 billion in 2012Q2 Connecticut's Government Earnings declined by \$1.113 billion in 2012Q3. Again, as noted above, some of the decline could have been driven by code changes in NAICS industry classifications. And, as also noted above, for Connecticut, Government Earnings also includes the Tribal Nations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



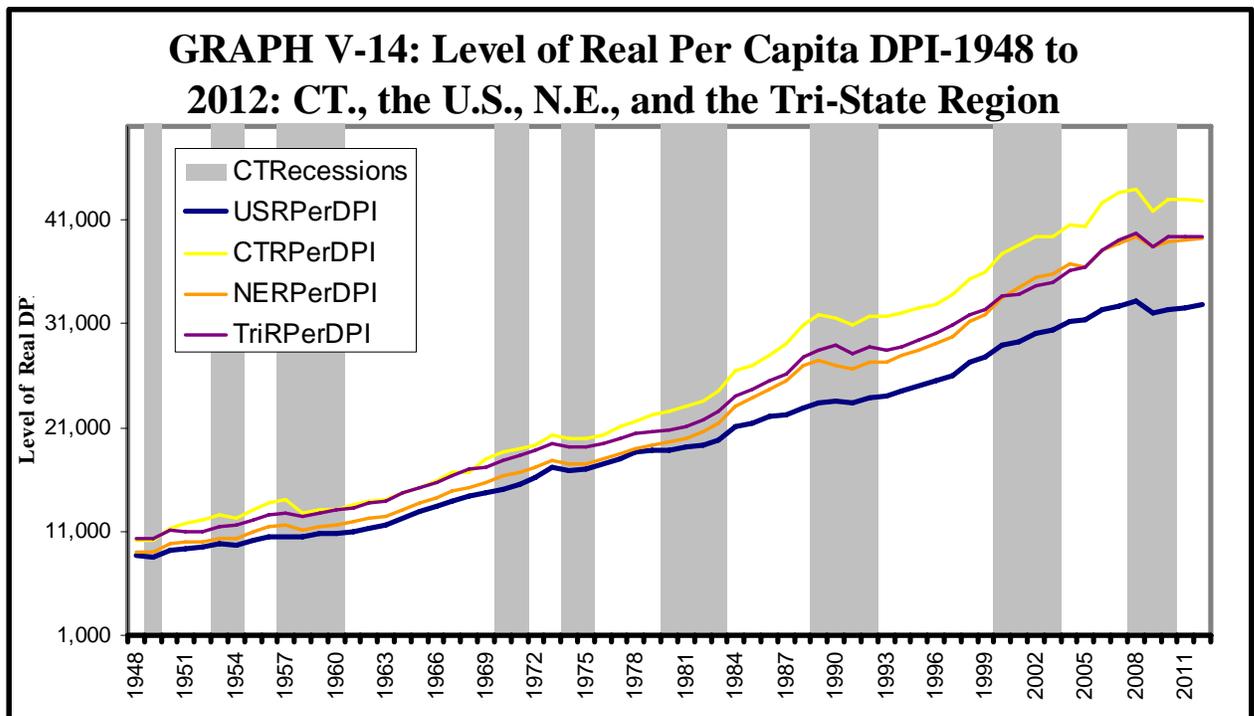
SOURCE: U.S. BEA and Author's calculations.

DISPOSABLE PERSONAL INCOME: The Basis for Consumer Spending

In the final analysis, the critical factor for consumer spending is *Disposable Personal Income*. Disposable Personal Income (DPI) is defined as:

$$\text{DPI} = \text{Income} - \text{Taxes} + \text{Transfer Payments} \quad (\text{V-1.})$$

In particular, Real DPI (adjusted for prices by deflating it with the Price Index for Personal Consumption Expenditures) is the key to consumers’ spending power. Graph V-14 tracks the level of Real Per Capita DPI for Connecticut (CT.), the U.S., New England (N.E.), and the Tri-State Region (Tri-State) from 1948 to 2012. DPI at the state and regional level is only available at the annual frequency. At the time of writing, the last release from the U.S. BEA was in March 2013³¹.

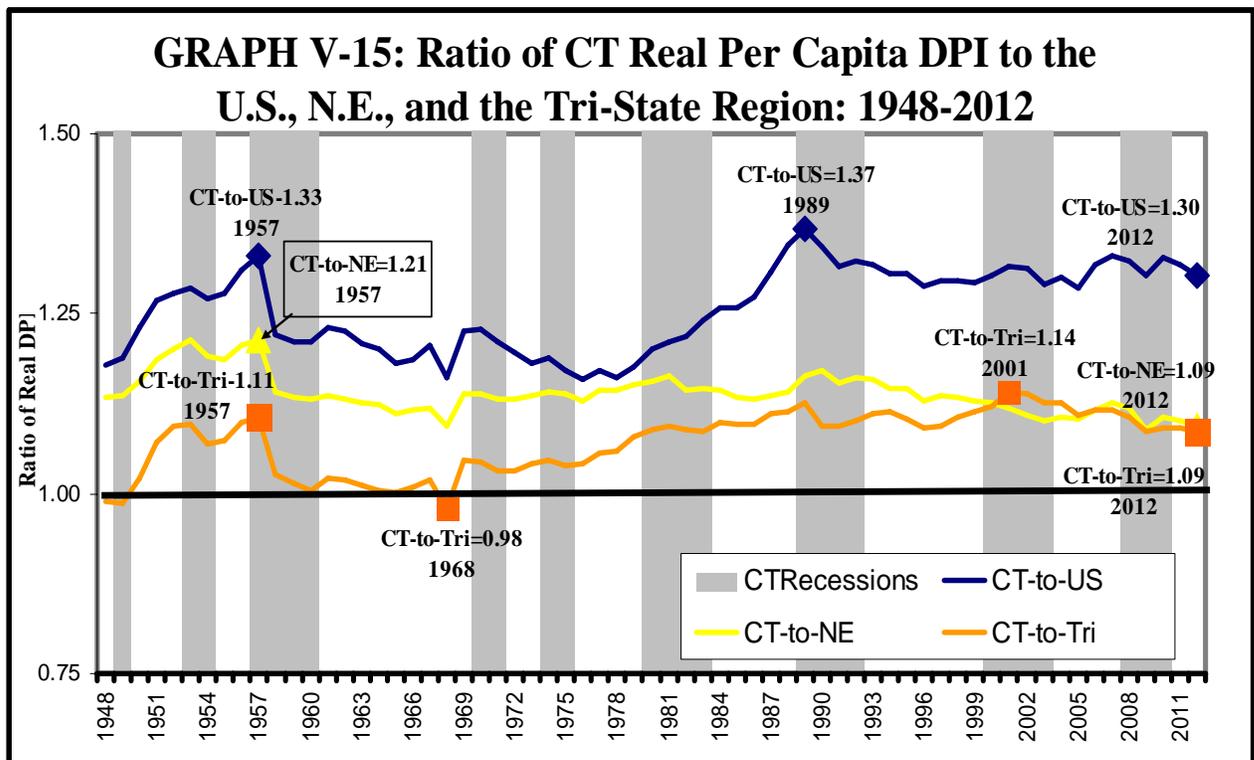


SOURCE: U.S. BEA and author’s calculations.

³¹ U.S. Bureau of Economic Analysis, STATE PERSONAL INCOME 2012 (March 27, 2013) U.S. Department of Commerce: Washington.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Connecticut's Real Per Capita DPI exceeded that of the U.S., N.E. and Tri-State after World War II, given Connecticut's large defense sector in manufacturing, the Korean War boosted its Real, Per Capita DPI. However, the State's economy took a hit after the cutbacks in defense spending after the Korean War, and from the effects of the 1957-58 Recession. As a result, Connecticut's Real, Per Capita DPI fell below that of the Tri-State Region until the Vietnam War, when again, defense boosted the State's economy and Real DPI and it once-again passed above the Real DPI of Tri-State. However, through this whole period, Connecticut's Real Per Capita DPI never fell below that of N.E. or the U.S. This can be seen more clearly in Graph V-15. Graph V-15 tracks the ratio of Connecticut's Real, Per Capita DPI to U.S. Real, Per Capita DPI, New England Real, Per Capita DPI, and the Tri-State Region's Real, Per Capita DPI.



SOURCE: U.S. BEA and author's calculations.

If the Connecticut DPI Ratio in Graph V-15 is greater than one it indicates that Connecticut's DPI is higher than the area in the denominator; and a ratio less than one indicates that Connecticut's DPI is lower, and a value of one indicates that they are equal.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Some of the trends in Connecticut's Real, Per Capita DPI are seen more clearly, and others, not discernable in Graph V-14 come through in Graph V-15.

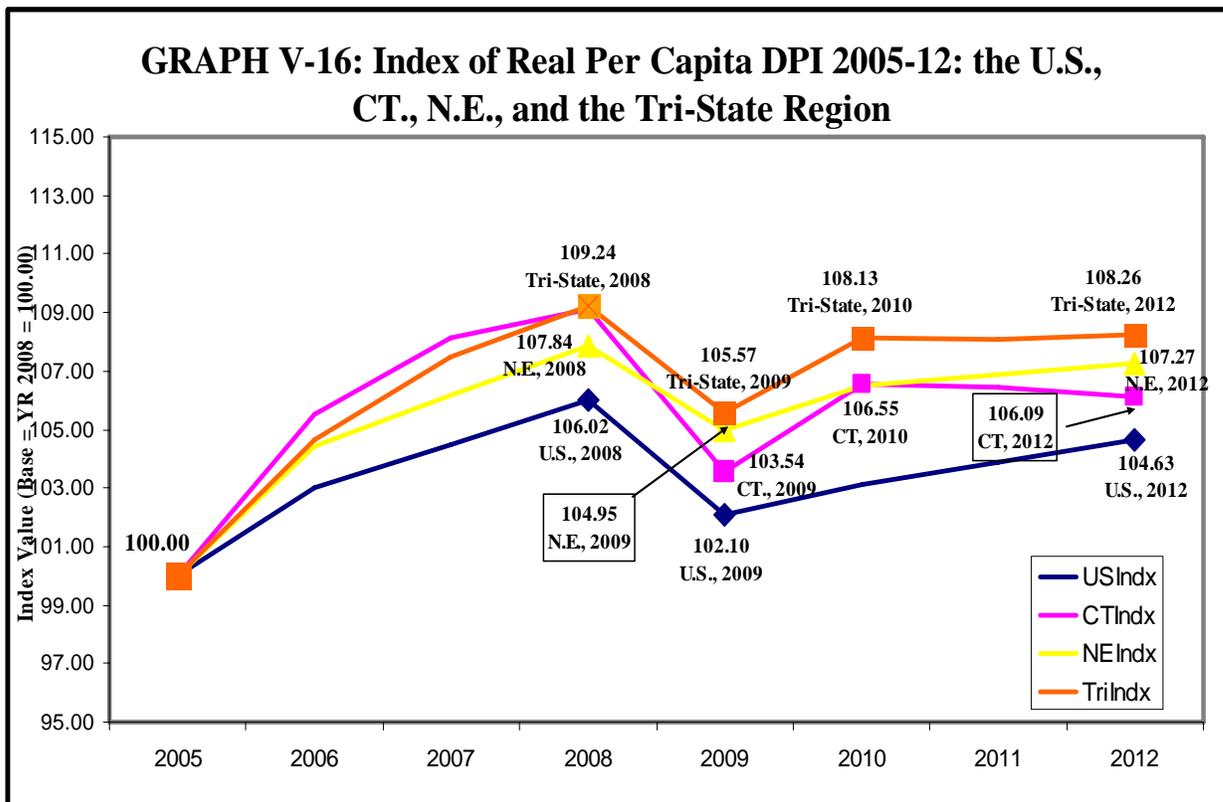
As noted in the discussion of Graph V-14, the boost from Korean War spending, as well as the Cold War, resulted in the strong growth in Connecticut's Real Per Capita DPI, as a ratio of U.S., New England, and Tri-State Real, Per Capita DPI when it peaked as the steep recession, which began in 1957 for Connecticut, and 1958 nationally, with Connecticut's ratio of Real, Per Capita DPI to U.S. Real, Per Capita DPI reaching 1.33. That is, Connecticut's Real, Per Capita DPI was 33% higher than that for the U.S. Also that same year, Connecticut's Real, Per Capita DPI was 21% higher than New England's (the highest in the Post World War II Era, relative to New England) and 11% higher than the Tri-State Region's Real, Per Capita DPI. Connecticut's relative Per Capita DPI had a steep and quick drop in 1968, and for the only time in the Post World War II Era, Connecticut's ratio of Real, Per Capita DPI to Tri-State Real, Per Capita DPI fell below one (0.98), as highlighted by the horizontal reference line in Graph V-15.

What comes through clearly in Graph V-15 is the strong growth in Connecticut's Real Per Capita DPI, which resulted from the U.S. defense build-up beginning with Carter, and then accelerating under Reagan, in the late 1970's and into the 1980's. By 1989, with the popping of Connecticut's and New England's real estate bubble, and the defense cutbacks that would impact the State's Economy with the end of the Cold War, sending Connecticut into its Great Recession, the ratio of Connecticut's Real Per Capita DPI to the U.S. reached its highest Post World War II Era level, 1.37. In 2012, the last year of available data at the time of writing, Connecticut's ratio of Real Per Capita DPI to the U.S. was 1.30, below the 1.33 in 2007, and again in 2010. The ratio with the Tri-State Region's Real, Per Capita DPI reached 1.14 as the U.S. was entering the 2001 Recession, and Connecticut had already been in recession since 2000. In 2012, Connecticut's Real, Per Capita DPI Ratio, relative to the Tri-State Region and New England was at 1.09, that is, 9% above both the Tri-State Region's, and New England's Real Per Capita DPI.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Connecticut's Real, Per Capita DPI Over the Current Cycle

Over the recession/crisis and recovery phases of the current business cycle, Connecticut's DPI has been losing ground, certainly when looking at it from the real (price deflated), per capita perspective. Graph V-16 tracks an index of the level of Real, Per Capita DPI for Connecticut, the U.S., New England, and the Tri-State Region from 2005 to 2012. The base year is 2005, in which all indices are equal to 100.00 in that year.

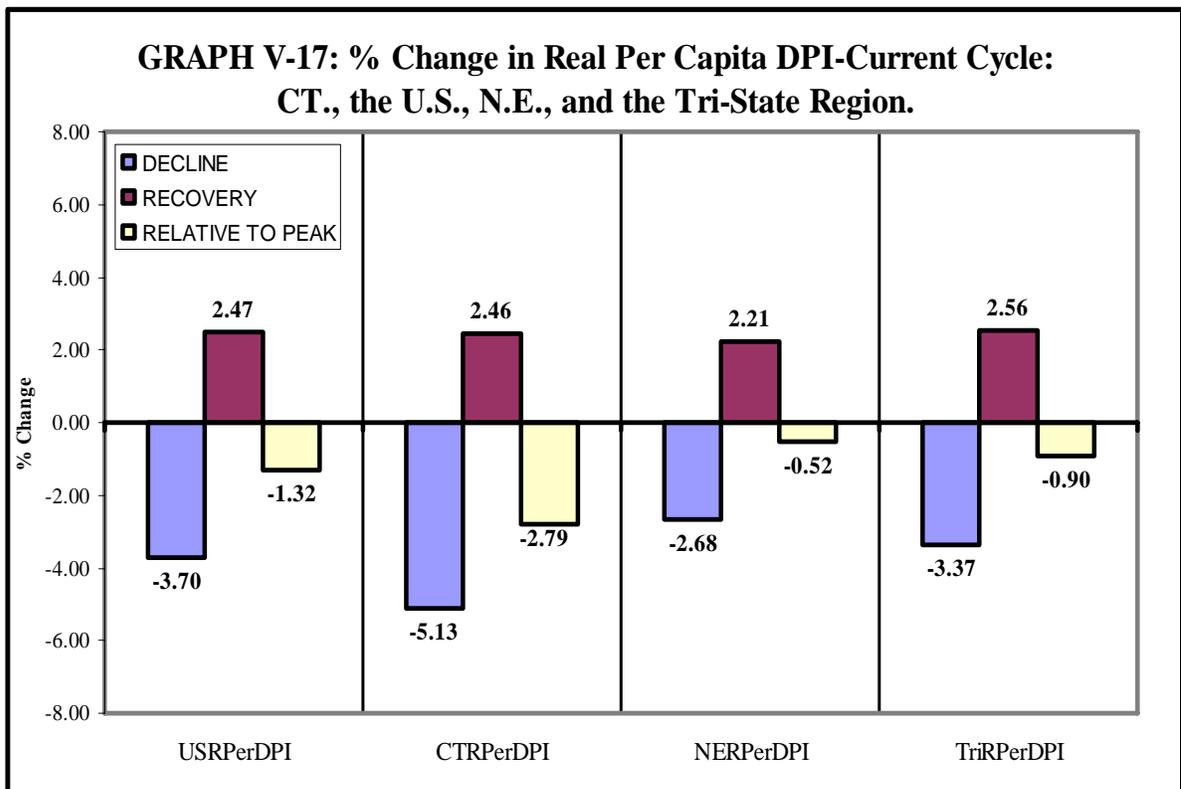


SOURCE: U.S. BEA and Author's calculations.

As would be expected, Real, Per Capita DPI for the U.S., Connecticut, New England, and the Tri-State Region peaked in 2008, the year of the financial crisis. The index for Connecticut was 109.13, in 2008, that is, Connecticut's Real Per Capita DPI was 9.13% higher than in 2005. The Tri-State Region's Real Per Capita DPI was 9.24% higher, while for New England, it was 7.84% higher, and for the U.S., 6.02% higher. As the last expansion came to a close with the collapse of the housing bubble, and the financial crisis, the behavior of Connecticut's Real Per Capita DPI was not all that different from

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

that of the U.S., New England, and the Tri-State Region. However, Connecticut's decline in employment and GDP was relatively steeper than the U.S., as was its decline in Real Per Capita DPI, which contracted by 5.13% in 2009, compared to 3.70% for the U.S., 3.37% for the Tri-State Region, and 2.68% for New England. And, the State, save an initial burst of growth in the first year of recovery, has had a much weaker recovery. As for its employment and GDP, Connecticut's Real Per Capita DPI grew strongly over the first year of recovery. Between 2009 and 2010, the first year of recovery, Connecticut's Real Per Capita DPI grew by 2.90%, compared to 2.43% for the Tri-State Region, 1.49% for New England, and 1.00% for the U.S. Subsequently, Connecticut's Real Per Capita DPI contracted over the next two consecutive years: -0.09% in 2011 and -0.34% in 2012. By 2012, Connecticut's Real Per Capita DPI had actually declined by 0.43% from its 2010 level, while New England's Real Per Capita DPI was 2.21% higher than it was in 2010, for the U.S. it was 1.46% higher, while the Tri-State Region's Real Per Capita DPI was flat at only 0.12% above its 2010 level.



SOURCE: U.S. BEA and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graph V-17 summarizes the changes in Real Per Capita DPI for the U.S., Connecticut, New England, and the Tri-State Region over the recession and recovery phases of the current business cycle.

Again, as discussed above, Connecticut's Real Per Capita DPI declined the steepest compared to the U.S., New England, and the Tri-State Region. Connecticut's recovery in Real Per Capita DPI has matched that of the U.S. at 2.46%, surpassed New England's 2.21%, and is not too much below the 2.56% recovery for the Tri-State Region. But, since Connecticut's recovery in Real Per Capita DPI came off of a much steeper decline, by 2012, it is still at a much lower level relative to its cycle-peak compared to the U.S., New England, and the Tri-State Region. By 2012, Connecticut's Real Per Capita DPI was still 2.79% below its cycle-peak level in 2008, compared to 1.32% below for the U.S., 0.90% for the Tri-State Region, and only 0.52% below the 2008, cycle-peak level for New England.

Contributions to the Change in Connecticut's DPI

Equation (V-1.) in the beginning of this sub-section (DISPOSABLE PERSONAL INCOME: The Basis for Consumer Spending), is reproduced below as Equation (V-2.). *Disposable Personal Income* (DPI) is defined as:

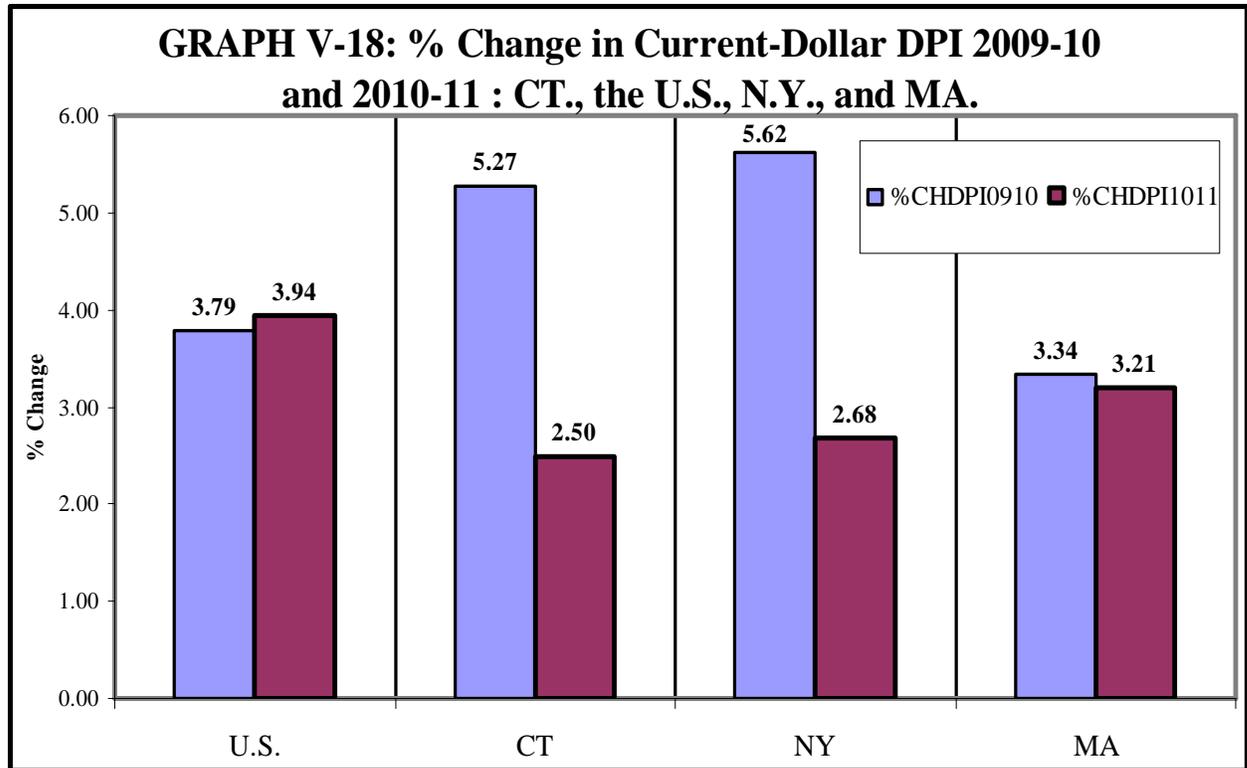
$$\text{DPI} = \text{Income} - \text{Taxes} + \text{Transfer Payments} \quad (\text{V-2.})$$

Specifically, "Income" in Equation (V-2.) is *Market-Based Income*. Market-Based Income is composed of *Labor Income* (Wages and Salaries and Supplements to Wages and Salaries), and *Property Income* (Dividends, Interest, and Rent). DPI is then derived by adding Transfer Payments to, and subtracting Personal Taxes from, Market-Based Income. It is *Disposable Personal Income* (DPI) that serves as the basis for consumer saving and spending.

Graph V-18 compares the percent growth in Current-Dollar DPI over the 2009-10 and 2010-11 periods to see how Connecticut's DPI growth performed relative to the U.S. and two neighboring states, New York and Massachusetts. And, as was discussed in the

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

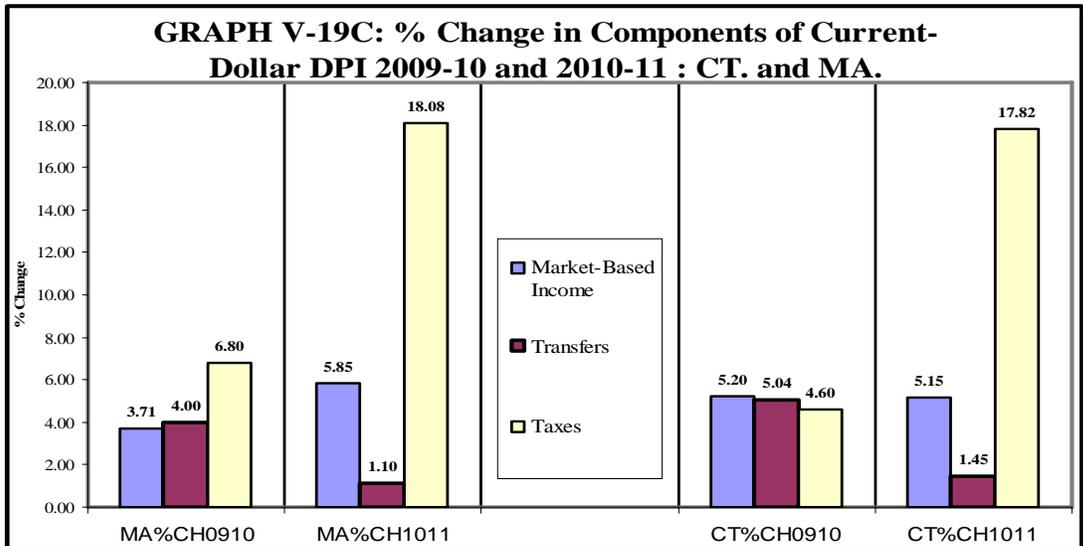
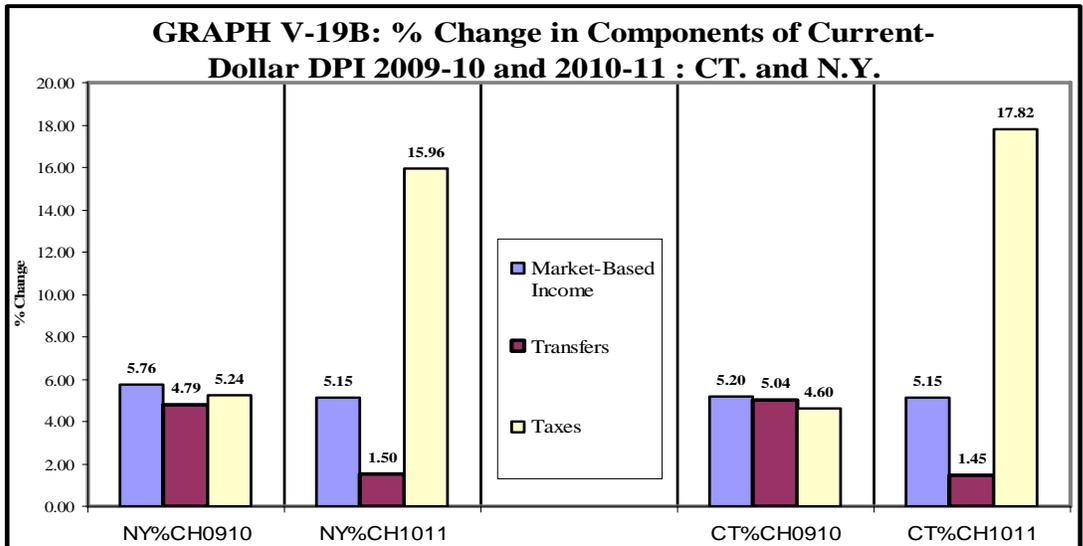
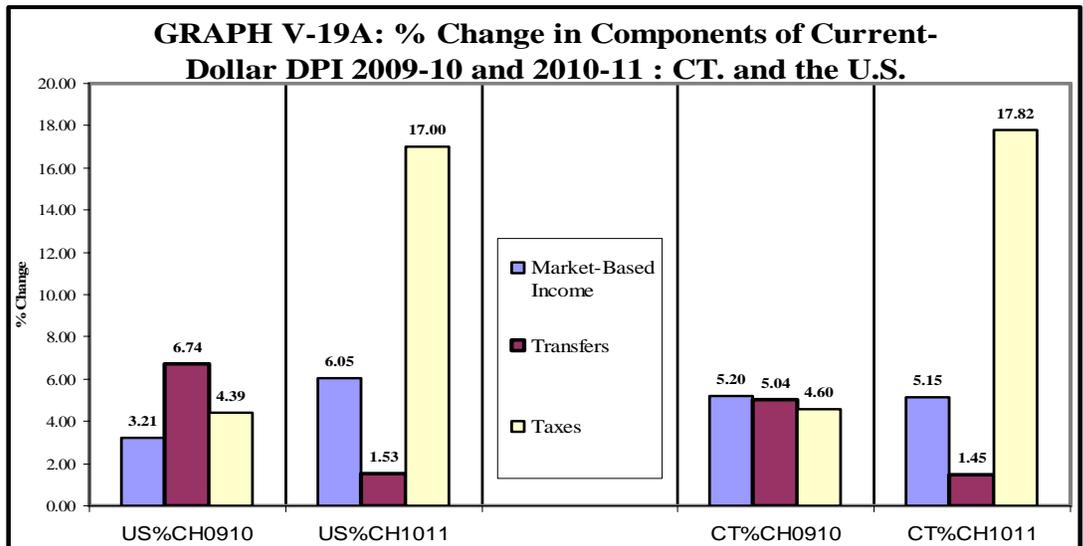
above sections, it is clear from Graph V-18 that Connecticut's growth in Current-Dollar DPI decelerated from 2010-11 compared to 2009-10, as did New York's.



SOURCE: U.S. BEA and Author's calculations.

Over the first two years of the current recovery, U.S. DPI increased by 3.79% in 2009-10 and 3.94% between 2010 and 2011, the growth in Massachusetts's DPI grew at essentially the same rate over both periods, while Connecticut's growth in Current-Dollar DPI fell from 5.27% in 2009-10 to less than half that (+2.68%) over 2010-11. New York also had a significant deceleration in its growth of Current-Dollar DPI, falling from 5.62% in 2009-10 to 2.68% in 2010-11. Further, the growth-rate in Connecticut and New York's DPI exceeded that for the U.S. and Massachusetts over 2009-10, but then both states growth-rates in DPI fell below that of the U.S. and Massachusetts over 2010-11. To explore what may be driving the results observed in Graph V-18, Graphs V-19A, 19B, and 19C look at the growth-rates of the components of DPI to see how they have contributed to, or subtracted from, the growth in Current-Dollar DPI, especially for Connecticut after 2010. Graph V-19A compares the growth-rate in Connecticut's DPI to

CURRENT CONDITIONS AND OUTLOOK FOR THE



the U.S., Graph V-19B compares it to New York, and Graph V-19C compares it to Massachusetts. SOURCE: U.S. BEA and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graph V-19A compares the growth-rates of the components of DPI for Connecticut to those of the U.S. over the 2009-10 and 2010-11 periods. What jumps out first is the surge in the growth-rate of Personal Taxes for both Connecticut and the U.S. Personal Taxes include all personal taxes at the Federal, State, and Local levels. Connecticut's Personal Taxes after increasing by 4.60% over 2009-10, jumped by 17.82% over 2010-11. But, that does probably not explain the lower growth-rate in Connecticut DPI compared to the U.S. as U.S. Personal Taxes after growing by 4.39% between 2009 and 2010, the growth in U.S. Personal Taxes then surged by 17.00% in 2010-11—only 0.82 percentage points lower than Connecticut's growth-rate. And, the growth in Transfer Payments decelerated for both Connecticut and the U.S. between 2009-10 and 2010-11. This leaves the last component of DPI: Market-Based Income composed of Labor Income and Property Income. This may be the source of the difference in the growth-rate of DPI between Connecticut and the U.S. For the U.S., Market-Based Income grew by 3.21% between 2009 and 2010, and then it accelerated to a strong 6.05% over the 2010-11 period. However, though Connecticut's growth in Market-Based Income was certainly not weak over 2009-10 (+5.20%) and 2010-11 (+5.15%), the change in the growth-rate was essentially flat and not enough to offset the acceleration in the growth-rate of Personal Taxes, and deceleration of the growth-rate in Transfer Payments between 2009-10 and 2010-11. This is explored further by looking at Connecticut's growth-rate compared to New York and Massachusetts in graphs V-19B and V-19C.

When looking at New York compared to Connecticut in Graph V-19B, there is a similar behavior of the components of DPI to Connecticut. And, New York, like Connecticut, had a significant deceleration in the growth-rate of DPI from 2009-10 to 2010-11 (see Graph V-18). Again, like for Connecticut, the culprit for New York seems to be Market-Based Income, while it grew by 5.76% over 2009-10 its growth-rate fell to 5.15% over the 2010-11 period. This is certainly not weak growth, but a deceleration in growth nevertheless, and a deceleration in the face of simultaneous deceleration in the growth-rate of Transfer Payments from 2009-10 (+4.79%) to 2010-11 (+1.50%), and a strong surge in the growth-rate in Personal Taxes from 2009-10 (+5.24%), and 2010-11 (+15.96%). Note that the growth in New York's Personal Taxes was lower than the

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

growth-rate for the U.S., Connecticut, or Massachusetts. Finally, Massachusetts, like the U.S., did not see a significant deceleration in its DPI growth-rate from 2009-10 to 2010-11. Its growth-rate, though slightly lower than that for the U.S., essentially remained unchanged over the two periods. And, in fact, the growth-rate of Massachusetts's Personal Taxes, 6.80% over 2009-10, and then 18.08% over 2010-11, was higher in both periods than Connecticut, New York, or the U.S. And, it had the lowest growth in Transfer Payments: + 4.00% in 2009-10 and 1.00% in 2010-11. Again, the key seems to be the acceleration in Market-Based Income growth. Over the 2009-10 period, the Commonwealth's Market-Based Income grew by 3.71%, which was slower than that for Connecticut or New York, but then, Massachusetts's Market-Based Income growth accelerated to 5.85% in 2010-11. The growth-rate in Massachusetts DPI exceeded that of both Connecticut and New York, but not the U.S. Again, the critical factor for the growth in DPI seems to be the acceleration in the growth-rate of Market-Based Income, not that the level of growth is not important, but that the acceleration in the growth-rate seems to play a critical role in the performance of DPI-growth.

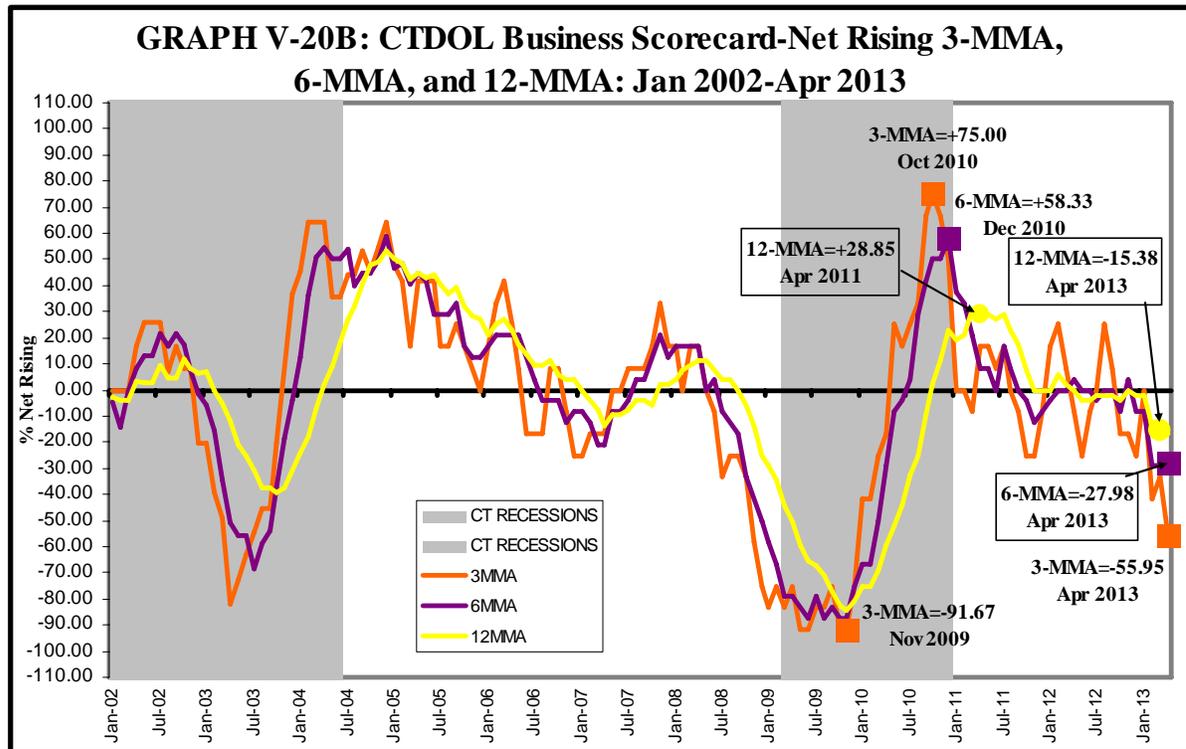
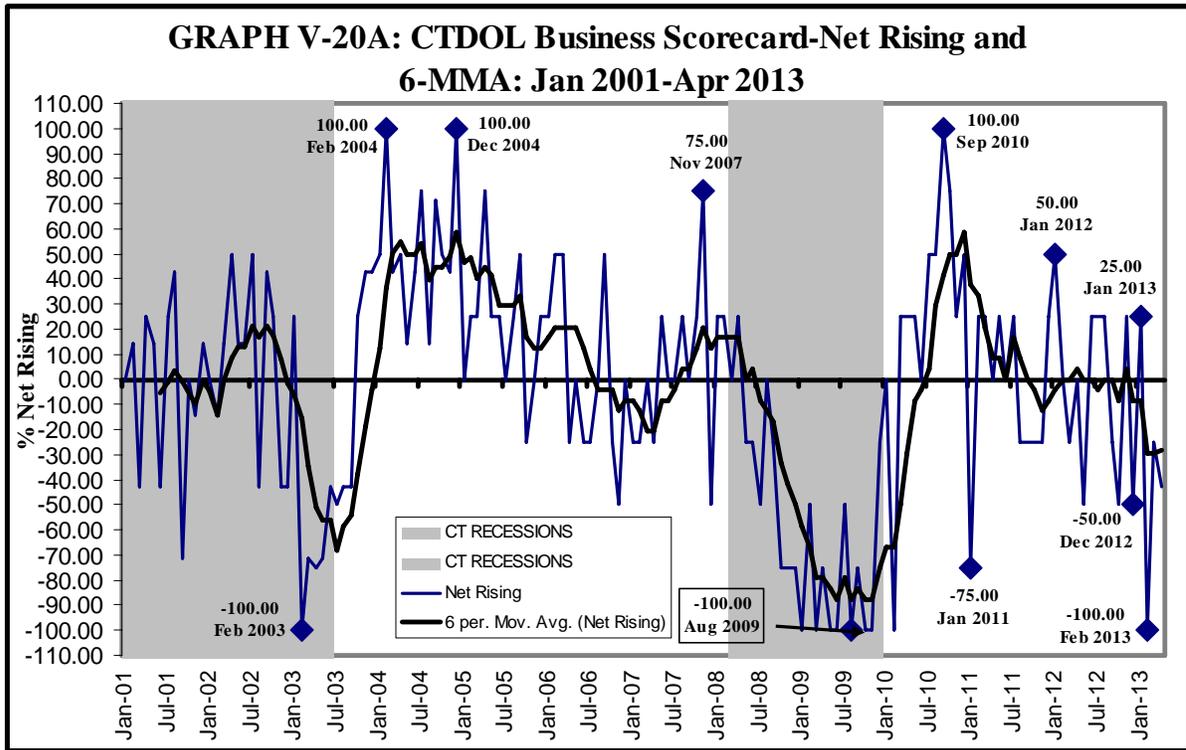
Since the BEA's estimates of state-level DPI for 2013 will not be out until March 2014 there is no way of directly knowing how DPI, and in particular, Per Capita DPI, has been performing over the first one-half of 2013 (the time of writing), at least at the state and regional levels. The first look at Connecticut's income over the first quarter of 2013 will be after the time of writing at the end of June.

2. BUSINESS CONDITIONS (Business Sector)

An indicator of Connecticut's overall business conditions is part of the set of Economic Scorecards, which is constructed by the Office of Research and can be found on the Labor Market Information (LMI) page of the Connecticut Department of Labor (CTDOL) Website³². Specifically, the Net-Rising Series, and its 6-Month Moving Average (MMA) are tracked in Graph V-20A.

³² <<http://www1.ctdol.state.ct.us/lmi/Scorecardv3.asp>> Accessed on June 20, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: CTDOL-Research, Todd Bentsen, Web Developer, and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

In addition to the 6-MMA presented in Graph V-20A to filter out the noise in the series, Graph V-20B also tracks the 3-MMA, 6-MMA, and 12-MMA to filter out the noise and to get three different smoothed-series perspectives on the trend in the Net Rising Index. The *Net Rising Index* is constructed by subtracting the percent of the series in the Business Economic Scorecard that had a Year-to-Year (YTY) percent increase for the current month from the percent of the component series that had a YTY percent-decline in the current month. If the value of the Net Rising Index (NRI) is zero, then the percent of the series in the Business Scorecard rising is exactly equal to the percent that declined. If the value of the NRI is greater than zero (positive), then the percent of series rising exceeds the percent declining. And, this would imply that Connecticut's business conditions are improving. If the value of the NRI is less than zero (negative), then the percent of series declining exceeds the percent of the component series rising, and would indicate that Connecticut's business conditions are deteriorating. The component series of the Connecticut Business Economic Scorecard, along with their units of measurement, and frequency of publication, are presented in Table V-4.

TABLE V-4: Components of the Connecticut Business Economic Scorecard		
INDICATOR	UNITS	Frequency
Housing Permits	Total Number	Monthly
Air Cargo	Tons	Monthly
Exports	Dollars (X1,000)	Monthly
Gaming Slots	Dollars	Monthly
Major Attractions	Number of Visitors	Monthly
Air Passengers	Passenger Count	Monthly
CMPI	Mfg. Index	Monthly
Mgf Hours	Ave. Weekly Hours	Monthly

Though there is a relatively limited historical time-series of the NRI, it does span two recessions, two recoveries, and one complete cycle, measured peak-to-peak (July 2000-September 2003-March 2008), and one complete cycle measured trough-to-trough (September 2003-March 2008-February 2010).

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

From Graph V-20A it appears that the NRI series, and its 6-MMA pretty closely track Connecticut's Business Cycle, based on the Non-Farm Employment Series. There is a dip where the NRI turns negative at the end of 2006/beginning of 2007, and we did not go into recession nationally or state or regionally. However, that was also the period of the popping of the housing bubble and the Shanghai Stock Market crash. These events foreshadowed the Liquidity Crisis in August 2007 and the subsequent Solvency Crisis in September 2008³³. And, it seems to track the 2000-03 Recession (for Connecticut) and 2008-10 Recession (for Connecticut), as well as the recoveries from those two recessions very well.

A less noisy perspective is presented in Graph V-20B. Looking at the 3-MMA, 6-MMA, and 12-MMA the movements of Connecticut's business conditions can be more clearly discerned. And, turning specifically to the current cycle and where Connecticut may currently be in the first half of 2013, and where it may be going over the forecast horizon (2012Q4-2014Q4). It is clear that the behavior of all three moving-average series, seem to have reinforced what other indicators have suggested. That is, as after bottoming out in 2009, Connecticut's Economy initially had a strong recovery that subsequently lost steam. This pattern can be seen in Graph V-20B. The strong recovery is observed in the 3-MMA by October 2010 (+75.00) and the 6-MMA by December 2010 (+58.33), with the 12-MMA peaking in April 2011 at +28.85 (and again in July 2011). Since then, all three moving-average series have declined and have, at best, remained flat, and have even been in decline since the end of 2012. This is consistent with the behavior of Connecticut's Non-Farm Employment Series (which appears to have come back in the first two months of the second quarter of 2013), and the Quarterly Personal Income Series. That is, after a strong showing coming out of the gate in 2010, Connecticut's recovery has faltered going into 2011 and 2012. The discussion now turns to looking at the component series of the NRI of Connecticut's Business Economic Scorecard to see what can be identified as the source of the State's Economy's losing its steam.

³³ See Brennerfont for a discussion of the Liquidity and Solvency crises in 2007 and 2008.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Like the trend nationally, Connecticut's Government Sector has been contracting in jobs, industry-earnings, and GDP (current-dollar and real), over the current recovery, which is the opposite of what has happened over every other Post World War II recovery, save the economy's demobilization in the late 1940's. And, at both the state and national levels, it is the Local Government Sector that has taken the biggest hit. But for Connecticut, it is not just Education and Public Safety that have taken a hit (which they have), in addition, the casinos operated by the tribal nations in Connecticut have also seen significant declines in their revenue. And, since the tribal nations are classified as Local Government, the declines in slot revenues and employment in Connecticut's casinos shows up as employment and income losses in Local Government. Further, the State of Connecticut gets 25% of the slot revenues in lieu of taxes. Thus, when the tribal nations' slot revenues decline the State of Connecticut's budget is negatively impacted. In addition, Gaming Slots Revenue is one of the components of Connecticut's Business Economic Scorecard. And, it is tribal-slots, revenue-declines that have played a role in the downward trajectory of the Net-Rising Index (NRI) for the Business Economic Scorecard. Over the last 24 months, to April 2013, on a Year-to-Year (YTY) basis, revenues from gaming slots have been down in 23 of those months.

The drivers of the strong performance of the NRI in 2010 appear to be Average Weekly Hours in Manufacturing, which after declining, YTY, in January and February 2010, turned in positive numbers for eight consecutive months before declining in November, and then barely returning to positive growth in December. And, not surprisingly, given the performance of Average Weekly Hours in Manufacturing, the Connecticut Manufacturing Production Index (CMPI), after a shaky start to the year, beginning in March 2010, save May, the CMPI had positive YTY growth in all the remaining months of 2010. Though negative for the first six months of 2010, the Air Passenger Count increased, YTY, for each month, over the remaining six months of 2010. The dollar-value of Exports increased, on a YTY basis, after declining in January 2010, then had 11 straight months of YTY growth. Also, after a shaky start at the beginning of the year, beginning in May 2010, Air Cargo Tons had YTY positive growth for seven straight months before declining in December 2010. Though coming off of a small base because

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

of the popping of the housing bubble, and driven by the first-time homebuyers program, even Housing Permits increased, YTY, in five of the months of 2010.

But, as confirmed by the behavior of other indicators, Connecticut's initially strong recovery from the recession/crisis began to wane. The two components of the Business Economic Scorecard NRI that began to turn in strongly negative YTY growth after 2010, and into 2013, are the Average Weekly Hours in Manufacturing and the related CMPI. And, after recovering in the last half of 2010 (see discussion above), and save January 2011, Air Passenger Counts continued to have positive monthly YTY growth until the end 2011, from that point on, the YTY, monthly growth-rate in Air Passenger Counts has been negative in 15 of the last 18 months up to April 2013, the last period of available data at the time of writing. Since their streak in 2010, Exports have been up-and-down. From January 2011 to March 2013 (there was no data available for April 2013 at the time of writing), the dollar-value of Connecticut's Exports, on a YTY basis, were up 12 months, and down 14 months over the 26-month period. And, as noted above, on a YTY basis, Gaming Revenues, as of April 2013, have been down for 24 straight months. Also, as noted above, Air Cargo Tons were up YTY, for 20 straight months between Jan 2011 and August 2012. In the eight months to April 2013, Air Cargo Tons have been down in five of those months.

The number of visitors at Major Attractions in Connecticut has also been in an up-and-down pattern since the recession/crisis. This component had two six-consecutive-months of growth streaks: the beginning of 2011, and at the end of 2011 and the beginning of 2012. Housing Permits seemed to join the apparent national housing recovery in 2012. Between April 2012 and January 2013, Connecticut's housing permits, on a YTY basis, had eight straight months of growth—mostly, multiple-family permits. After a decline in February, on a YTY basis, Connecticut's Housing Permits increased in both March and April. Though the Housing Permit component of the Business Economic Scorecard is sending a positive signal about Connecticut's business conditions in 2013, strongly negative signals are being sent by Gaming Slot Revenues, Air Passenger Counts, the CMPI, and Average Weekly Hours in Manufacturing. It is these components that appear

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

to be driving the downward trajectory of Connecticut's Business Economic Scorecard NRI over the first half of 2013. Whether or not the housing recovery, if real and sustainably, through its significant multiplier effects, as well as Wealth/Balance Sheet effects, can reverse the negative signals sent by the other scorecard components remains to be seen.

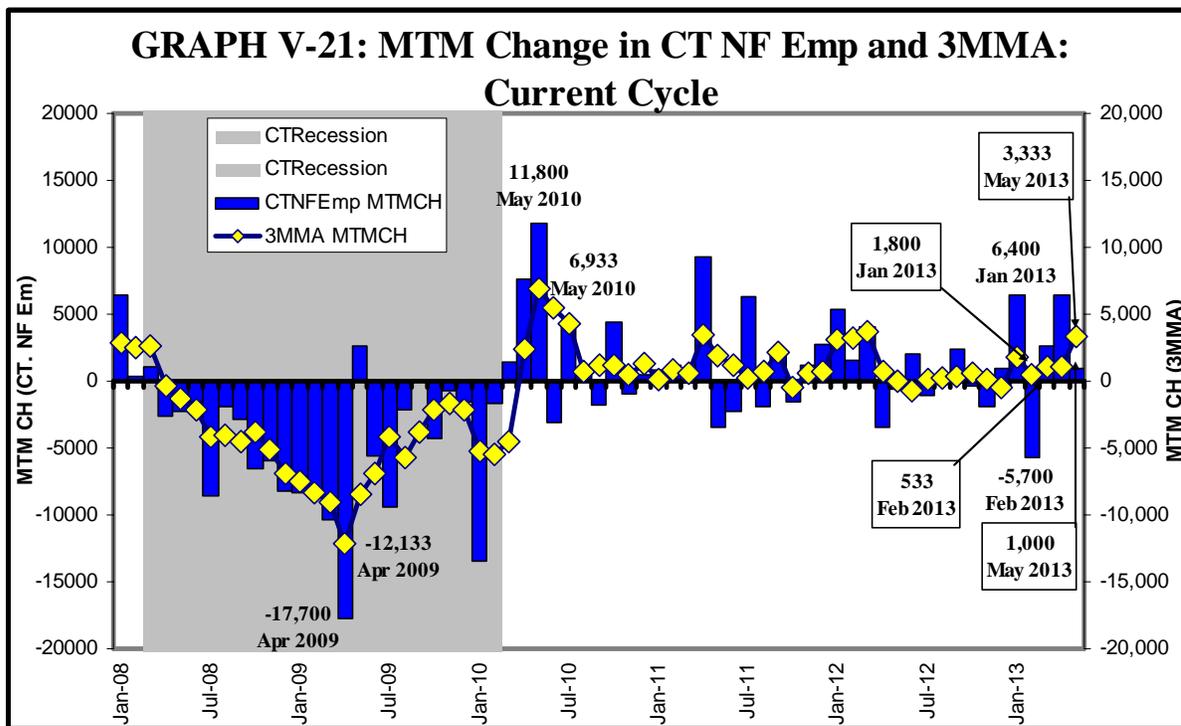
ii. AGGREGATE SUPPLY

Referring again to Table V-3 (see page 57 above), which is a modified version of Table V-1 in Volume 1-U.S. ECONOMIC OUTLOOK, it summarizes the indicators that are analyzed in assessing the current conditions in the U.S. Economy. Since a number of the indicators available to assess the national economy are not available at the state level, Table V-3 adds two columns that do not appear in Table V-1. The last sub-columns, from the right, under the two major headings, "Aggregate Demand", and "Aggregate Supply" are titled "State Level?" and note whether or not the corresponding indicator is available at the state level. Those available are analyzed in the next two sub-sections to gauge the current state of Connecticut's Economy. Part i looked at the indicators of Aggregate Demand and this section, Part ii, turns to assessing the indicators of Aggregate Supply.

As indicated in Table V-3, there is no state-level counterpart to the Federal Reserve Board's statistical releases on industrial capacity and capacity utilization. Therefore, Capacity (Capital Stock) and the Capacity Utilization Rate (CUR) will not be included in the discussion of Aggregate Supply at the state level. In addition, there is either, cursory or limited data available on Foreign Supply (Imports) and Productivity. The one set of indicators available in great detail, and on a timely and high-frequency basis, at the state, regional, and local levels, are indicators of Labor-Market conditions. Therefore, the assessment of indicators of Aggregate Supply at the state level will focus on the state and local labor markets, discussed under the heading of Human Resource Utilization. With that, the following discussion now turns to the current conditions and the outlook over the forecast horizon for Connecticut's Labor Markets.

1. CONNECTICUT'S LABOR MARKET (Human Resource Utilization)

As noted in Chapter 1-INTRODUCTION, the current recovery officially began in the second quarter of 2009, however, the U.S. and Connecticut labor markets turned around three quarters later in the first quarter of 2010 (2010Q1). As of 2013Q1, this puts Connecticut's recovery at 12 quarters, or three years. With the first collapse of housing and credit bubbles since the 1920's, and the first systemic banking panic since the 1930's, this cycle, including the current recovery, has behaved differently than even other Post Cold War cycles which have been much weaker than other Post World War II Era recoveries. This is apparent for Connecticut as well, as is shown in Graph I-1 (see Chapter I-INTRODUCTION).



SOURCE: U.S. BLS, CTDOL-Research, and Author's calculations.

Graph V-21 tracks the Month-to-Month (MTM) change in Connecticut's 2013 Benchmarked Non-Farm Employment Series and its 3-Month Moving Average (3-MMA) over the current cycle (January 2008 to May 2013). As was noted in Chapter IV-

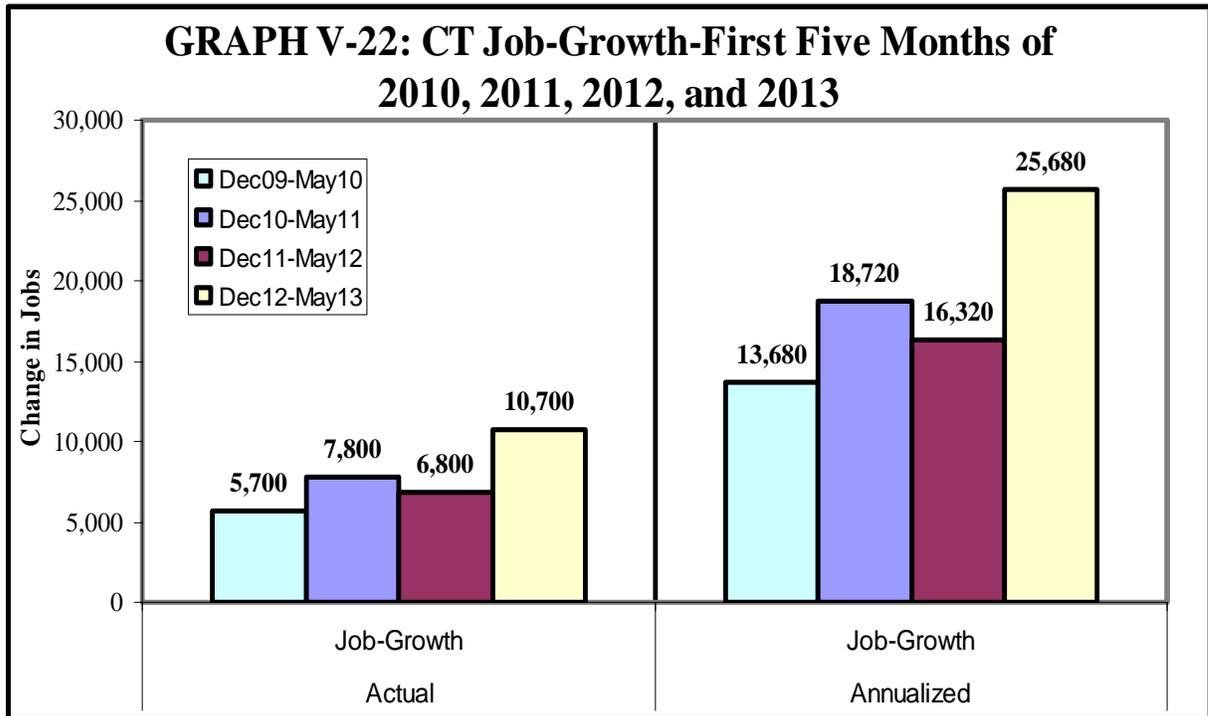
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

THE 2013 BENCHMARK OF CT NON-FARM EMPLOYMENT, after the centralization of the Establishment Survey to U.S. BLS in Washington, the states' Non-Farm Employment Series have become much more volatile, and Connecticut is no exception. To accommodate this increased volatility of Connecticut's Non-Farm Employment, Graph V-21 tracks both the original series and its 3-MMA. As this outlook is being completed, the May 2013 Establishment Survey Data on Connecticut's May 2013 jobs data has been released by the Office of Research, Connecticut Department of Labor. As depicted in Graph V-21, the June release of May's Non-Farm Employment for Connecticut showed that the State's Economy had a net gain of 1,000 jobs. The 3-MMA shows a gain of 3,000 jobs for May 2013. This reflects the large swings in the data, up by 6,400 in January, and then down by 5,700 in February, the month of a significant blizzard. But then March and April had two consecutive month-to-month gains: +2,600 in March and +6,400 in April. Even though there was a deceleration in growth to an increase of 1,000 jobs in May, it was May when the 3-MMA picked up the previous increases. So, what does it mean? The introduction to this outlook asked the, not so rhetorical question: Is this a turning point, and inflection point, or more of the same? What is the condition of Connecticut's labor market as the first half of 2013 comes to a close?

As noted in the discussion of Graph I-1, in Chapter I-INTRODUCTION, there is clearly a pattern of successively declining rates of growth in Connecticut's Non-Farm Employment over each four-quarter segment of the first 12 quarters of economic recovery, from 2010Q1 to 2013Q1, the last period of available complete quarterly data at the time of writing. Connecticut came out of the gate very strongly the first four quarters of recovery, adding 25,500 new jobs between 2010Q1 and 2011Q1, a growth-rate of 1.60%, which surpassed the U.S. growth-rate, which was less than 1%. Then, in the second four-quarter segment (2011Q1-2012Q1) of the current recovery, Connecticut's job-growth rate fell to 1.26%, and fell below that of the U.S. Over the last four quarters to 2013Q1, the State's job-growth rate fell to a flat 0.26%. The 2013 Benchmark did show that Connecticut did a little better measured on a fourth-quarter basis (2011Q4-2012Q4): adding 10,800 jobs, which is a 0.67% growth-rate.

CONNECTICUT’S JOBS MARKET: First Half of 2013

At what stage of the business cycle Connecticut and U.S. economies are over the first five months of 2013, as discussed previously, is hard to discern. Both Connecticut and U.S. job-growth seem to be picking up steam, even as capital markets worldwide have been roiled by Bernanke’s statement about the Fed ending its bond-buying program (Quantitative Easing 3) in 2014 (depending on the economy’s performance), and concern about China’s banking system and possible slowing in growth. Further, the third estimate of first-quarter GDP was revised downward from 2.4% to 1.8% by the U.S. BEA. Nevertheless, U.S. and Connecticut job-growth seems to be picking up steam as we head toward the middle of 2013.



SOURCE: CTDOL-Research, U.S. BLS, and Author’s calculations.

From Graph V-22, it is clear that Dec 2012-May 2013 is the strongest comparable period of job-growth over the first five months in each of the four years of the current recovery. Though Connecticut had strong job-growth in the first three quarters of 2010 and 2012, by the second quarters in each year, the strong job-growth began to fizzle out. By May

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

2010, Connecticut's Economy had added 5,700 jobs since December 2009, which translates into an annualized job-growth of 13,680. However, this masks the strong surge in job-growth over the second three-month period, March-to-June 2010. After shedding 13,700 more jobs between December 2009 and March 2010 (an annualized rate of -54,800 jobs), Connecticut's recession troughed and between March and June 2010, Connecticut added 16,300 net, new jobs, an annualized rate of 65,200, or a 4.14% annualized, growth-rate. However, this did not last and Connecticut's strong start coming out of the gate ended going into 2011. The second first five months period of the current recovery was December 2010-to-May 2011. Though the growth was not as strong as the previous year's period, there was no period of job-loss, so the number of jobs added between December 2010 and May 2011 was 7,800, an annualized rate of 18,720.

With the record warm 2011-12 Winter and some other factors, the U.S. and Connecticut economies enjoyed an "Arab Spring". Between December 2011 and March 2012, Connecticut's Economy added 10,900 new jobs, an annualized rate of 43,600 jobs. But then, the "Arab Spring" came to an abrupt end as the State's Economy shed 2,100 jobs (an annualized rate of -8,400), between March and June 2012. Consequently, the five-month creation of new jobs was 6,800 (an annualized rate of 16,320), lower than the previous year's growth over the comparable period. The current period, December 2012-May 2013, shows the strongest first five months job-creation since the Connecticut Economy turned the corner in early 2010. Over the first five months of 2013, the State's Economy has added 10,700 jobs, which translates into an annual job-creation rate of 25,680, or a 1.57% compounded annualized growth-rate. The first quarter's growth was not all that strong, between December 2012 and March 2013, Connecticut added 3,300 jobs, which is an annualized rate of 13,200. This was probably affected by the February blizzard. At the time of writing, June data is not yet available and therefore no complete second-quarter data. However, it is the last two months, especially April, of the five-month period that appears to be driving the job performance over the first five months. In April 2013, Connecticut added 6,400 net, new jobs, and then that growth-rate decelerated to an increase of 1,000 jobs in May. The discussion now turns to a more detailed look at Connecticut's job-market performance over the first five months of 2013.

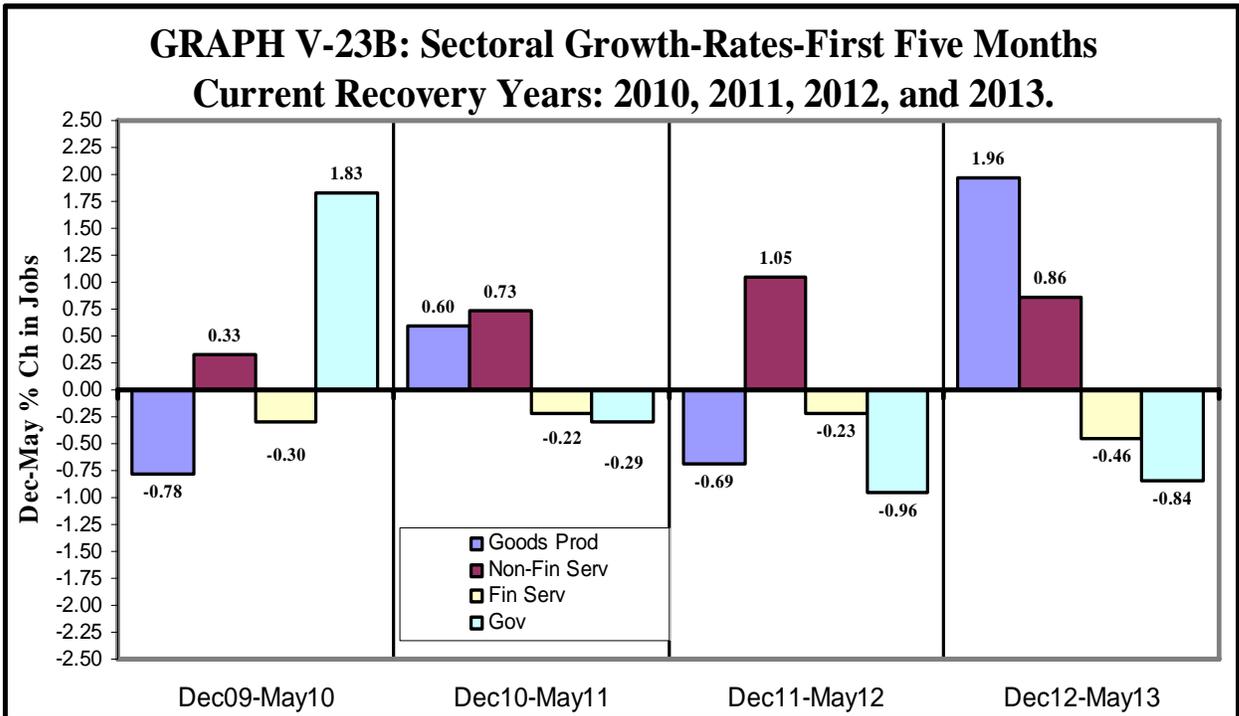
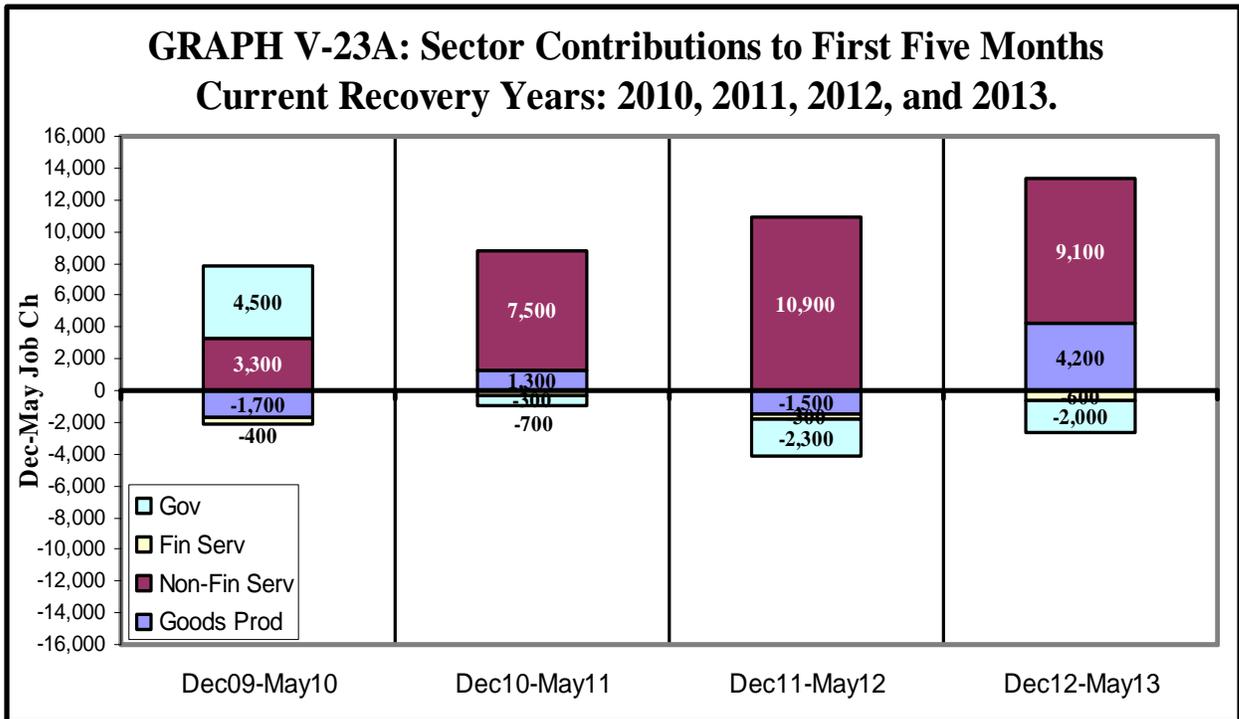
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Sectors Driving Connecticut's Labor Market in the First Half of 2013

Graphs V-23A and V-23B compare the first five months of 2013 to the first five months of the previous three years of the current recovery. The four major sectors are broken out: Goods Producing, Non-Finance Private Services, Financial Services, and Government. Graph V-23A tracks the contributions of the four major sectors to total job-growth in each of the first-five-months segments of the four years of the current recovery. Graph V-23B looks at the percent change in jobs over the first five months of each year depicted in Graph V-23A. Save the +1,300 in the first five months of 2011, the Goods Producing Sector subtracted from growth, but then, over the first five months of 2013, the Goods Producing Sector accounted for 4,200, or 39.25% of the 10,700 net, new jobs added between December 2012 and May 2013. After losing support to, especially local governments, with the winding down of the *American Reinvestment and Recovery Act* (ARRA), and adding 4,500 jobs between December 2009 and May 2010, Connecticut's Government Sector has subtracted jobs since then, including -2,300 jobs between December 2011 and May 2012, and -2,000 jobs between December 2012 and May 2013. Over the last three years' first five-month segments, the largest contributor to job-growth has been the Non-Financial Private Services Sector. This sector only accounted for 3,300 net, new jobs between December 2009 and May 2010, but accounted for 7,500 new jobs between December 2010 and May 2011, 10,900 net, new jobs between December 2011 and May 2012, and for 9,100 addition jobs between December 2012 and May 2013.

Goods Producing Sector---Since Manufacturing had a net loss of 1,300 jobs between December 2012 and May 2013, it was Construction, which added 5,000 new jobs that accounted for the strongest growth of jobs in the Goods Producing Sector over the periods of this recovery depicted in graphs V-23A and V-23B. Connecticut's Goods Producing Sector had a job-growth rate of 1.96% over the first five months of 2013. Since seasonalized data is not available in the Construction Sector, at the three-digit level from Establishment Survey data, the following drill-down had to be done with unseasonalized data.

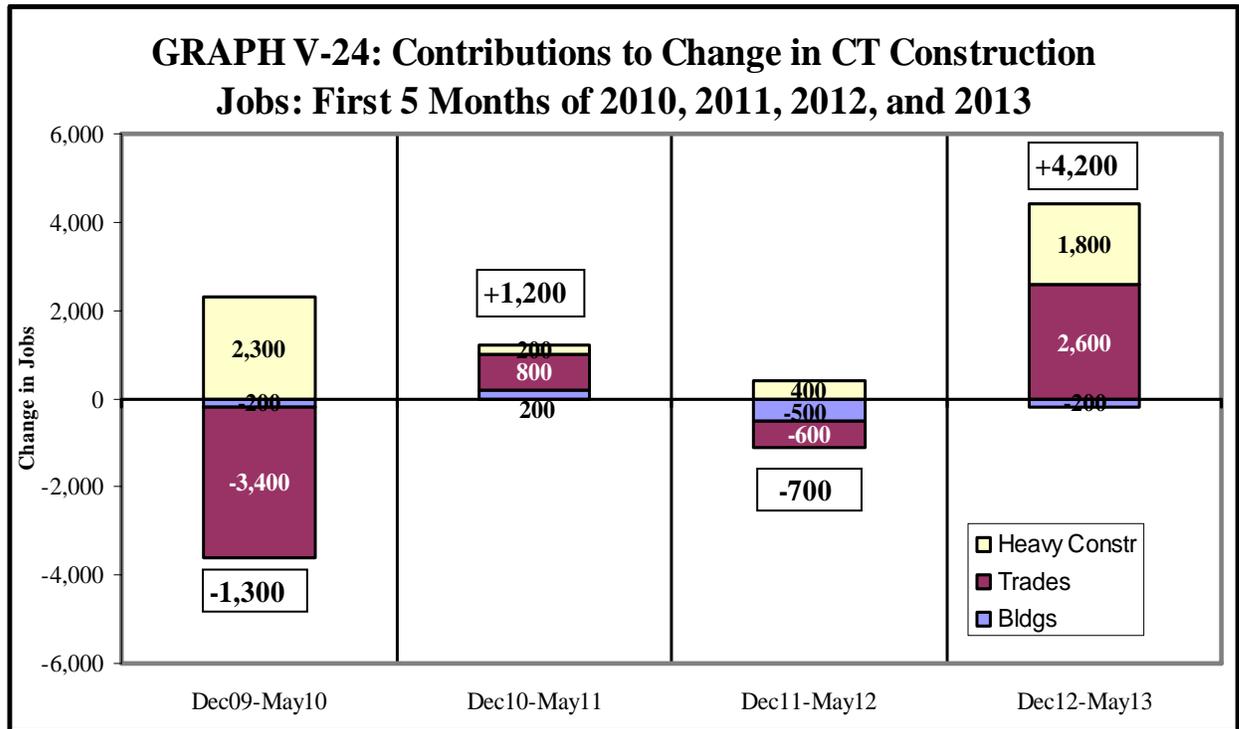
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: CTDOL-Research, U.S. BLS., and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graph V-24 presents the change in Connecticut’s Construction jobs over the first five months of each year of the current recovery: 2010, 2011, 2012, and 2013. In addition, the contributions of each of the three sub-sectors of the Construction Industry are depicted. The net-change in total Construction jobs is indicated by the numbers in the boxes.



SOURCE: U.S. BLS and Author’s calculations.

After shedding 1,300 jobs between December 2009 and May 2010, as Connecticut’s Economy bottomed from the recession/crisis, the only sub-sector with positive job-growth was Heavy Construction, which includes Non-Building infrastructure projects such as highways, mass transit, dams, sewers, and other such activities. The net addition of 2,300 jobs in this sub-sector was largely driven by Federal money coming to the State under the *American Recovery and Reinvestment Act (ARRA)* for the so-called “shovel-ready” projects. The other two sub-sectors were still shedding jobs, particularly the sub-sector with the largest share of Construction-Sector jobs; Specialty Trade Contractors. Specialty Trade Contractors shed 3,400 jobs over the first five months of 2010. In the first five months of 2011, all three sub-sectors turned around. They did not have strong

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

growth in jobs but, it was positive. Even Building Construction and Renovation, hit particularly hard along with Specialty Trades after the housing bubble popped, turned in, albeit weak (+200), but, nevertheless, positive growth, and the Construction Sector added 1,200 net new jobs between December 2010 and May 2011.

Even with an expected bounce from Construction, and related sectors, because of the rebuilding and repair needs after Hurricane Irene in September 2011, and the Halloween Blizzard in October, Connecticut's Construction Sector, nevertheless, had a net-loss of 700 jobs between December 2011 and May 2012. The economy's "Arab Spring" in early 2012 passed by the Construction Sector. But the first five months of 2013 are a different story. Connecticut's Construction Sector had the largest increase in jobs (+4,200) over the first five months of 2013, than in any of the first five months of any of the current recovery years (2010, 2011, 2012, and 2013). The Specialty Trades added 2,600 jobs and the Heavy Construction Sub-Sector added 1,800 jobs over the first five months of 2013. However, despite the indicators that suggest that housing is recovering, the only sub-sector to lose jobs between December 2012 and May 2013, Construction and Renovation of Buildings, shed 200 jobs.

So what seems to be driving the job-growth in Specialty Trades and Heavy Construction? Especially since there is no more stimulus from the ARRA, which over the first year of recovery created jobs in the Heavy Construction Sector, but since then, has pretty much run its course. Some current projects in Connecticut over the first half of 2013 that could be driving the numbers are first, the Hartford-New Britain Busway, which has been moving forward over the first half of 2013³⁴. This, of course, would be more of a driver of the heavy construction jobs, would the construction on the Route 24 Connector. In downtown New Haven³⁵ Driving both Specialty Trade and Heavy Construction job-growth is the Jackson Lab construction underway in 2013 at the University of

³⁴< <http://www.crcog.org/publications/TransportationDocs/NBHBusway/2010/Brochure-2010-03-09.pdf>> Accessed on June 25, 2013.

³⁵Stannard, Ed, *New Haven to begin construction on Route 34 transformation*, THE NEW HAVEN REGISTER (February 21,2013) <http://www.nhregister.com/articles/2013/02/21/news/doc51267f79d0d10827542252.txt?viewmode=fullstory> > Accessed on June 25, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Connecticut's (UCONN) Health Center at their Farmington Campus³⁶ and the expansion of, and the addition of new facilities to, the UCONN Health Center's Farmington Campus³⁷

Private, Non-Financial Services Sector---Turning to the sector that contributed the most to the job-growth over the first five months of 2013, and depicted in Graph V-23A, adding 9,100 net, new jobs, the Non-Financial Private Services Sector is now dissected to see what drove its growth. This sector was the only other major sector to add jobs. Between December 2012 and May 2013, Non-Financial Private Services Employment increased by 0.86%. Graph V-25 drills down below the major sectorial level to uncover those sub-sectors and industries driving its growth. It should be noted that since state-level data is not seasonally adjusted below the North American Industry Classification System (NAICS) two-digit level sector, the sectoral employment numbers in Graph V-25 will not sum to the sectoral totals in Graph V-24, which is seasonally adjusted data. However, since Graph V-25 compares comparable periods covering December 2009-May 2010 to December 2012-May 2013, there should be minimal distortion due to seasonal effects, save the record warm winter of 2011-12. However, the record warm 2011-12 Winter also effects seasonalized data as the seasonal factors would be distorted by the record warmth. With that caveat in place, the discussion turns to the behavior of the sectors that make up the Private, Non-Financial Services major sector depicted in Graph V-25.

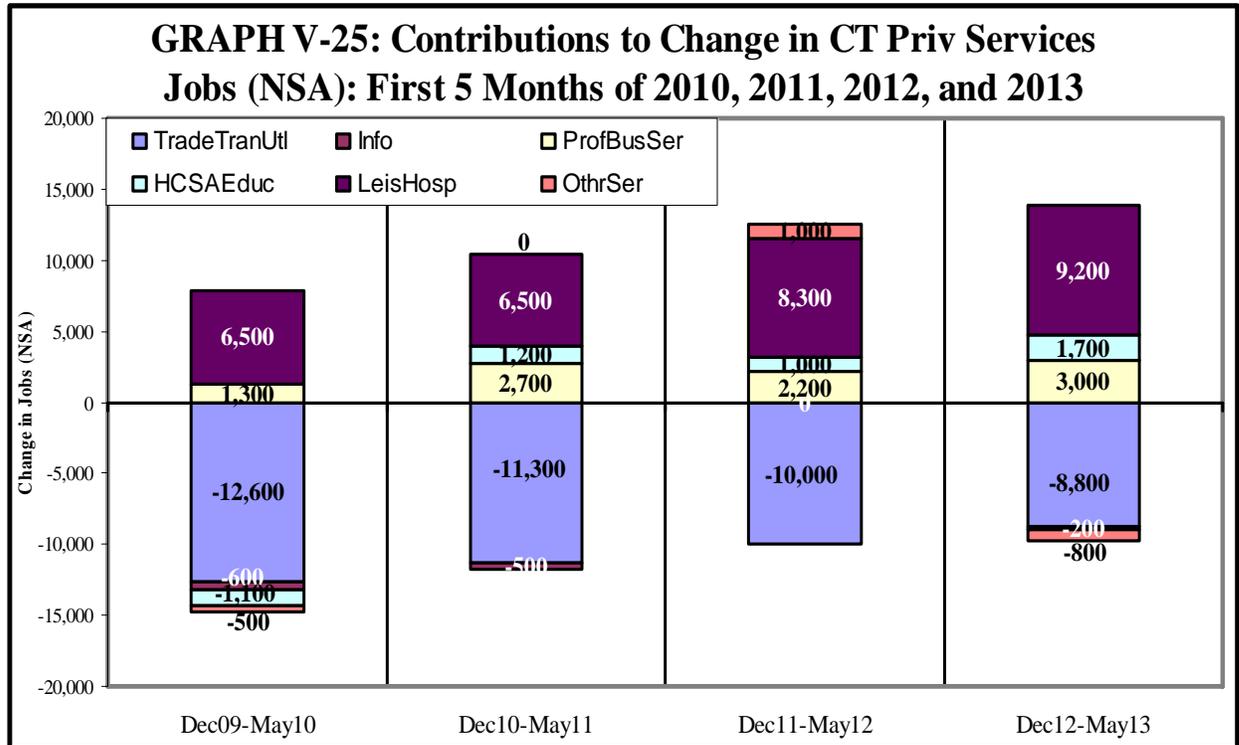
What is clear from Graph V-25 is that the Transportation, Trade, and Utilities Sub-Sector of Private, Non-Financial Services has been a subtraction from Connecticut's job-growth over all four periods of the current recovery depicted. After turning in positive job-growth in the three previous periods, Transportation, Trade, and Utilities shed 500 jobs between December 2012 and May 2013. And, after adding jobs to the State's Economy

³⁶ UCONN Health Center, *The Jackson Laboratory for Genomic Medicine*
http://biosciencect.uhc.edu/jackson_laboratory/ > Accessed on June 25, 2013.

³⁷ McGuire, Maureen, *Bioscience Connecticut: Year One Milestones* (June 12, 2013) UCONN TODAY
<http://today.uconn.edu/blog/2013/06/bioscience-connecticut-year-one-milestones/> > Accessed on June 25, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

over the first five months of 2011 and 2012, Wholesale Trade subtracted 900 jobs in the first five months of 2013.

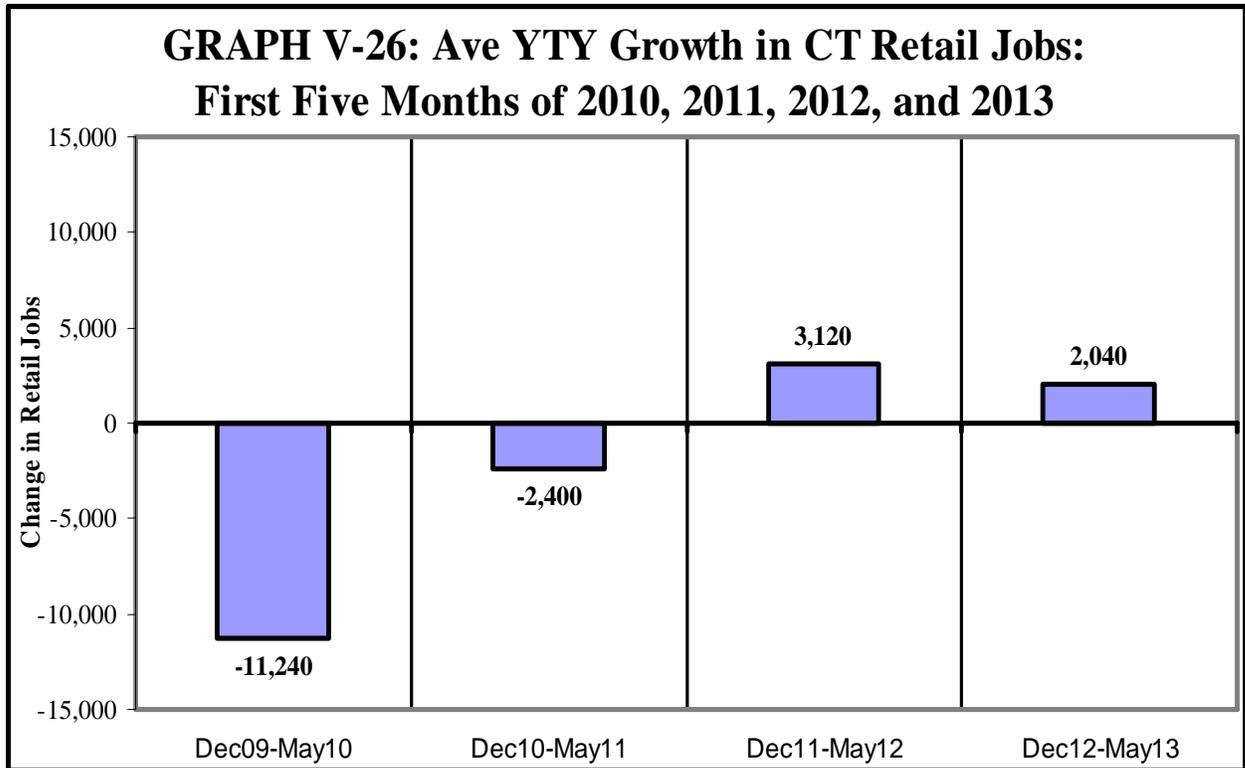


SOURCE: U.S. BLS and Author's calculations.

Retail Trade has consistently added jobs over the first five months in each of the four years of the current recovery. Between December 2012 and May 2013, Connecticut's Retail-Trade Sector added 1,300 net, new jobs, matching its performance for the December 2011-May 2012 Period (based on seasonally-adjusted data) To compare it to the unseasonalized data in Graph V-25, and to account for the distortion introduced by seasonally-higher employment in December, compared to May, in many sectors, Graph V-26 looks at the Year-to-Year (YTY) growth in Retail Trade for the first five months of each year of the current recovery (i.e., 2010, 2011, 2012, and 2013). After shedding jobs on a YTY basis over the first five months of the first two years of the current recovery, Connecticut's Retail Trade sector came roaring back between December 2011 and May 2012 by adding, on average, 3,120 net, new jobs per month. This was, no doubt, also influenced by the record warm winter. Though Retail job-growth has been robust over the

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

first five months of 2013, it is at a slightly lower pace, adding, on average, 2,040 jobs per month between December 2012 and May 2013.



SOURCE: U.S. BLS and Author's calculations.

The two sub-sectors that appear to be adding to the increase in Retail jobs are Motor Vehicles and Parts retailers adding an average 560 jobs per month Between December 2011 and May 2012, and adding 600 jobs per month over the first five months of 2013. After shedding jobs over the first five months of 2012, and perhaps do to the apparent housing turnaround, over the first five months of 2013, Building and Garden Supplies have added, on average, 700 jobs per month. Job-growth in Clothing and Accessories has been weak and up-and-down. There have been two sub-sectors that have had a rapid deceleration in growth over the first five months of 2013, compared to the same period in 2012. Food and Beverage Stores added, on average, 1,760 jobs per month between December 2011 and May 2012, but that pace rapidly decelerated over the first five months of 2013. Between December 2012 and May 2013, Food and Beverage Stores only averaged 260 net, new jobs per month. General Merchandise Stores have also seen a

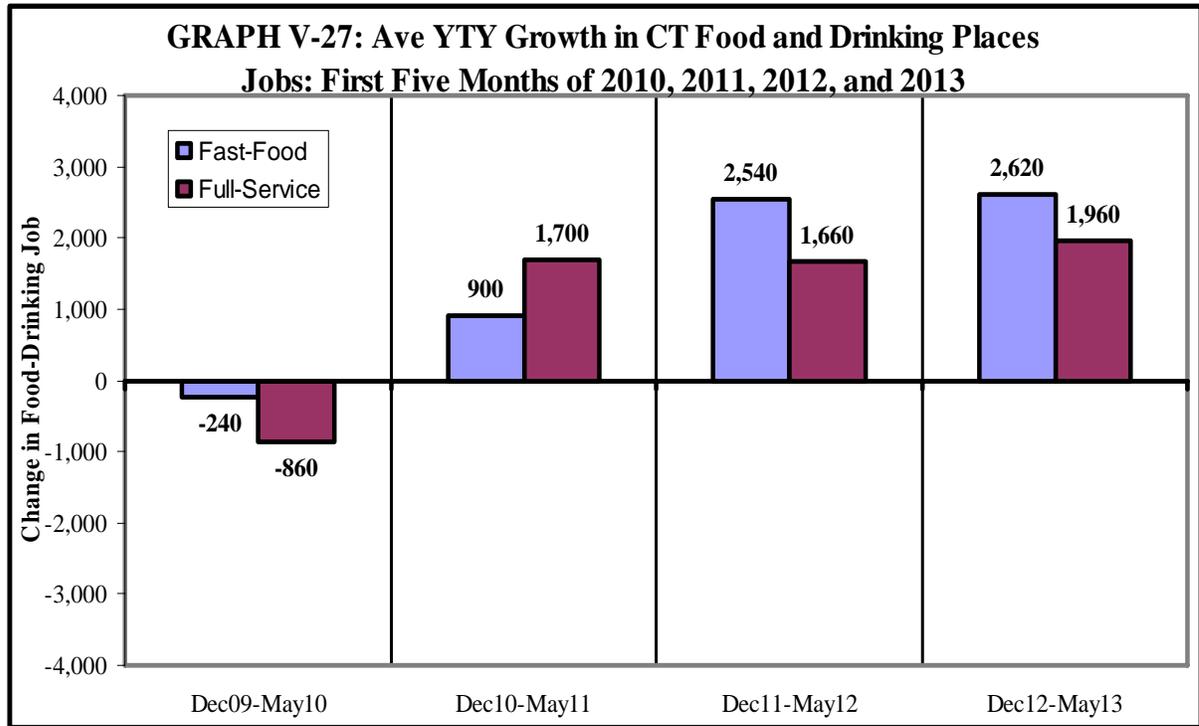
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

significant drop-off in job-growth in the first five months of 2013 compared to the same period in 2012. After adding 860 jobs per month in the first five months of 2012, General Merchandise Stores only added, on average, 20 jobs per month over the first five months of 2013.

Three sectors under the Private, Non-Financial Services major sector accounted for all of the job-growth over the first five months of 2013: Leisure and Hospitality, Professional and Business Services, and Health Care and Education. By far, of the two sub-sectors under Leisure and Hospitality (Arts, Entertainment, and Recreation and, Accommodation and Food Services), it has been the Accommodation and Food Services Sub-Sector that has accounted for most of the job-growth in the Leisure and Hospitality Major Sector over the current recovery. And, specifically, it has been the Food Services and Drinking Places Industry that has driven most of this growth. Over the first five months of 2013, Food and Drinking Places accounted for 92% of the growth in Accommodation and Food Services (not seasonally adjusted), and 54% of the job-growth in the entire Leisure and Hospitality Major Sector (not seasonally adjusted). As depicted in Graph V-27, the Year-to-Year (YTY) growth in jobs over the first five months of each year of the current recovery, save the first year 2010, has seen strong, and accelerating, especially in Limited-Service Eating Places (i.e., Fast-Food Restaurants). The average YTY job-growth over the first five months of recovery over the last three years has been particularly strong for Fast-Food Restaurants, after averaging a YTY increase of 900 jobs per month over the first five months of 2010, the average monthly, YTY job-growth accelerated over the comparable periods of 2012 (+2,540 jobs per month) and 2013 (+2,620 jobs per month). Job-growth has also been robust in the Full-Service Restaurants as well. The average YTY job-growth for the first five months of 2011 was 1,700, which declined slightly to an average of 1,660 jobs per month for the first five months of 2012, and the accelerated to 1,960 jobs per month between December 2012 and May 2013, the strongest average growth over the current recovery. Even though job-growth is always a good thing, nevertheless, the Accommodation and Food Service Industry tends to have lower-paying jobs, and it has the highest percent of part-time employment of any NAICS

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

three-digit industry. And, the Leisure and Hospitality major sector has the highest percentage of part-time employment of any major sector³⁸.



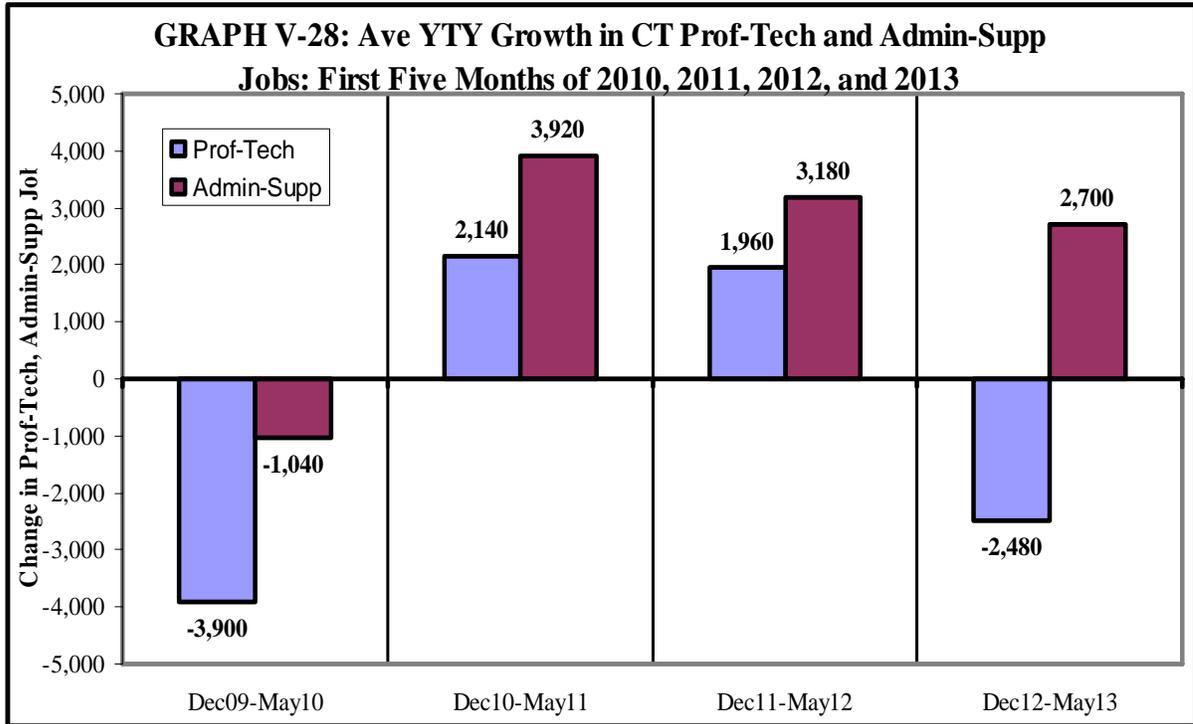
SOURCE: U.S. BLS and Author's calculations.

The next sector, after Leisure and Hospitality, that made the largest contribution to job-growth in Connecticut's Private, Non-Financial Services major sector, over the first five months of 2013, was Professional and Business Services. Three sectors come under this major sector. Two of these three sectors are: Professional, Scientific, and Technical Services (Prof-Tech) and Administrative Support and Waste Management (Admin-Supp). The third sector, Management of Companies and Enterprises, will not be discussed as its job-growth numbers were distorted by an administrative re-classification issue, which has since been resolved, but is not reflected in the data available at the time of writing. Therefore, the discussion will be confined to the remaining two sectors introduced above.

³⁸ U.S. Bureau of Labor Statistics,

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Again, to mitigate any seasonal distortions that may arise in unseasonalized data, Graph V-28 shows the monthly, average YTY growth in jobs over the first five months of each of the four years of the current recovery for the two remaining sectors of the Professional and Business Services Major Sector.



SOURCE: U.S. BLS and Author's calculations

As is apparent from Graph V-28, the average, monthly YTY growth in both Prof-Tech and Admin-Support decelerated in each successive year of the current recovery over the first five months. However, by 2013, though the monthly, YTY growth had decelerated from the two previous years, Admin-Support jobs still averaged a net gain of 2,700 jobs per month between December 2012 and May 2013. Prof-Tech on the other hand, subtracted 2,480 jobs per month, on average, on a YTY basis, between December 2012 and May 2013. The YTY, monthly job growth in Computer Systems Design and Related Services virtually collapsed in the first five months of 2013, compared to 2012. After averaging +1,300 jobs per month, on a YTY basis, over the first five months of 2012, Computer Systems Design subtracted, on average, 160 jobs per month over the first five

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

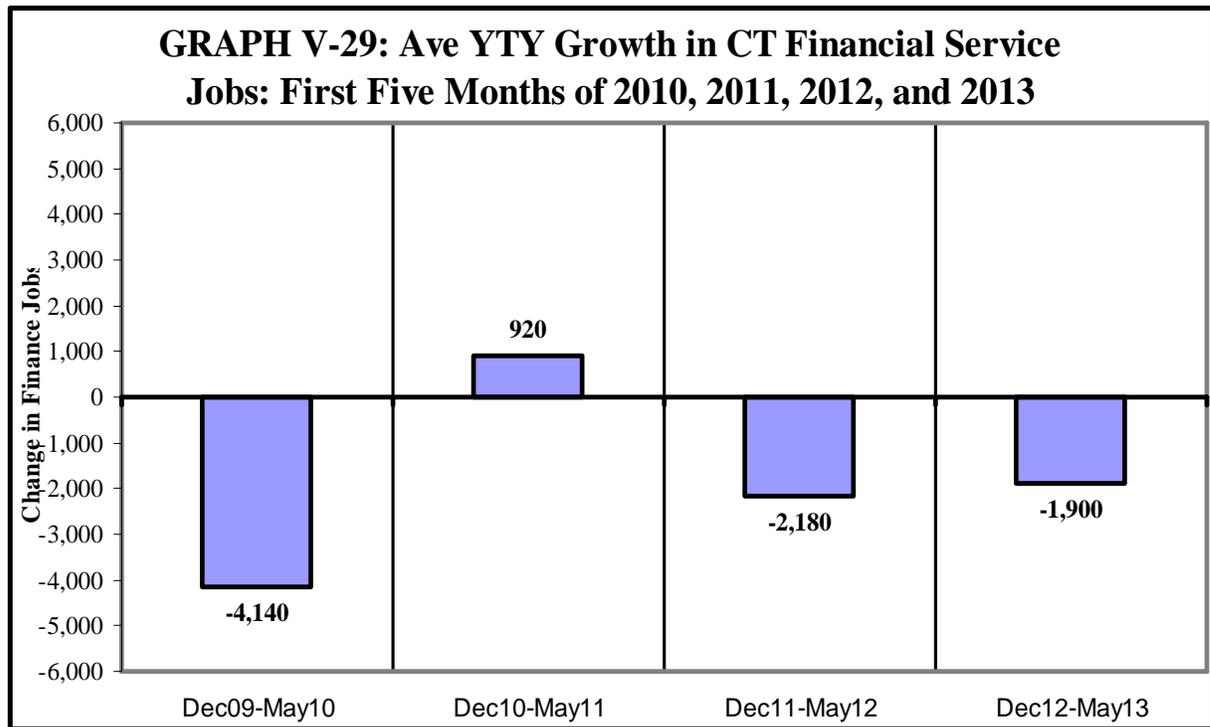
months of 2013. Legal Services and Accounting, Tax Preparation, Bookkeeping, and Payroll Services each, on average, subtracted jobs each month over the first five months of 2013, on a YTY basis.

The strong job-growth in the Admin-Support Sector was driven by Employment Services and Services to Buildings and Dwellings. On a YTY basis, Employment Services, which includes Temporary Help, added, on average, 1,280 jobs per month between December 2012 and May 2013. And, Services to Buildings and Dwellings, which includes Pest Control Services, Janitorial Services, Landscaping, and cleaning services, added, on average, 1,040 jobs per month over the first five months of 2013, on a YTY basis.

Finally, the last of the three sectors under the Private, Non-Financial Services major sector that accounted for all of the job-growth over the first five months, Health Care and Education, added 3,700 net, new jobs between December 2012 and May 2013, on a seasonally adjusted basis. This was double the pace compared to the 1,600 jobs added over the comparable period in 2012. .Virtually all the jobs added were in the Health Care and Social Assistance (HCSA) Sector, as the Education Sector subtracted 100 jobs over the first five months of 2013, on a seasonally adjusted basis.

Financial Services--- As shown on Graph V-29, the average, YTY monthly job-losses in the Financial Services Sector are not as steep as they were the first year of recovery. Between December 2009 and May 2010, Connecticut's Financial Services Sector was shedding, on average, 4,140 jobs per month, on a YTY basis. In fact, the first five months of 2011, the Financial Services Sector actually added, on average, 920 jobs per month, YTY. But then losses resumed into the first five months of 2012 and again in 2013. The biggest contributor to the losses in Connecticut's Financial Services Sector is not from Credit Intermediation, but, in fact, driven by Insurance, especially over the first five months of 2012 and 2013. Connecticut's Insurance Industry subtracted, on average, on a YTY-basis, 1,120 jobs per month in the first five months of 2012, and 1,340 jobs per month over the first five months of 2013.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

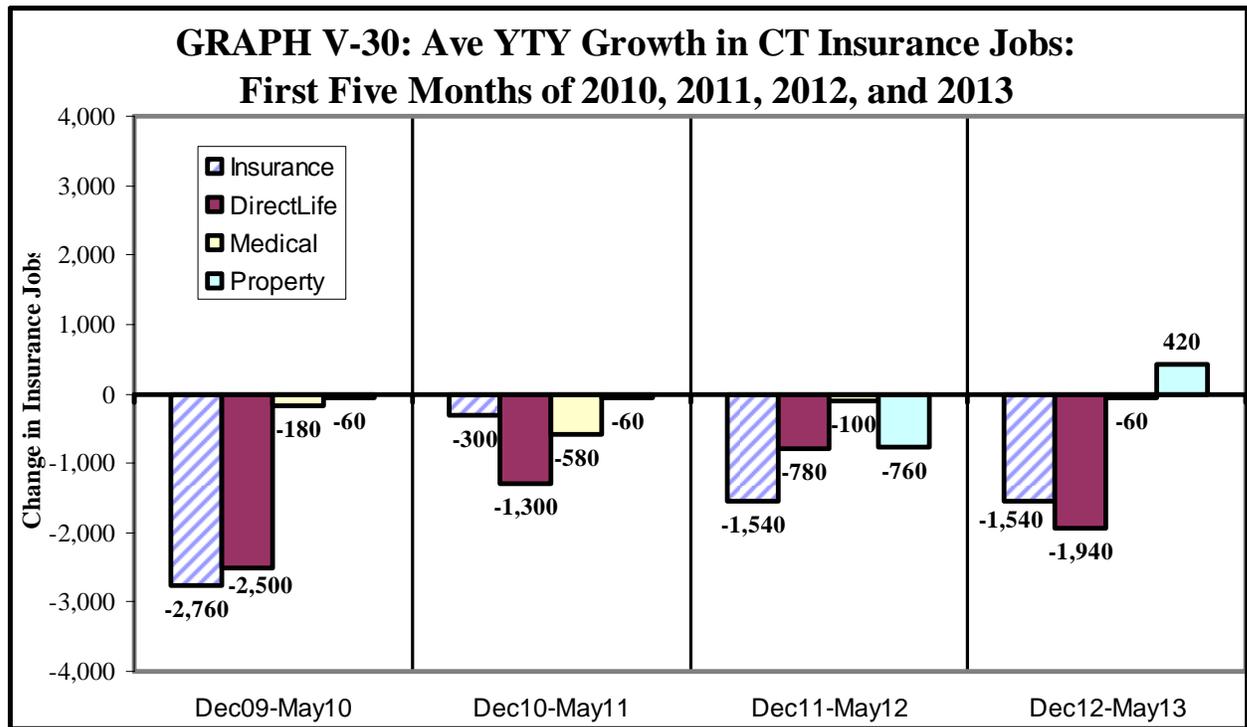


SOURCE: U.S. BLS and Author's calculations.

Graph V-30 breaks out the Insurance Carriers Industry into its major components: Direct Life, Health/Medical, and Property and Casualty. The crosshatched bars in Graph V-30 represent the average YTY, monthly change in jobs for the entire Insurance Carrier Industry in each of the first five months of 2010, 2011, 2012, and 2013. The solid bars represent the monthly, YTY change in jobs for each of the three sub-sectors of the Insurance Carriers Industry, and as for the previous sector and sub-sector analysis discussed above the detailed industry data are not seasonally adjusted.

It is clear from Graph V-30 that it is Direct Life Insurance that is driving the shedding of jobs, not only in Connecticut's Insurance Industry, but also in the State's Financial Services Sector. After losses decelerated from an average monthly, YTY rate of 2,500 jobs over the first five months of 2010, they then subsided to -1,300 per month between December 2010 and May 2011, and -780 per month over the first five months of 2012.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014



SOURCE: U.S. BLS and Author's calculations.

But then the jobs picture for Direct Life-Annuity Insurance reversed over the first five months of 2013 and the industry eliminated jobs at a rate of 1,940 per month, on a YTY basis. This was the steepest average monthly decline since the first five months coming out of the recent recession/crisis. And though the Health/Medical Sector also lost jobs between December 2012 and May 2013, it was at a much lower -60 jobs per month pace. The Property and Causality Sector added, on average, 420 jobs per month, on a YTY basis, over the first five months of 2013.

But, even on an annualized basis, for the last two years of complete, annual data, 2011 and 2012, it is Life Insurance and Annuity that accounts for the largest share of job losses, as well as the steepest percent decline. This is presented in Table V-5. Of the 1,200 jobs lost in Connecticut's Insurance Sector between 2011 and 2012, 1,000 of those jobs were eliminated in the Life Insurance and Annuity Industry, which represented a 3.65% decline in employment, on an annual, average basis.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

CT INS IND	2011	2012	CH11-12	%CH11-13
INSURANCE	49,900	48,700	-1,200	-2.40
Life	27,400	26,400	-1,000	-3.65
Medical	7,100	7,100	0	0.00
Property	12,600	12,300	-300	-2.38
Agents	2,800	2,900	100	3.57

SOURCE: U.S. BLS and Author's calculations

So what is driving the job-losses in the Life Insurance and Annuity Sector? According to a report by Ernst & Young on the Life Insurance Industry for 2013:

The US life insurance industry is confronting significant demographic, macroeconomic and regulatory challenges to business models and operations. In 2013, successful players are repositioning and reinventing their products, strategies and services, positioning their companies for growth and profitability in the competitive, lower-margin market. Insurers are competing in a market where average household expenditures on life insurance have declined 50% over the past decade, a decrease most noticeable among younger consumers. Product preferences for all consumers are also altering, given the prolonged low-interest-rate environment and equity market upheaval³⁹.

And, despite a need, as pointed out by Deloitte Touche Tohmatsu Limited in their 2013 outlook for the Life Insurance and Annuity Sector, by the Insurance Industry to fill projected occupational shortages in such areas as Accounts and Auditors, Actuaries, and Financial Managers from within:

U.S. economic growth has been uneven and relatively weak over the past two years, keeping unemployment relatively high. This makes it more difficult for carriers to expand their business with consumers wary of committing their limited disposable income to discretionary purchases such as life insurance and annuities.⁴⁰

³⁹ French, Doug, *2013 US Life-Annuity Insurance Outlook* (2013) Ernst & Young, p. 1 < [http://www.ey.com/Publication/vwLUAssets/2013-US-life-annuity-insurance-outlook/\\$FILE/2013-US-life-annuity-insurance-outlook_EG0097.pdf](http://www.ey.com/Publication/vwLUAssets/2013-US-life-annuity-insurance-outlook/$FILE/2013-US-life-annuity-insurance-outlook_EG0097.pdf) > Accessed on June 28, 2013.

⁴⁰ Deloitte Center for Financial Services, *2013 Life Insurance and Annuity Industry Outlook* (2012) Deloitte Development LLC, p. 2. < http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/FSI/US_FSI_L&A2013Outlook_010913.pdf > Accessed on June 28, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

As a consequence of these trends:

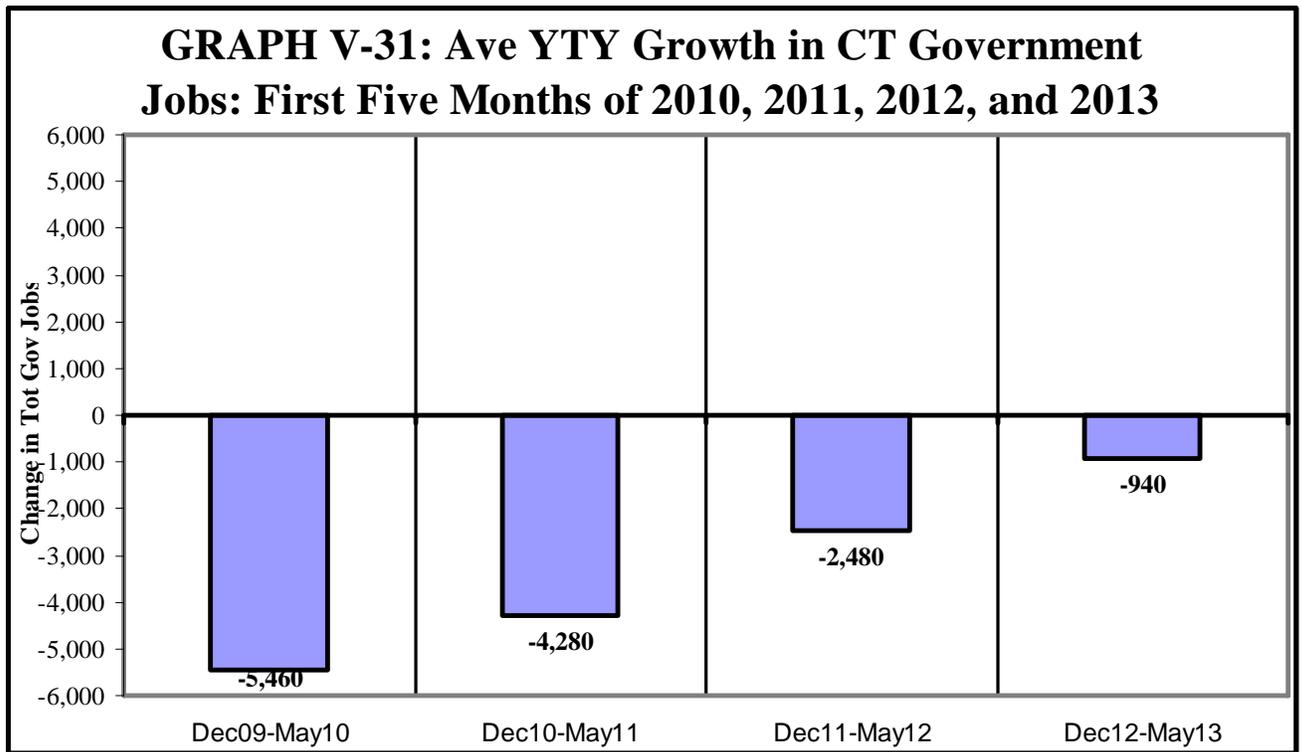
While some insurers will consider buying out potentially unprofitable legacy annuity contracts, others may spin-off annuity businesses. Several large domestic and foreign companies may divest life insurance assets in the U.S. to concentrate on core businesses and regions. Merger or acquisition deals may spring from carrier interest in entering or growing within emerging markets to pursue growth potential that seems more elusive in mature regions⁴¹.

It is these developing trends in the Life Insurance and Annuity Industry that probably account for the increased shedding of, especially, Life-Insurance Sector jobs in Connecticut's Insurance Industry over the first five months of 2013.

Government---The last of the four major sectors tracked in Graph V-23A and V-23B, and the only other sector besides Financial Services to shed jobs, is the Government Sector. As has been noted in both volumes of the current outlook, and past outlooks, this is the only Post World War II recovery in which the Government eliminated jobs, both at the State and national levels. Graph V-31 tracks the monthly, YTY, growth of Connecticut's Total Government Employment over the first five months of each of the four years of the current recovery. Again, the sub-sector data are not seasonally adjusted so the YTY growth is tracked to net out any seasonal factors that may distort the jobs growth.

As the Private Sector has been adding jobs over the past four years of recovery, as previously noted, the Public Sector has continued to shed jobs. From Graph V-31, though Connecticut's Public Sector has been shedding jobs over the first five months of each of the last four years of recovery, those job-losses have been decelerating. Over the first five months of 2013, Connecticut has, on average, on a YTY basis, been losing 940 Government-Sector jobs per month. This is only one-sixth of the job-loss pace between December 2009 and May 2010, the first five months to include the current recovery. On an annual basis, Connecticut's Total Government Employment declined by 1,600 between 2011 and 2012.

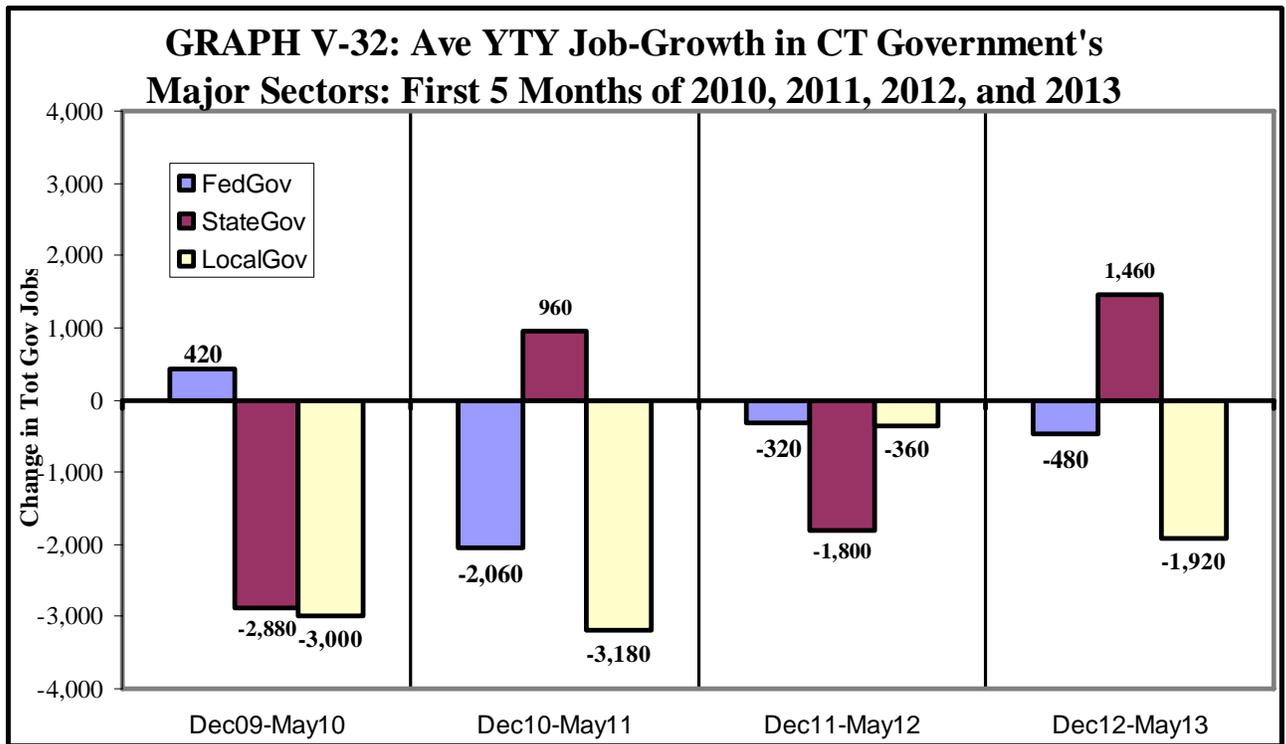
⁴¹ *ibid*, p. 6.



SOURCE: U.S. BLS and Author's calculations.

Graph V-32 shows the monthly, YTY-change, in jobs by the major sub-sectors of Government, Federal, State, and Local. Over the first five months of 2010, Federal jobs were still increasing at a modest rate of 420 jobs per month, on a YTY basis. Over the first five months of 2011, Federal job-losses were steep, averaging -2,060 jobs per month. And, though the steepness of the 2012 job-losses has subsided, nevertheless, Federal job losses have continued in each of the comparable periods in 2012 (-320 jobs per month) and 2012 (-480 jobs per month). The State jobs picture has been up-and-down over the current recovery. State jobs contracted steeply between December 2009 and May 2010 at a rate of -2,880 jobs per month. Then, between December 2010 and May 2011, Connecticut State Government added jobs at a rate of 960 jobs per month. The, over the first five months of 2012, during the economy's "Arab Spring", and when the Private Sector was adding jobs, Connecticut State Government Employment declined at a rate of 1,800 jobs per month.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

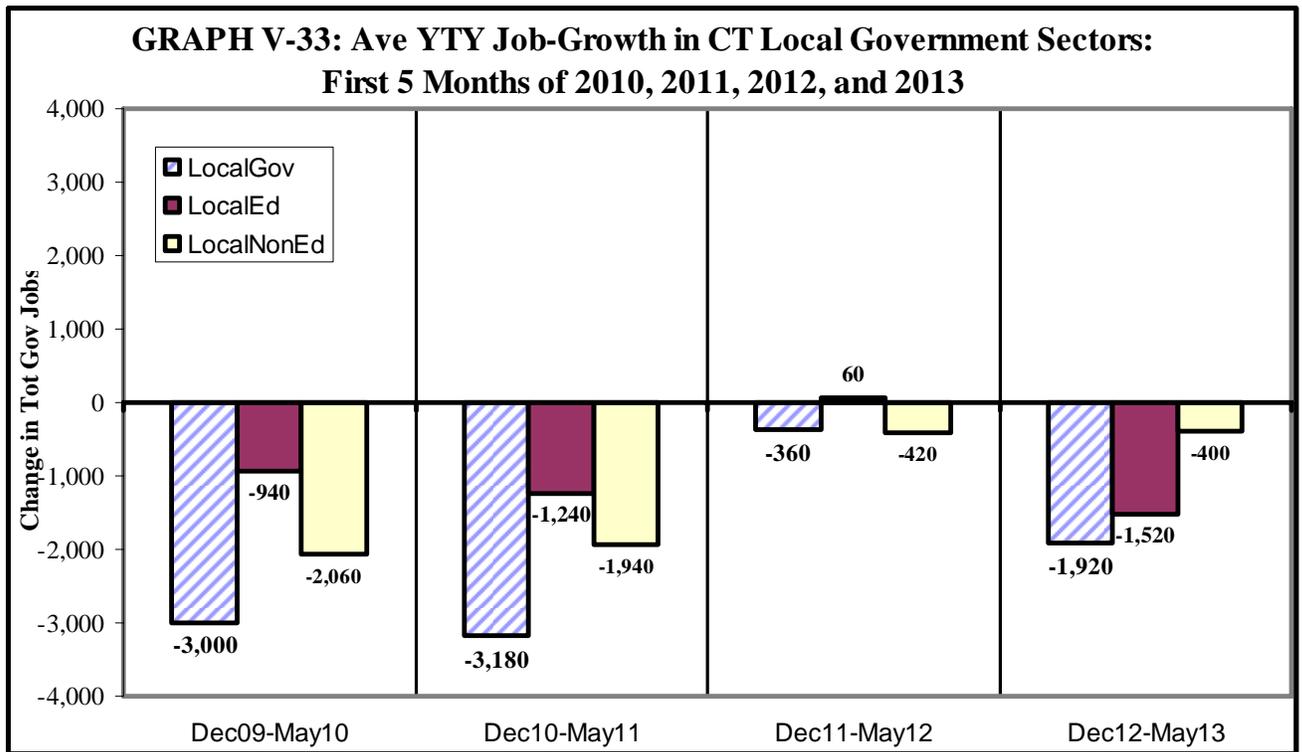


SOURCE: U.S. BLS and Author's calculations.

But, following the national trend, it is Connecticut's Local Government Sector that has consistently eliminated jobs over the last four years of the current recovery. After shedding 3,000 jobs per month, on a YTY basis, between December 2009 and May 2010, Connecticut's Local Government Sector then shed 3,180 jobs per month over the first five months of 2011. The job-losses subsided in 2012 to -360 jobs per month between December 2011 and May 2012. But then over the first five months of 2013, the hemorrhaging of Local-Government jobs resumed as Connecticut's Local Government Sector eliminated jobs at a rate of -1,920 jobs per month.

Graph V-33 breaks out Connecticut's Local Government Sector into its two major sub-sectors: Local Education, and Non-Education Local Government. The crosshatched bars, in Graph V-33, represent the aggregate Local Government Sector and the solid bars represent the two major sub-sectors.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014



SOURCE: U.S. BLS and Author's calculations.

Local Education has shed jobs over the first five months in three of the four years of the current recovery. The first five months of 2012, the only period in which jobs were added, Connecticut's Local Education Sector added, on average, 60 jobs per month, on a YTY basis. Then, between December 2012 and May 2013, the job-losses in the Local Education Sector resumed as Connecticut's Local Government Education Sector shed jobs at a rate of -1,520 jobs per month. The Non-Education, Local Government Sector at first had steep losses, jobs declined at a rate of 2,060 jobs per month, on a YTY basis, between December 2009 and May 2010. Then in 2011, another 1,940 jobs per month were eliminated in the first five months. The rate of job-loss, in the Non-Educational Local-Government Sector, has subsided, though still negative, over the first five months of 2012 and 2013. Between December 2012 and May 2013, Connecticut's Non-Education Local-Government Sector's Employment declined at a rate of 400 jobs per month, on a YTY basis. Of course, in addition to local government functions, Connecticut's Local Government Sector includes the tribal nations.

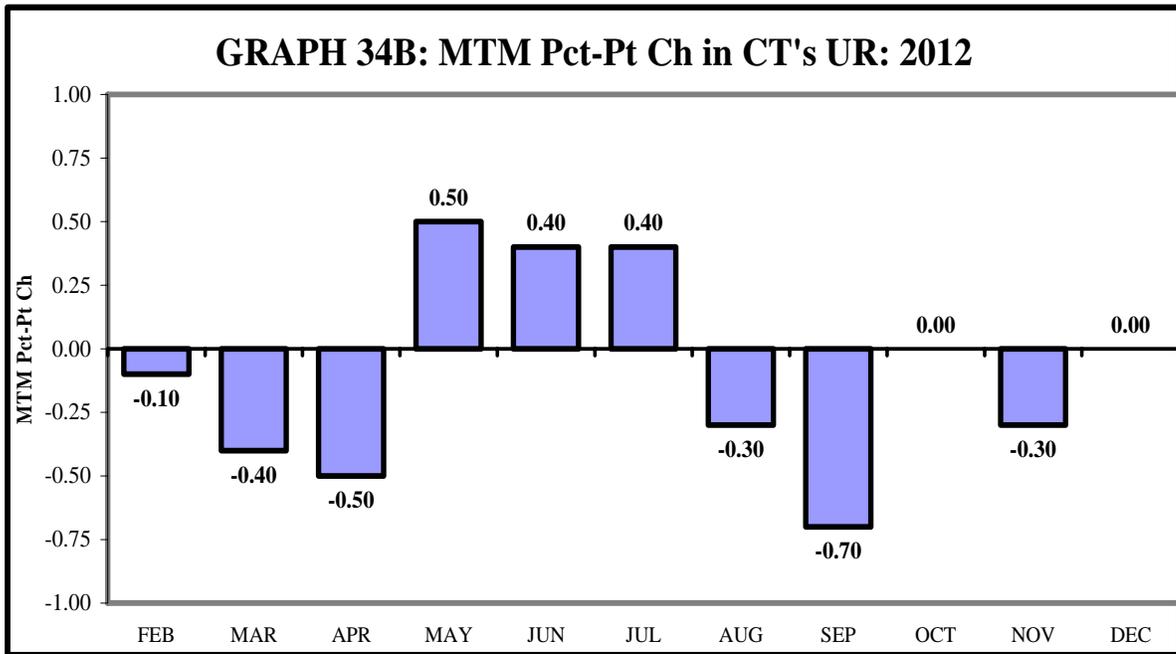
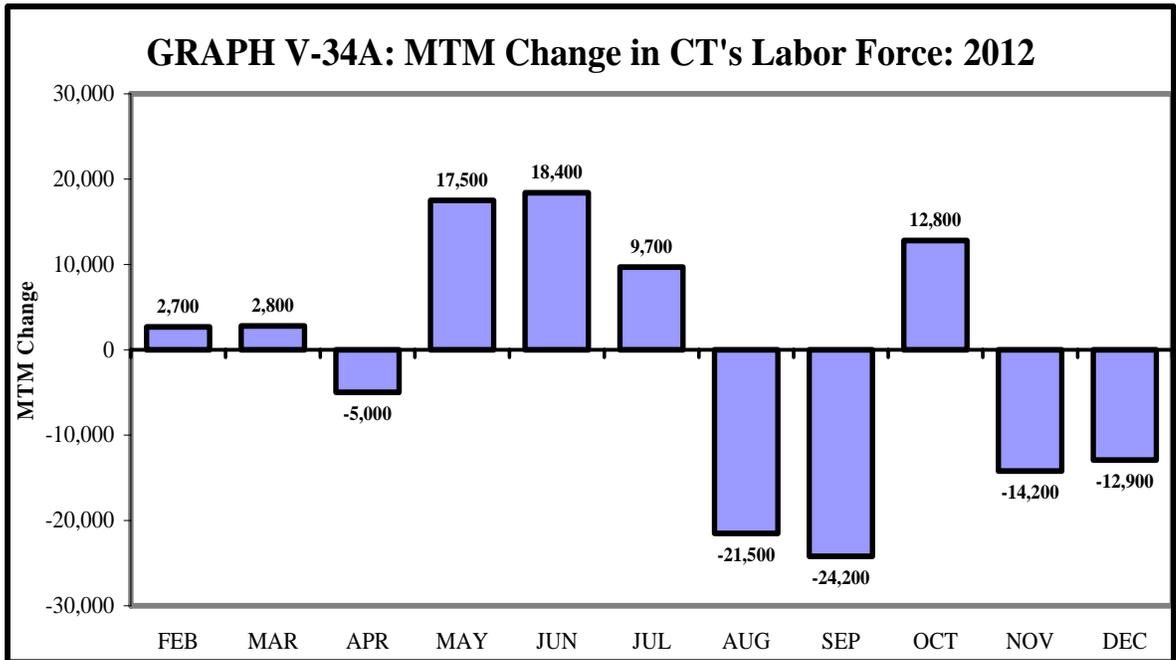
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

UNEMPLOYMENT, RESIDENCE EMPLOYMENT, AND THE LABOR FORCE)

Connecticut's Labor Force, Household Employment, Number Unemployed, and the Unemployment Rate (UR), all part of the Local Area Unemployment Statistics (LAUS) Program, took a bizarre turn in the middle of 2012. This bizarre turn is illustrated in graphs V-34A and V-34B. Graph V-34A tracks the Month-to-Month (MTM) changes in Connecticut's Labor Force over 2012, and Graph V-34B tracks the MTM Percentage-Point (Pct-Pt) change in Connecticut's Unemployment Rate (UR) over the year 2012.

From Graph V-34A, the volatility in the MTM changes in the Labor Force begin in May 2012. Until May, the absolute value of the monthly change in the Labor Force does not exceed 5,000, then in May the Labor Force jumps by +17,500, and then by +18,400 in June. After a deceleration in growth to +9,700, Connecticut's Labor Force then plunges by -21,500, followed by another 24,200 leaving the Labor Force in September. This is followed by a gain of 12,800 in October and then two more successive declines in November and December. A similar pattern can be observed in Connecticut's Unemployment Rate (UR) in 2012. From Graph 34B, after significant declines in the UR, -0.40 Pct-Pts in March, and -0.50 Pct-Pts in April, the UR suddenly begins shooting up in May (+0.50 Pct-Pts), June (+0.40 Pct-Pts), and July (+0.40 Pct-Pts). The UR then declines by -0.30 Pct-Pts in August, and then plunges by -0.70 Pct-Pts in September. The obvious question is: What is driving this bizarre behavior in Connecticut's Labor Force and its UR? The magnitude of these changes is unprecedented in Connecticut's LAUS data series, either over the phases of the business cycle, or going all the way back to the introduction of the current methodology in 1976. Most importantly, the participants in the State's Economy, whether they were consumers, business decision-makers, policy-makers, or others, were at a loss as to how they should interpret the implications of this data. And, they had, as always, to make decisions, based on the signals being sent by this data, in real time. That is, in many cases, the decisions could not be delayed until revisions, or corrections to, the data became available at a later date.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: U.S. BLS and Author's calculations.

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014

How the LAUS Data is Produced

For all states and the District of Columbia, the Los Angeles-Long Beach-Glendale, metropolitan division, New York City, and the respective balances of state, models based on a "Signal-Plus-Noise" approach are used to develop employment and unemployment estimates. The model of the signal is a time series model of the true labor force which consists of three components: A variable coefficient regression, a flexible trend, and a flexible seasonal component. The regression techniques are based on historical and current relationships found within each state's economy as reflected in the different sources of data that are available for each state—the Current Population Survey (CPS), the Current Employment Statistics (CES) survey, and the UI system. The noise component of the models explicitly accounts for autocorrelation in the CPS sampling error and changes in the average magnitude of the error. In addition, the models can identify and remove the effects of outliers in the historical CPS series. While all the state models have important components in common, they differ somewhat from one another to better reflect individual state labor force characteristics.

Seasonal adjustment occurs within the model structure through the removal of the seasonal component. The models also produce reliability measures on the adjusted and unadjusted series, and on over-the-month change⁴². But, another seasonal adjustment method is applied after the modeling process. The *Smoothed, Seasonally-Adjusted* (SSA) estimates are seasonally-adjusted estimates that have incorporated a long-run trend smoothing procedure. The SSA technique uses a Henderson 13-Term Smoothing Algorithm⁴³, which is applied after the model has applied seasonal adjustment techniques. The reason for BLS applying the smoothing algorithm on top of the modeling is to produce estimates that are less volatile than those currently produced by the LAUS estimation methodology.

⁴² For more information, or to follow up on the above discussion, see the U.S. BLS Website on the methodology for producing state-level unemployment statistics at < <http://www.bls.gov/lau/laumthd.htm> > Accessed on July 12, 2013.

⁴³ Seasonal Adjustment, *Henderson filters* < <http://www.seasonaladjustment.com/henderson/> > Accessed on July 12, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

As recounted in the last paragraph above: “The reason for BLS applying the smoothing algorithm on top of the modeling is to produce estimates that are less volatile than those currently produced by the LAUS estimation methodology”. However, as depicted in graphs 34A and 34B, this had the opposite effect on the Connecticut data. .

Many were at a loss to explain the sudden gyrations in Connecticut’s LAUS data. The director of the State Labor Department’s Office of Research, Andrew Condon, Ph.D., stated that:

We can find no corroborating evidence that the record losses in employment and increases in unemployment ... are occurring at this magnitude⁴⁴,

Condon also noted that no other economic indicators, including unemployment insurance claims, layoff events and reports of business expansions and contractions, "do not support the sudden and steep decline" shown by the federal data. He said state officials are working with the Bureau of Labor Statistics to review the data⁴⁵.

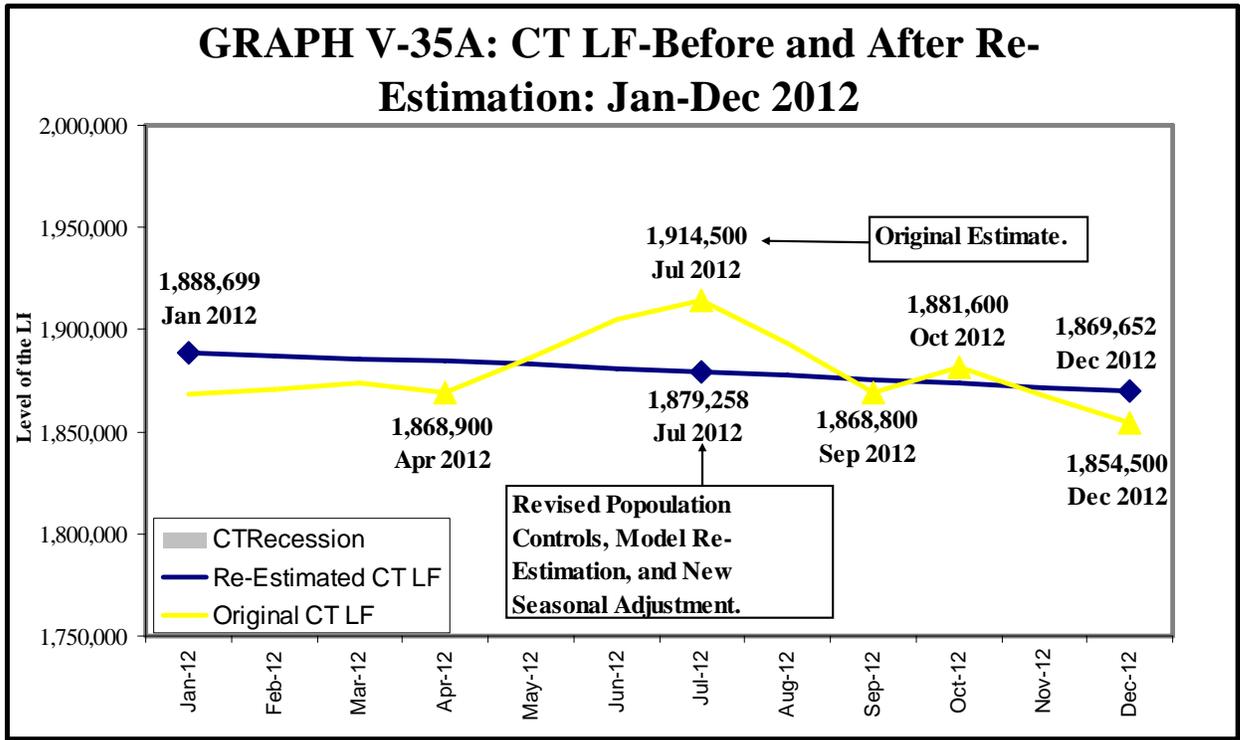
Subsequent Revisions to Connecticut’s Data

At the time of writing this outlook, June-July 2013, the population controls, model re-estimation, and a new round of seasonal adjustment has been applied to the data. The results are presented in graphs V-35A and V-35B. In Graph V-35A, the level of Connecticut’s monthly Labor Force, before and after, the population controls were revised, the model re-estimation, and the new seasonal adjustment applied are compared over the year 2012. The same comparison is made for the before, and after, Connecticut UR series for the year 2012. In both graphs, the revised series show a much smoother, less volatile series for both the Labor Force and the Unemployment Rate over the year 2012. Among other factors, it also probably reflects a problem with the 13-Term Henderson Smoothing Algorithm, which has end-point issues that are obviously resolved when the observations in question are no longer the endpoints.

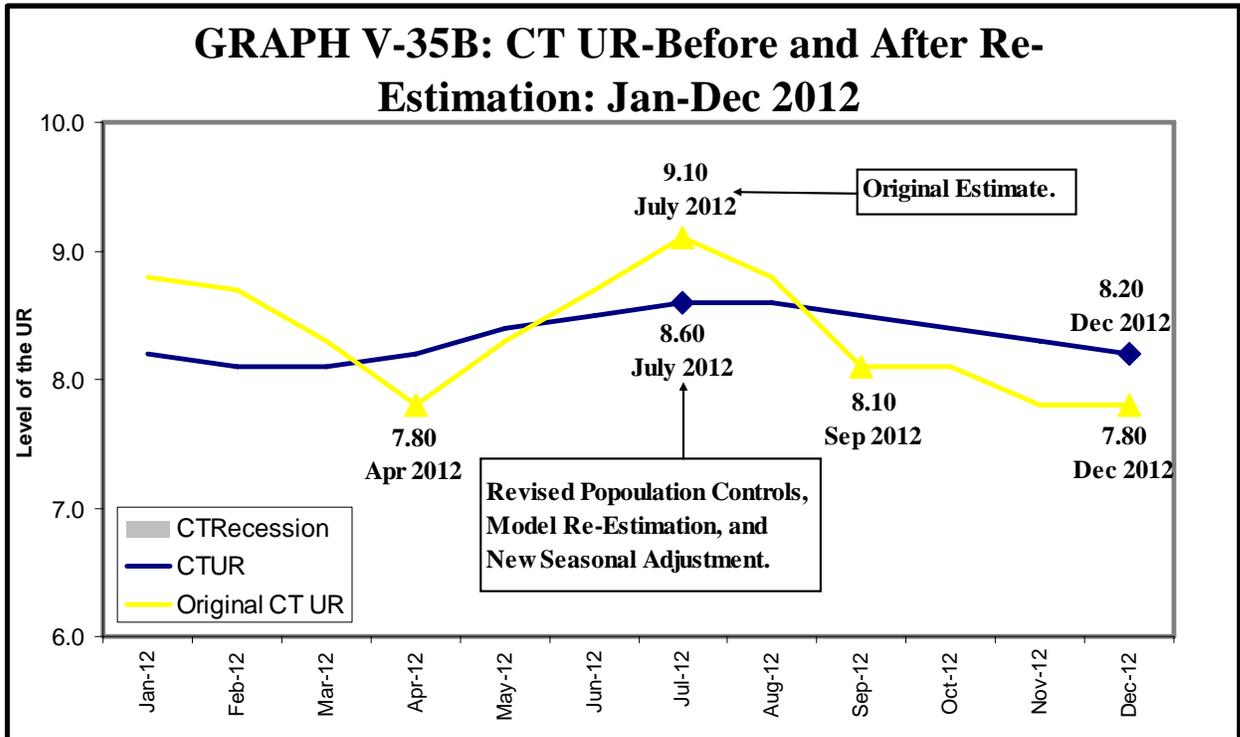
⁴⁴ Collin, Dave, *Conn. unemployment rate jumps to 9 percent* (September 20, 2012) BLOOMBERG BUSINESSWEEK < <http://www.businessweek.com/ap/2012-09-20/conn-dot-unemployment-rate-jumps-to-9-percent> > Accessed on July 12, 2013.

⁴⁵ *ibid*

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



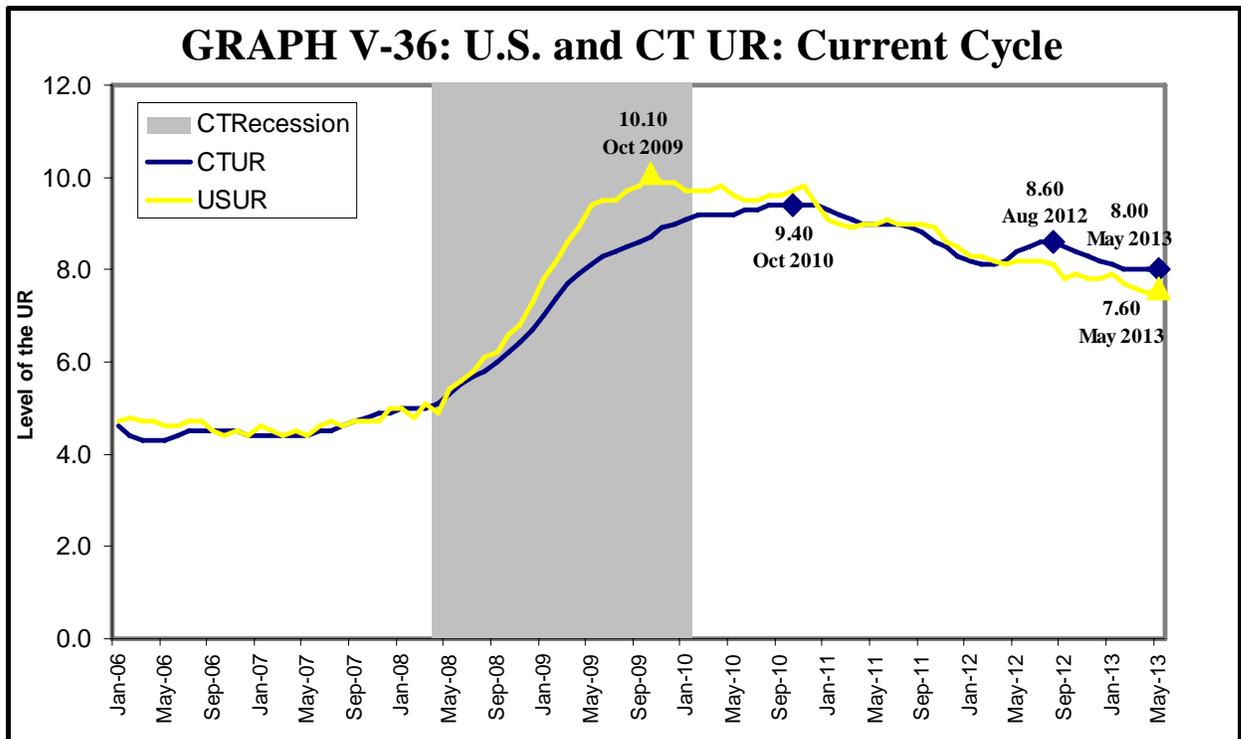
SOURCE: U.S. BLS



SOURCE: U.S. BLS

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graph V-36 compares the U.S. and Connecticut Unemployment Rates (UR) over the current cycle. The U.S. UR peaked at 1.10% in October 2009, whereas Connecticut's UR peaked exactly one year later at 9.40%. Even with the revised data, Connecticut's UR, after being at, or below that, of the U.S. UR over most of the current cycle, from the last expansion, through the recent recession, and over the current recovery up until the middle of 2012, when Connecticut's UR passed above that of the U.S. In August 2012, the Connecticut UR was 8.60%, compared to 8.10% for the U.S. As of May 2013, the most recent period of available data, at the time of writing, the U.S. UR Was 7.60%, which was 0.40 percentage-points (or, 40 basis points) lower than Connecticut's UR of 8.00%.



SOURCE: U.S. BLS.

Post Scrip

The Office of Research of the Connecticut Department of Labor is currently working with the U.S. Bureau of Labor Statistics to try and identify the source of the anomalous behavior of Connecticut's LAUS data, particularly over the middle of 2012.

VI. HAS CONNECTICUT'S HOUSING MARKET TURNED THE CORNER?

Has the apparent turnaround in the U.S. housing market implied that the most important indicator of the direction of the economy is the strong performance of the U.S. job-market noted above? Does this represent an inflection point in the U.S. and Connecticut economies, thus portending a transition from a weak-and-halting, to a stronger recovery? Though housing has always been a critical part of the business cycle, playing a major role in driving both the expansion and contraction phases of the cycle, due to the inflating, and subsequent popping, of the housing asset-bubble, it has played a particularly critical role over the current cycle. If, in fact, the housing market is now recovering, does this represent a critical turning point in this cycle? And, is Connecticut's housing market participating in the recovery?

In their assessment of the fourth quarter of 2012, Prudential Connecticut Realty's report opened with:

Our real estate market in Connecticut is showing strong momentum as we round out the year. Closed sales of single family homes have risen 16.0% over last year and sales of condominium homes are up 9.2%⁴⁶.

The report did caution that the index for median prices had not yet turned positive. Median prices for single family homes are down slightly by 1.0% and down 3.6% for condominiums. .

If, as the data for the last half of 2012 and into the first half 2013 seems to suggest, that, in fact, the housing market is back, both nationally, and in Connecticut, it would be a critical inflection point in the current recovery.

⁴⁶ Adams, Candace and Terence Beaty, Director, THE REAL ESTATE MARKET REPORT: 4th quarter 2012, Prudential Connecticut Realty

WHY HOUSING IS CRITICAL TO A STRONGER RECOVERY

As discussed in Chapter II-*WHY THE STEEP RECESSION AND WEAK RECOVERY? A Brief Recap of the Current Cycle*, a “Normal Recession” is brought on by a slowdown in economic activity, which results in a slowing of output growth and consequently rising unemployment. This can be the result of the Fed raising interest rates to slow down what it perceives as being an overheated economy; it could be brought on by an Inventory Buildup that results in cutbacks in production to bring inventories down to acceptable levels, or other factors that that are from a *FLOW* Perspective. But, in a ***Balance-Sheet Recession***, such as the recent recession/crisis, the Great Depression, which was the consequence of, among other domestic and international factors, the collapse of real estate bubbles (housing in 1926 and commercial in 1929), and the collapse of Japan’s real estate bubble in 1989, the collapse of asset values, usually accompanied by the accumulation of unsustainable levels of debt, which decimates the balance sheets of one or more major sectors of the economy and renders them *INSOLVENT*., which is from the *STOCK* Perspective, as opposed to the flow perspective discussed above⁴⁷. The result is a collapse in spending as households and business pay down debt to repair their Net Worth to re-gain access to credit markets. This is summarized below:

$$\text{ASSETS} - \text{LIABILITIES} = \text{NET WORTH} < 0$$

$$\text{ASSETS} \downarrow (\text{Housing}) - \text{LIABILITIES} \uparrow (\text{Debt}) = \text{NET WORTH} < 0$$

But, unlike the stock market, an asset bubble in housing has much broader implications for the economy. It is wealthier households that tend to directly own stocks, and, in fact, whose assets are mostly in the form of financial assets. For the vast middle-income, and working-class households, most, and in many cases, all of the wealth is in their house. Therefore, the popping of a housing bubble would effect a much greater number and proportion of households than the popping of a stock market bubble. And, in fact, he implications for Households Balance Sheets are supported by the results of the Federal

⁴⁷ There, of course, can be exogenous shocks to the economy that do not fit within the Flow or Sock framework, a case in point, would be the 1973 Oil Embargo.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Reserve Board's *Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances* (June 2012)⁴⁸ The Fed report noted that it was, in fact, it was housing that played the major role in the collapse of Households' Net Worth and, housing was of greater importance than Financial Assets for the wealth position of most families.

If Housing has, in fact, turned the corner, it would be a critical inflection point in this recovery. Housing and Construction are important drivers of the Business Cycle, and their strong multiplier-effects have not been there for this recovery. Housing plays several distinct and critical roles in the economy with each role generating its own independent and distinct set of multiplier effects on output, income, and employment. Housing straddles, at least, three separate markets:

1. ASSET MARKET (Structures): Housing is an asset and the construction and sale of structures generates increases in construction activity, including increased income and jobs.
2. PROPERTY MARKET (Residential Space): The activity in the Property Market where living space is demanded and supplied generates a separate set of increases in jobs and income.
3. GOODS MARKET (Durable-Goods Consumption): Housing is also a Durable Good, which yields a stream of services over multiple time periods. Further, the consumption of housing services generates the consumption of complementary goods and services. This produces another set of independently generated multipliers as homeowners purchase furniture, appliances, etc

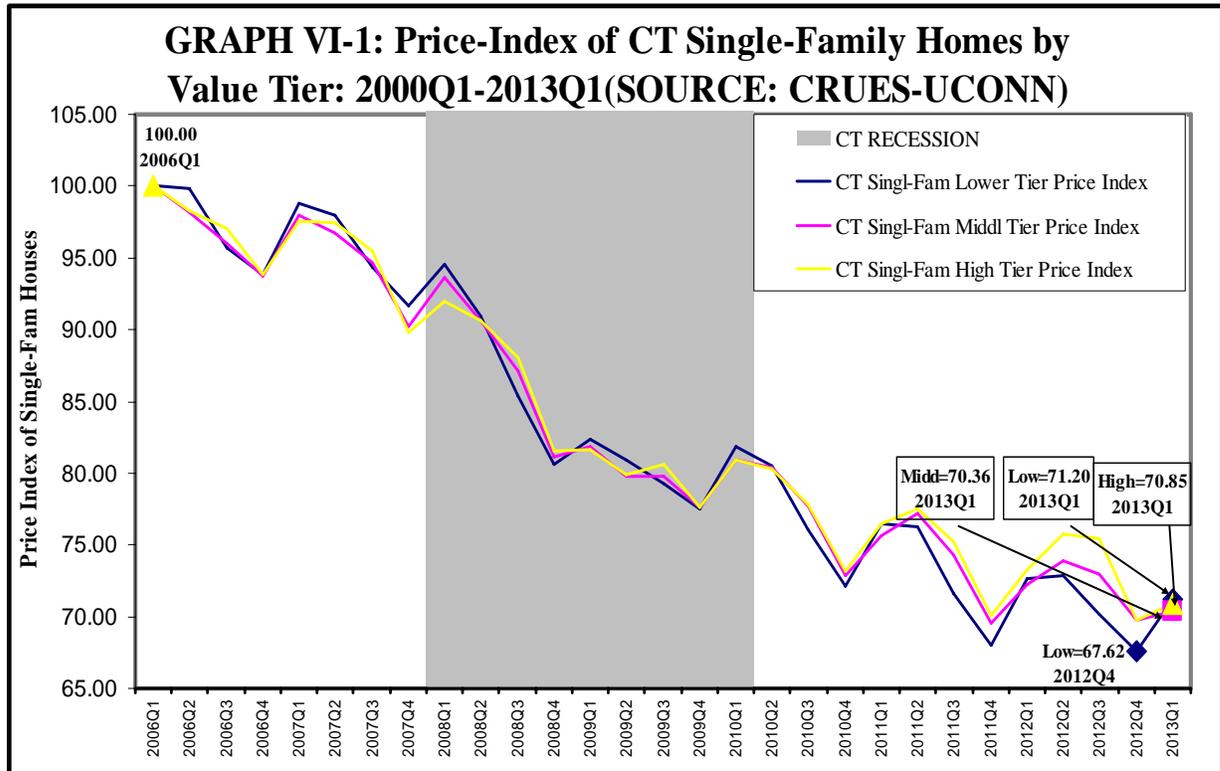
HAS CONNECTICUT'S HOUSING MARKET TURNED THE CORNER?

To gauge whether or not Connecticut's housing market has joined the apparent national housing turnaround, there are several regularly tracked indices of the State's housing markets that may tell us how the housing market is doing in Connecticut. Quarterly data

⁴⁸ Board of Governors of the Federal Reserve, *Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances* (June 2012)

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

on housing prices, the Year-to-Year (YTY) percent-change, and the number of sales transactions by Connecticut’s Labor Market Areas (LMA’s), and statewide, weighted averages are published by the Center for Real Estate and Urban Economic Studies (CREUES) at the University of Connecticut for Connecticut.

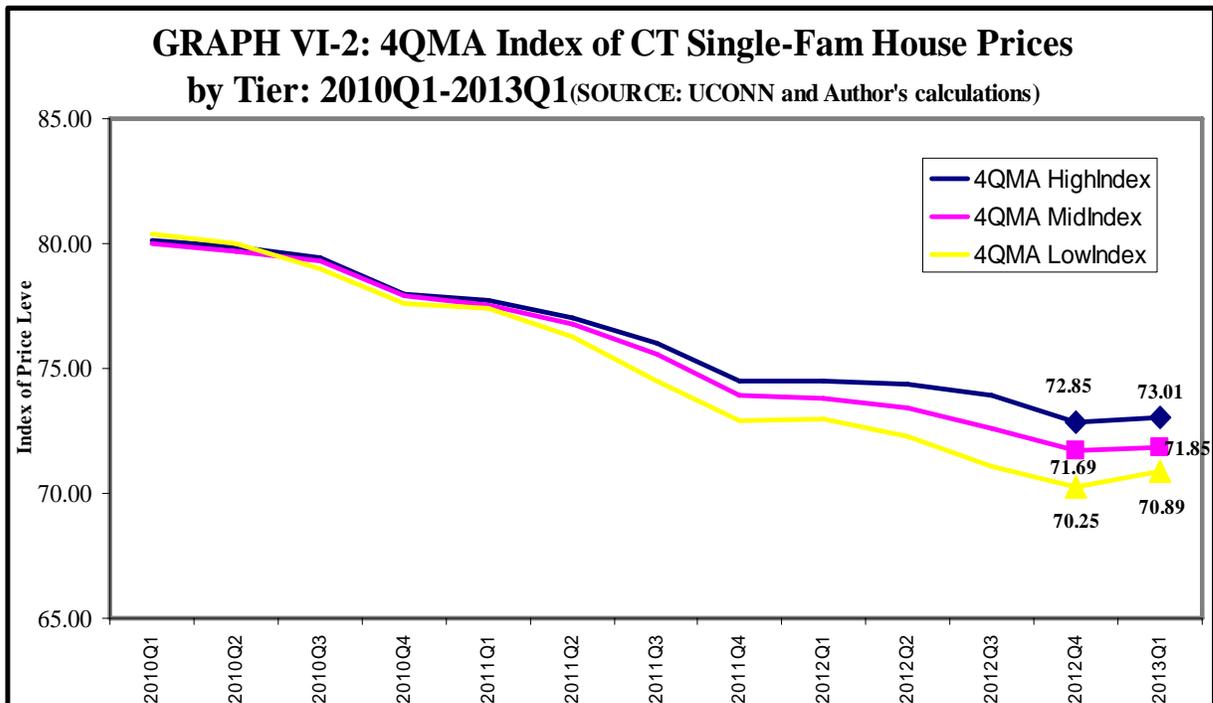


SOURCE: CRUES-UCONN and Author’s calculations.

Graph VI-1 tracks an index based on housing-price information gathered by CREUES on three tiers of prices of single-family home sales for Connecticut’s MSA’s. CREUES divides the sale prices up into three tiers: High Tier, Middle Tier, and Low Tier. The index in Graph VI-1 is based on the statewide, weighted average for the nine LMA’s for each tier. It is the ratio of the current-year price to the price in the base period multiplied by 100. The base period is the fourth quarter of 2006(2006Q4), which is the period when all three of the tiers’ statewide, weighted averages peaked over the recent housing bubble. The series begins in 2000Q1 and ends with the most recent period of available data, 2013Q1.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

As is apparent from Graph VI-1, the index for each tier, after peaking at 100.00 in 2006Q4, steadily declined throughout 2010 and 2011 in an oscillating fashion. It was the Middle Tier of single-family house prices that bottomed first in 2011Q4. The High and Low tiers then both bottomed one year, or four quarters later, in 2012Q4. And, as will be discussed below on the data reported in Table VI-1, it was the Lower Tier that had, not only the largest increase during the bubble, but also the biggest decline after the bust. Graph VI-2 focuses in on the last two years of data to get a clear picture on the possible price turn-around in addition, Graph VI-2 presents the 4-Quarter Moving Average (4-QMA) in order to filter out some of the noise in the data.



As was the case for the price index in Graph VI-1, the 4-QMA of the price index also shows the Lower Tier had the biggest decline, except that for the 4-QMA, all three tiers bottom in 2012Q4. Also, based on the 4-QMA, though it had the biggest decline, the Lower Tier also had the strongest comeback, with an index value of 70.25 in 2012Q4 increasing to 70.89 in 2013Q4, which represents a 0.91% increase in the 4-QMA of the price index, or a 3.69% compounded, annualized growth-rate. Both the High and Middle

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

tiers 4-QMA grew by 0.22% between 2012Q4 and 2013Q1, which represents an 0.88% annualized growth-rate.

Table VI-1 and Graph VI-3 present the longer view of the behavior of Connecticut's single-family housing prices based on the unfiltered, price data over the entire range of the data on prices and transactions published by CREUES from 2000Q1 to 2013Q1.

Price-Change	HighTier	MidTier	LowTier
2000Q1-Peak	71.03	72.22	73.43
Peak-to-Trough	-30.27	-30.43	-32.38
Trough-to-2013Q1	1.61	1.15	5.29
No of Qtrs	HighTier	MidTier	LowTier
2000Q1-Peak	24	24	24
Peak-to-Trough	26	23	26
Trough-to-2013Q1	1	5	1
Comp Ann Grw-Rate	HighTier	MidTier	LowTier
2000Q1-Peak	9.36	9.48	9.61
Peak-to-Trough	-5.40	-6.12	-5.84
Trough-to-2013Q1	6.60	0.92	22.91

SOURCE: UCONN-CREUES and Author's Calculations

From 2000Q1 to the peak of the housing bubble in Connecticut, the Low Tier had the greatest increase in price of over the six-year, 2000Q1-2006Q1 Period, growing by 73.43%. The High Tier price increased the least, relatively, at 71.03%. But, while the High and Middle Tier prices declined by a little over 30% over the bust between 2006Q1 and 2011Q4 for the Middle Tier, and 2012Q4 for the High Tier, the Low Tier's average price for single-family homes declined by 32.38% between 2006Q1 and 2012Q4. From its trough in price in 2012Q4, the High Tier price has increased by 1.61% by 2013Q1. The Middle Tier price has increased by 1.15% between its bottom (2011Q4) and 2013Q1. It is the Low Tier, that although it declined the steepest, it has also had the strongest recovery in price increasing by 5.29% between 2012Q4 and 2013Q1.

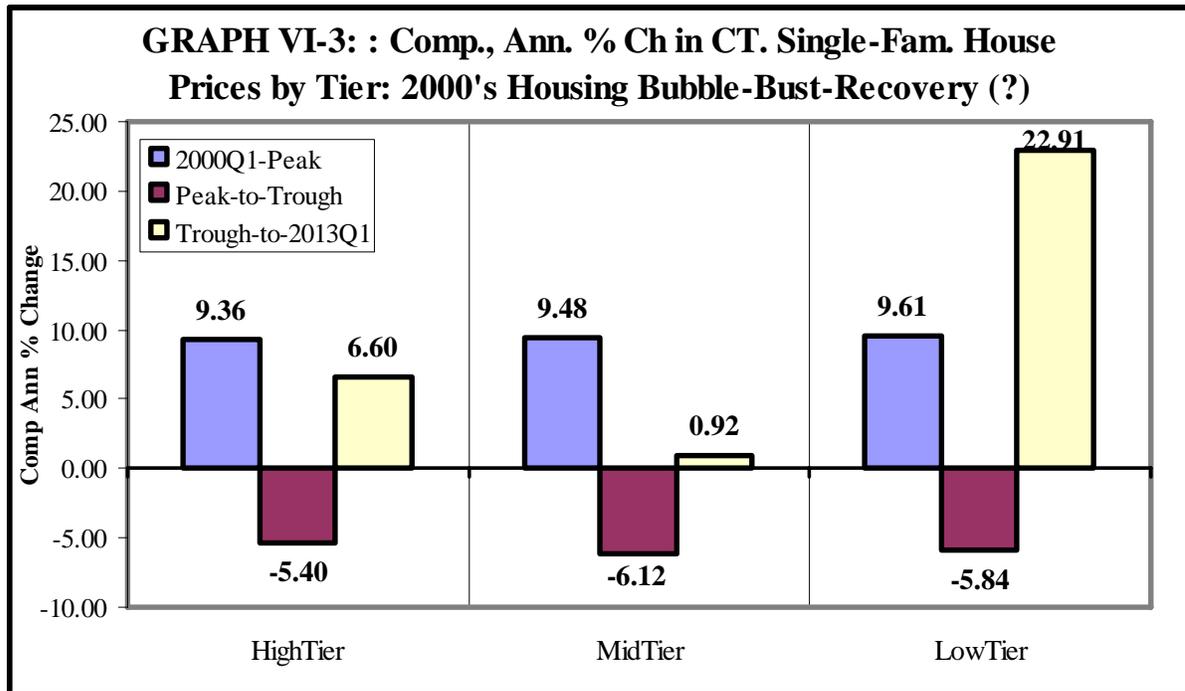
**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

The middle part of Table VI-1 shows the length of each phase of the 2000's Housing Bubble/Bust, and possible recovery. All three tiers, bubbles expanded for 24 straight quarters, however, while the High and Low tiers had 23 quarters of contracting prices after the bust, the Middle Tier had a shorter, 23-quarter, period of contraction in prices. Consequently, the High and Low Tier "recoveries" have been one quarter in duration as of 2013Q1, but the apparent recovery in prices for the Middle Tier has now been five quarters as of 2013Q1.

The different behaviors of the three tiers are further investigated by looking at the compounded, annualized growth-rates of the price changes discussed above. This puts all three tiers on the same footing even if their phases of the housing cycle were of different lengths. These are presented in the lower part of Table VI-1. As can be observed in Table VI-1, all three tiers' prices grew at pretty much the same pace, on a compounded, annualized basis, over the six-year bubble period. From 2000Q1 and 2006Q1, all three tiers, prices grew at a compounded, annualized rate of about 9.5%, with the Low Tier, as noted above, growing the fastest at 9.61%. However, it was the Middle Tier that contracted the fastest on a compounded, annualized basis. Though the Middle Tier had the shortest contraction-period of prices, 23 quarters, its contraction was the steepest as prices declined at a compounded, annualized rate of 6.12%. Further, even though the Middle Tier has had the longest recovery in prices, compared to the other two, its recovery has been the weakest, growing by an anemic compounded, annualized rate of 0.92% for five quarters, as of 2013Q1.

One other hand, though it had the second steepest compounded, annualized decline in prices (-5.84%) over 26 quarters, its one-quarter recovery between 2012Q4 and 2013Q1, of 5.29%, represents a 22.91% compounded, annualized growth-rate in price. The High Tier, which also contracted for 26 quarters, but at the slowest rate of the three tiers (-5.40% on a compounded, annualized basis), and has also had a short one-quarter recovery, as of 2013Q1, with prices increasing by 1.61%, which represents a 6.60% compounded, annualized growth-rate. Graph VI-3 summarizes the discussion of the lower part of Table VI-1

CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014



SOURCE: CREUES-UCONN and Author's calculations.

This chapter opened with Prudential Connecticut Realty's report on Connecticut's housing activity in the fourth quarter of 2012. Their assessment of the State's housing market in 2012Q4 was that "Our real estate market in Connecticut is showing strong momentum as we round out the year". In their report on Connecticut's housing market for the first quarter of 2013 (2013Q1), they open with:

Connecticut's real estate market ended very strong last year in both closed sales and new deposits. As a result, the first quarter shows continued strength in closed sales and even more new business activity. Pending sales of single family homes rose 17.1% over the first quarter of last year. Deposits on condominiums also rose 29% to 1,790 contracts, the highest number of new deposits in three years. This activity also helped stabilize median prices in our area⁴⁹.

They see the gathering strength in Connecticut's housing market in 2012 continuing into 2013. They noted in their 2013Q1 Report that new contracts for condominium homes

⁴⁹ Adams, Candace and Terence Beaty, Director, THE REAL ESTATE MARKET REPORT: 1st quarter 2013, Prudential Connecticut Realty

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

soared in the first quarter of 2013 by 29% Year-to-Year (YTY), and 54%, on a Quarter-to-Quarter (QTQ) basis. They noted that this represented renewed confidence in the condominium segment, which had suffered from a lack of available financing in recent years. In addition, they reported that new contracts for single family homes jumped 17.1% in the first quarter as well. Growth was strongest in New London, Middlesex and Fairfield Counties for single family homes and in Windham, Middlesex and New Haven Counties for condominiums. New deposits for rented properties rose 2.2%. However, Connecticut's standing inventory of unsold homes rose from 4.6 months for single family homes in 2012Q4 to 5.4 months in 2013Q1, though this was down from the 7.3 months in 2012Q1. The standing inventory of unsold condominiums rose from 5.5 months in 2012Q4 to 7.4 months in 2013Q1. This was down from the 9.8 months of standing inventory for condominiums in 2012Q1. The report does note that the rise in the number of months of standing inventory of unsold single family home and condominiums in the first quarter compared to the fourth quarter is indicative of a typical spring market. A balanced market represents approximately 6 months of inventory⁵⁰.

Another indicator of the condition of the housing market is the median price. Prudential Connecticut Realty's report notes that median prices in Connecticut have stabilized as a result of a full year of consistent growth in deposits and closings. However, with each quarter of the year comes a slight variation in prices. Median prices for single family homes were higher by 1.1% in 2013Q1, compared to 2012Q1, but lower by 9.1% when compared to the fourth quarter of 2012. In 2013Q1, condominiums were 3.3% higher than in 2012Q1, but 5.8% lower than the fourth quarter. The report then notes that it is likely that stable prices will continue through this year given recent growth. This seems to be consistent with the house-price results of the CREUES survey discussed above.

A critical indicator of the condition of the housing market is the number of days, on average, that a house is on the market. The Prudential Connecticut report notes that the number of days on the market for a single family home has been above average in the last few years. However, the current 163 days has started to fall to a shorter amount of time.

⁵⁰ *ibid.*

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

By comparison, back in 2005, just before the housing bubble popped, the number of days on the market for a single family home was well below 100. By 2009, the number of days on market for single family home jumped to 143. Days on market for condominium homes remains higher by 3.2% over last year (2012Q1), also 163. In a balanced market the average number of days on market is 120 days⁵¹.

HOME BUILDING ACTIVITY AND CONNECTICUT'S HOUSING MARKET

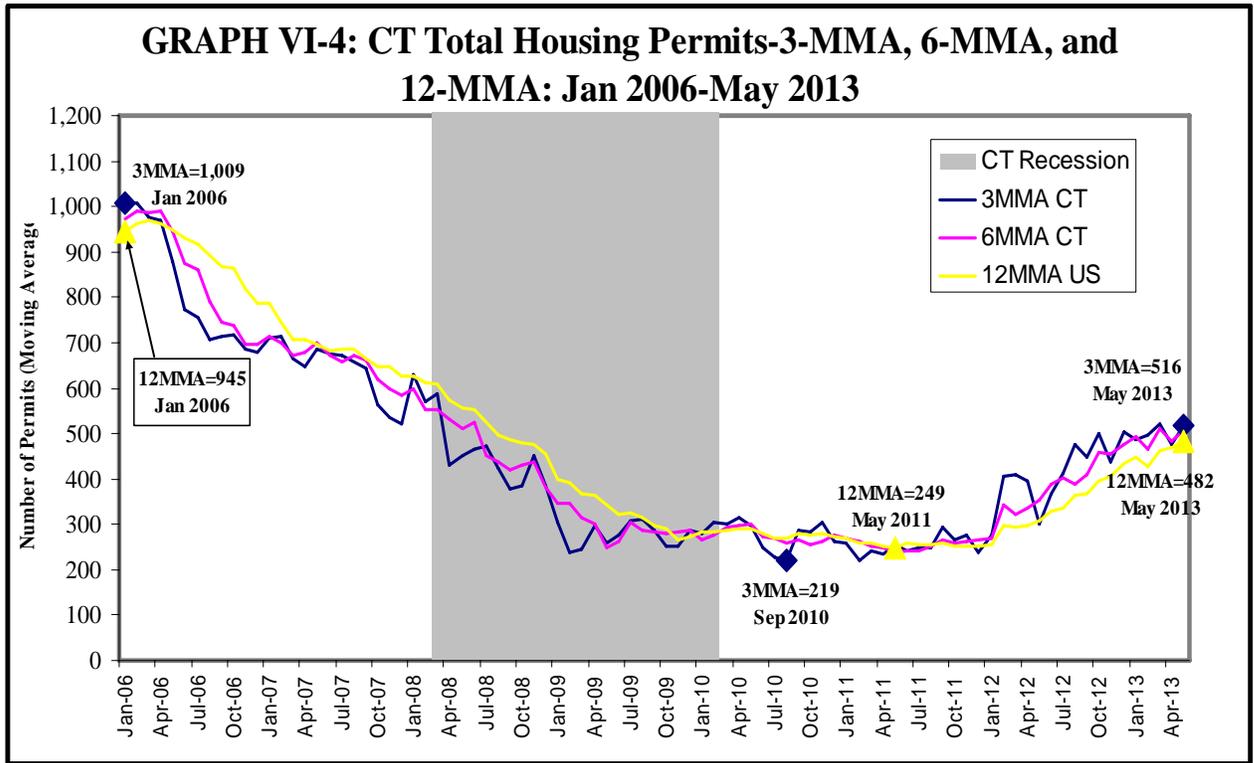
Another important indicator of the health of the housing market is home-building activity. Has the apparent halt in the slide of home prices spurred any home construction activity? Two indicators of homebuilding activity are Housing Permits and Housing Starts. Housing, or Building Permits authorize the construction of a structure in the near future, whereas, a Housing Start, records the actual beginning of the physical construction of a housing unit or units. Thus, just because a Building Permit is taken out that does not mean the actual construction of a housing unit, or units, will take place. With the distinction between these two indicators in mind, the following discussion tracks these two indicators to see what they may be telling us about Connecticut's housing market.

In order to filter out the noise in the data, Graph VI-4 presents the three-month moving average (3-MMA), 6-MMA, and the 12-MMA of Connecticut Total Housing Permits from January 2006 to the most current period of available data, at the time of writing, May 2013. The 3-MMA gives a smoothed short-term view of the behavior of the series, the 6-MMA then provides an intermediate-term view of where the more trend-influenced view may be going, with the 12-MMA providing the longer-term perspective with a much stronger influence of the trend.

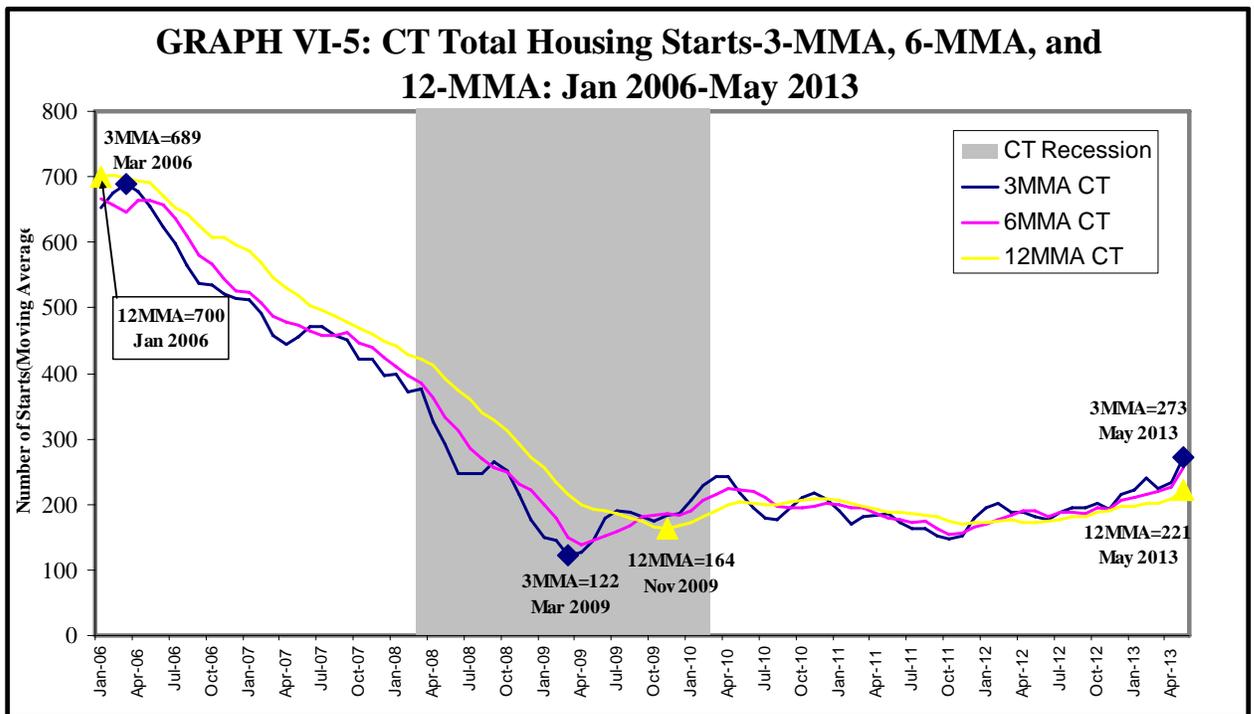
The peak of all three moving average series is close to the beginning of the data series in Graph VI-4, January 2006. It was in 2005 when Connecticut's existing home sales declined, and when permits also began to decline, with prices beginning to fall in 2006 as the housing bubble began to pop.

⁵¹ *ibid.*

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: FRBB-NEEI and Author's calculations.



SOURCE: FRBSStL-FRED and Author's calculations.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Focusing on the short-run, the 3-MMA and the long-run, the 12-MMA, the 3-MMA of Housing Permits peaked at 1,009 in January 2006, with the longer-term, trend, 12-MMA series also peaking in January 2006 at 945. From that on on, all three series fell. The 3-MMA of Permits bottomed at 219 in September 2010, representing a 78.30% decline over 56 months. The 12-MMA of Permits bottomed out in May 2011 at 249, a 73.65% decline over 64 months. Since hitting bottom, the 3-MMA in Total Housing Permits had recovered by 135.62%, over 32 months, to a level of 516 Permits by May 2013.

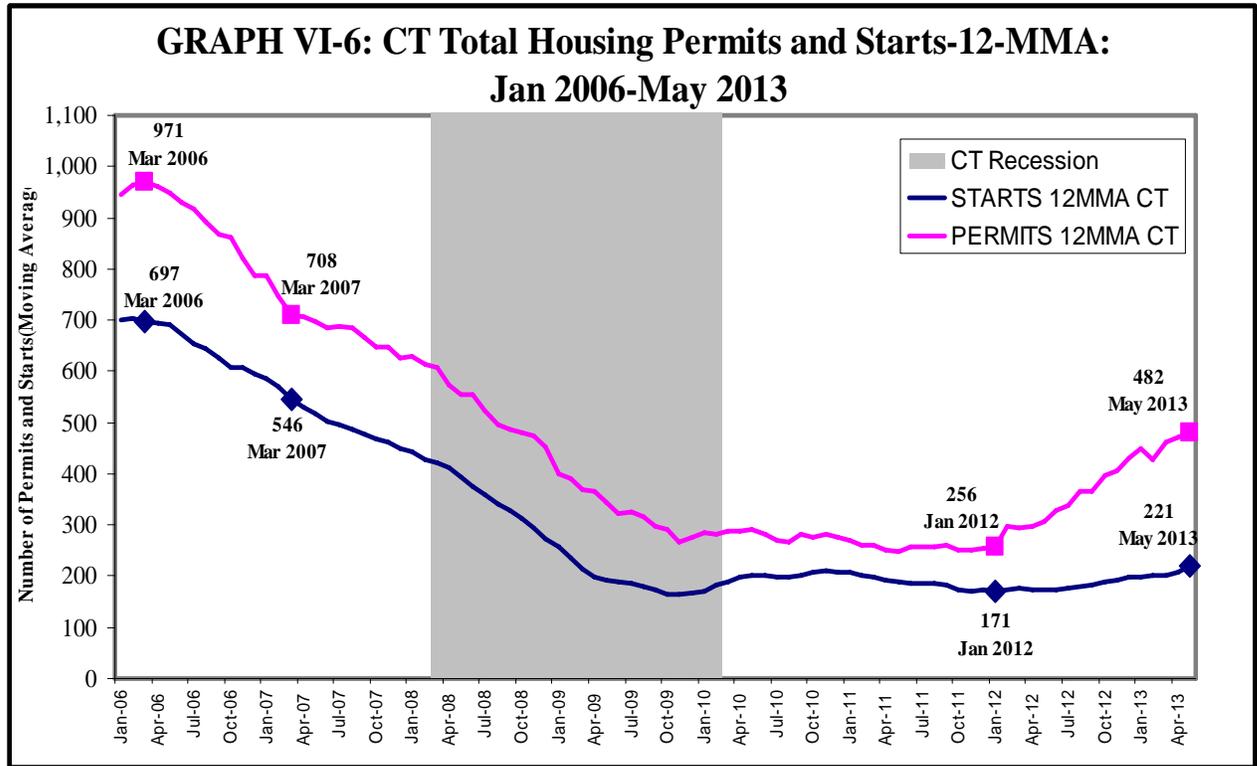
Meanwhile, the 12-MMA recovered to 482 Permits by May 2013, which represented a 93.57% increase over 24 months. Nevertheless, as of May 2013, this still left the 3-MMA in Permits 51.14% below its peak level in January 2006, and the 12-MMA in Permits 51.04% below its January 2006 peak level before the housing bust set in.

Turning to Graph VI-5 and Connecticut Housing Starts, the 3-MMA in Housing Starts peaked three months after the 3-MMA in Total Permits, in March 2006 at a level of 689 starts. As the decline in housing activity, in terms of Housing Starts, bottomed in March 2009, the 3-MMA of Starts hit its lowest level of 122, an 82.29% decline from the March 2006 peak over a 36-month period. Starts had a brief recovery in 2010 with the First-Time Homebuyers Program, but then the 3-MMA began falling again. By May 2013, the 3-MMA of Connecticut Housing Starts had recovered to a level of 273, a 123.77% increase, but at a level that was still only 39.62% its peak level in March 2006 (i.e., still 60.38% below its peak level). The 12-MMA of Housing Starts peaked in January 2006, at 700, and then declined for 46 months to a level of 164 in November 2009, a 76.57% decline. Again, there was a brief recovery of the 12-MMA in Housing Starts from the First-Time Homebuyers Program, followed by another decline. By May 2013, the 12-MMA in Housing Starts had recovered to a level of 221, a 34.76% increase over the 42 months since the bottom in November 2009. Nevertheless, the level of the 12-MMA of Housing Starts was still only 31.57% of the level in January 2006 (i.e., it was still 68.43% below its peak level).

But, what is the behavior of permits and starts telling us about the current condition of Connecticut's housing market in the first half of 2013? When graphing both on the same

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

graph, there is a noticeable difference in the growth of Connecticut's Total Housing Permits relative to Housing Starts.



SOURCE: FRBB-NEEI, FRBStL-FRED, and Author's calculations.

Graph VI-6 tracks the 12-MMA to filter out noise in the data and to get a sense of the longer-term behavior of Connecticut Total Housing Permits and Housing Starts. Note that from the peak of the housing bubble in 2006 to the beginning of 2012, the two series are pretty much moving in parallel, and the Permits Series remains consistently above the Starts Series. The gap between the two does tighten up coming out of the 2008-10 Recession/Crisis. There are two periods, in Graph VI-6, when the two series are not in parallel, the period of the housing bust, particularly from 2006 to 2007. Between March 2006 and March 2007, the 12-MMA of Permits fell by 263 or -27.09%, from a level of 971 to a level of 708. Over that same period, the 12-MMA of Housing Starts declined by 151, or by -21.66%, from 697 to 546. That is, for every one-unit fall in Housing Starts, there was a decline of 1.74 Permits. Thus, after the housing bubble popped, Housing Permits fell at a faster rate than Housing Starts.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Both Permits and Starts changed at similar rates until 2012. Then the growth in the two series significantly diverged. With the apparent turnaround in housing in 2012, Connecticut Housing Permits began growing at a much faster rate than Housing Starts. Referring back to Graph VI-6, between January 2012 and May 2013, the 12-MMA of Housing Permits increased from 256 to 482, an increase of 226, or +88.28%. Over the same period the 12-MMA of Housing Starts increased from 171 to 211, an increase of 50, or +29.24%. That is, for every one-unit increase in the 12-MMA of Housing Starts, there was a 4.52 increase in the 12-MMA of Housing Permits. Clearly, the growth in permits has been accelerating at a much faster pace than the growth in actual starts. Are expectations getting ahead of actual market conditions?

To explore this question, Graph VI-7 tracks the ratio of the 3-MMA of Permits to the 3-MMA of Housing Starts and the 12-MMA of Permits-to-Starts. Table VI-2 presents the descriptive statistics for the 3-MMA and 12-MMA of the Ratio of Housing Permits-to-Housing Starts. The calculations are based on the entire range of data, January 1988 to May 2013. The series in Graph VI-7 are restricted to the Post Housing-Bust Period: January 2006 to May 2013, the most recent period of available data at the time of writing.

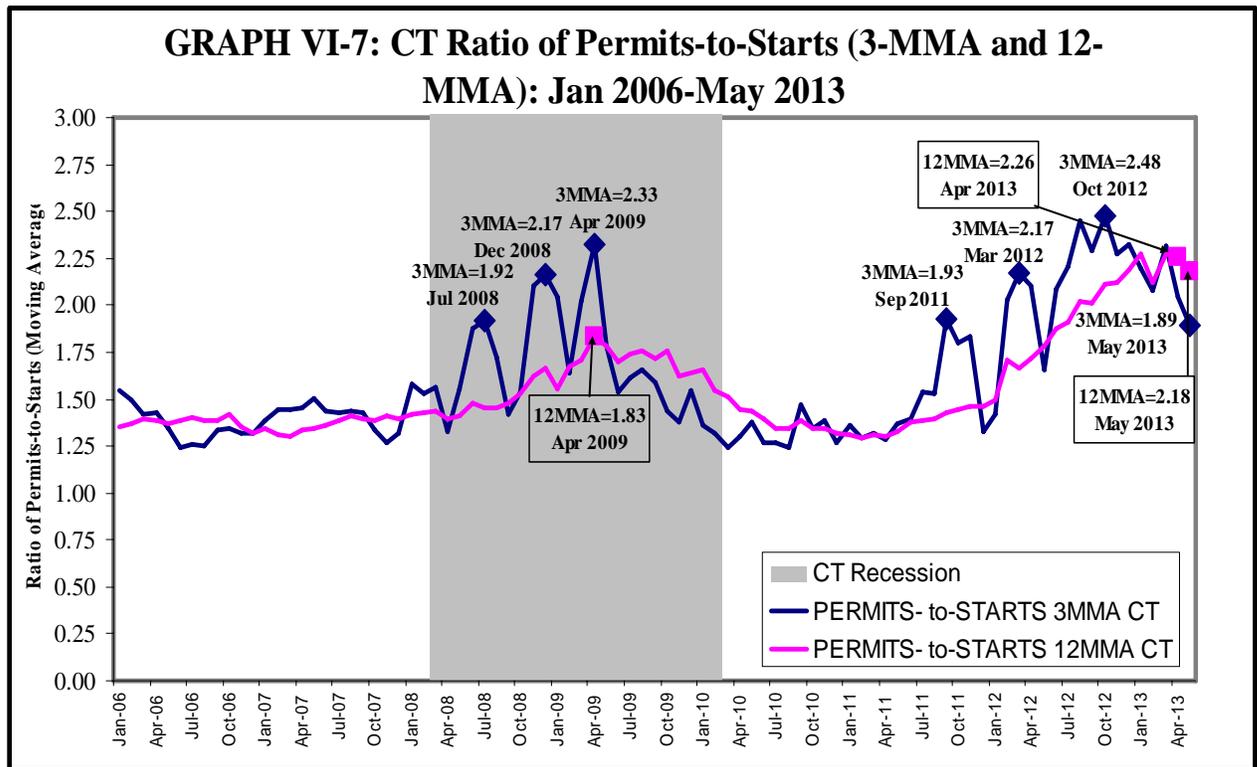
**TABLE VI-2: Descriptive Statistics for the 3-MMA and
12-MMA of the Ratio of Housing Permits-to-Housing Starts**

	3-MMA	12-MMA
MEAN	1.35	1.33
SD	0.28	0.22
CV	20.83	16.73

	- 3MMA	+ 3MMA
1SD	1.07	1.63
2SDS	0.79	1.92
3SDS	0.51	2.20

	- 12MMA	+ 12MMA
1SD	1.11	1.55
2SDS	0.88	1.77
3SDS	0.66	2.00

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: FRBB-NEEI, FRBStL-FRED, and Author's calculations.

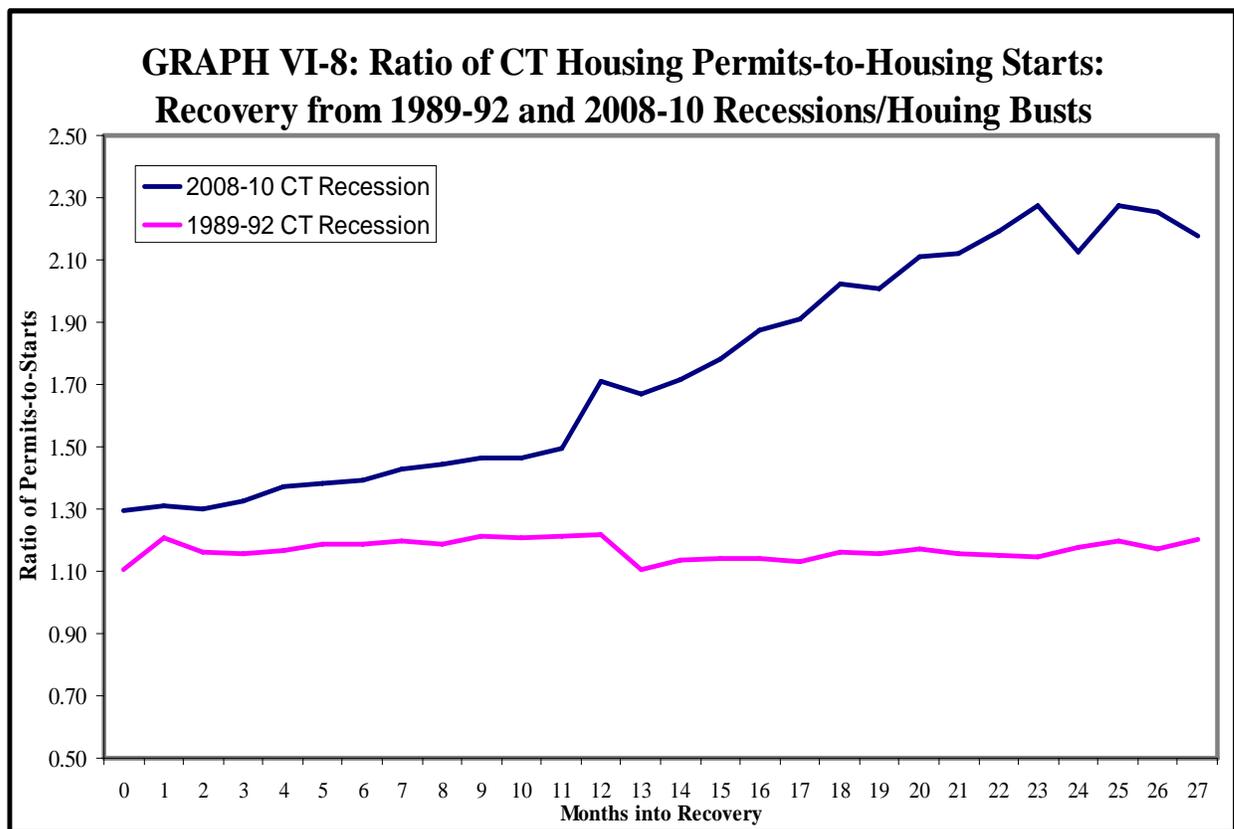
Note from Graph VI-7 that there are two periods of high volatility for the 3-MMA of the ratio of Total Housing Permits-to-Housing Starts: the period of recession/crisis (the gray-shaded region of the graph), and late 2011 on, particularly 2012 and 2013. Further, these are the only two periods in which the value of the 3-MMA of the ratio of Permits-to-Starts exceeds three standard deviations from the mean (see Table VI-2). That is, the 3-MMA of the ratio of Permits-to-Starts exceeds 2.20-to-1.00.

The 12-MMA of the ratio of Permits-to-Starts exceeded two standard deviations from the mean in April 2009, during the recession/crisis, but did not exceed three standard deviations from the mean until April and May 2013. From Chebychev's Theorem⁵² we

⁵² Chebyshev's Theorem states that no more than $1/k^2$ of the distribution's values can be more than k standard deviations away from the mean (or equivalently, at least $1 - 1/k^2$ of the distribution's values are within k standard deviations of the mean. Thus, for 3 Standard Deviations, $1 - 1/3^2 = 1 - 1/9 = 0.8889$, or at least, 88.9% of a distribution's values are within 3 SD's of the mean (or, at most 11.11% of the

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

know that, with even know what the underlying distribution is, that, at most, 11.11% of the observations lay beyond three standard deviations from the mean. So, these values can be considered “tail events”. What the behavior of the 3-MMA and 12-MMA of the ratio of Permits-to-Starts may be signaling is that Permits may be conveying an overly optimistic take on where the State’s housing market is going. It does appear that it has turned the proverbial corner, but the optimism should probably be more tempered than what the behavior of Permits suggests. Drawing comparisons to other Post World War II recoveries, and even Post Cold War recoveries, is difficult because this recession was accompanied by the bursting of the first nationwide housing bubble since 1926. The closest meaningful comparison may be with the aftermath of the bursting of the 1980’s New England, regional real estate bubble in 1989.



SOURCE: FRBB-NEEI, FRBStL-FRED, and Author’s calculations.

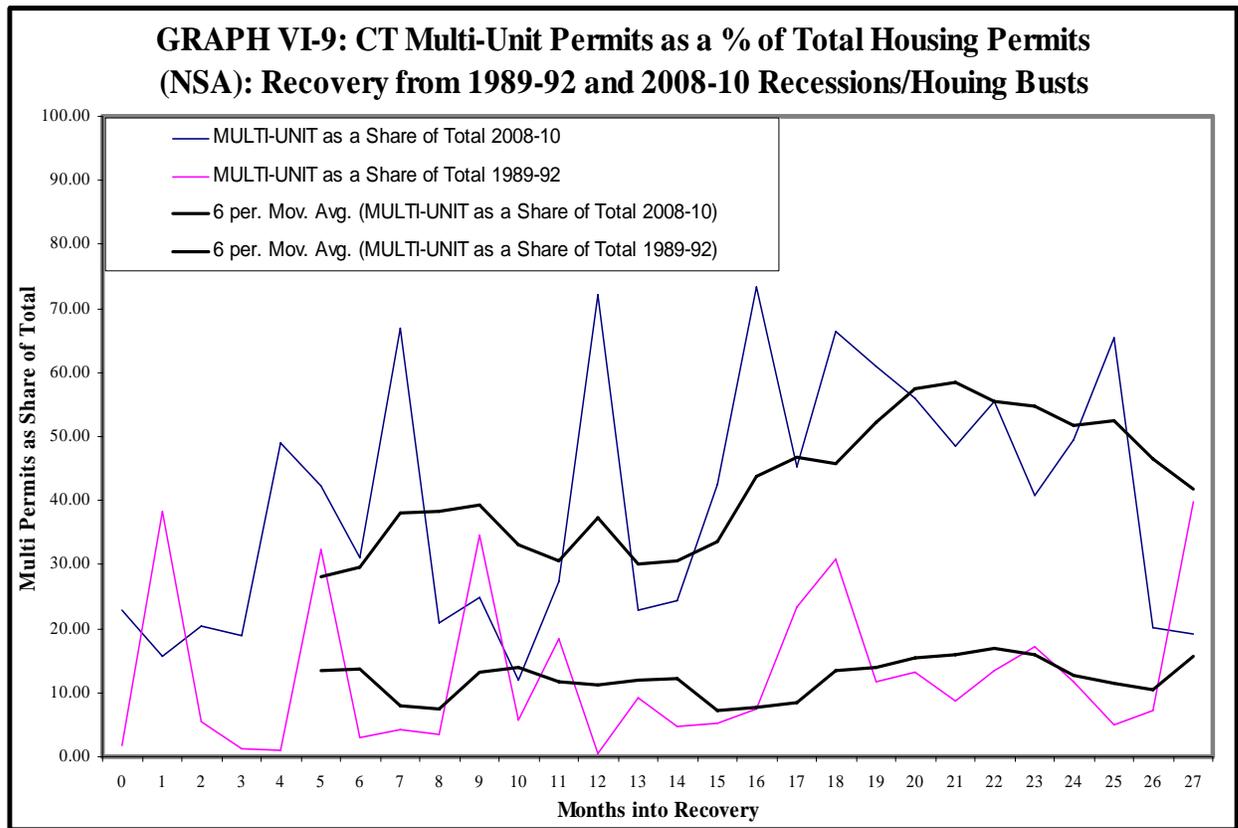
distribution’s values are beyond 3SD’s from the mean). And, this is without knowing what the distribution is..

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graph VI-8 compares the behavior of the 12-MMA of the Permits-to-Starts Ratio over the first 27 months of recovery from the 1989-92 Recession and the 2008-10 Recession. Both recoveries followed the bursting of real estate bubbles. But unlike the recovery after the 1989-92 Recession, in which the ratio of Permits-to-Starts pretty much remained flat, after 11 months into the current recovery, the ratio of Permits-to-Starts really accelerated. The ratio averaged 1.17 over the first 27 months of recovery from the 1989-92 Recession, but averaged 1.75 over the 27 months of the current recovery. The Coefficient of Variation ($CV = SD / \text{Mean} \times 100$) for the current recovery is 20.33, compared to 2.65 for the first 27 months of recovery after the 1989-92 Recession. The highest the 12-MMA of the Permits-to-Starts Ratio got over the first 27 months of the early 90's recovery was 1.22. Over the 27 months of the current recovery, the ratio has been above 2.00 over the last 10 months and hit a high of 2.27. Again, it is hard to judge the behavior of the ratio given the uniqueness of the current cycle, nevertheless, it appears that permits may be sending a less-than-reliable signal about just how strong the housing recovery actually is. However, there is one difference between the aftermath of the 1980's Housing Bust and the 2000's Housing Bust that may account for the difference.

During the recent housing bubble, home ownership grew rapidly, and, as a consequence, there was very little rental-unit construction activity. After the bust, many who lost their homes, and those who were forming new households were entering the rental market rather than the buyers' market. This, in turn, sparked a surge in permits for constructing multi-unit residential structures. Graph VI-9 compares the seasonally unadjusted monthly Multi-Unit Permits, as a share of Total Permits over the same periods depicted in Graph VI-8: Because of the noise in the data, in addition to the original monthly data, the 6-MMA is also presented. As is clear, the share of Multi-Unit Permits is much higher over the first 27 months of the current recovery, as compared to the first 27 months of the recovery, from the 1989-92, Recession/Regional Real Estate Bust. This may explain much if the behavior of the Ratio of Housing Permits-to-Housing Starts over the current recovery, compared to the recovery from the 1989-92 Recession, as depicted in Graph VI-8.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**



SOURCE: FRBB-NEEI and Author’s calculations.

SOME POSSIBLE IMPEDIMENTS TO CONNECTICUT’S HOUSING RECOVERY

As discussed in Chapter IV- IS HOUSING BACK? in Volume 1 of this outlook, there are some possible problems waiting in the wings that could derail the apparent turnaround in the housing market. Of particular concern is what is called the “shadow inventory”.

Apparently the concept of “shadow inventory” itself is controversial. According to Jay Rosen of Zillow, there is no such thing:

There is so much infighting within our industry about so-called "Shadow Inventory", the term often being used to describe properties being held by banks, poised to flood and ruin the real estate market. I have been arguing for

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

a year now that there is no "Shadow Inventory", and by that definition there isn't one⁵³.

On the other hand, KCM devotes an entire report to explaining to their clients what the shadow inventory is. They state in the INTRODUCTION that:

Over the past few years, the term "shadow inventory" has been making its way into the vocabulary of many real estate agents. In fact, the topic has become quite volatile, with agents from all over the country debating whether shadow inventory actually exists⁵⁴.

They then conclusively confirm that "shadow inventory" does, in fact, exist:

We're here to confirm that shadow inventory not only exists, but that it will also have an impact on all markets for quite some time⁵⁵.

They go on to define the *Shadow Inventory* as:

Shadow Inventory refers to the inventory of homes not yet for sale that will eventually come to market in the near future⁵⁶."

There are several reasons why there would be an inventory of homes not yet for sale but will eventually come on the market. One reason is what are known as Real Estate Owned (REO) assets on banks' balance sheets. Since regulators do not require banks to mark-to-market their REO assets on their balance sheets they carry the value of the house they obtained through foreclosure based on what the foreclosed homeowner paid for it. If a house were purchased during the housing bubble for \$500,000 then the bank would value that house as a REO asset of \$500,000 on its balance sheet, as a non-performing asset. But, if the bank were to allow the foreclosed homeowner to sell it in a short-sale, then that sale, on average would get the bank about one-third of the value for the house,

⁵³ Rosen, Jay, HELPING END THE CONTROVERSY OVER SHADOW INVENTORY! (January 23, 2013) ZILLOW < <http://www.zillow.com/advice-thread/HELPING-END-THE-CONTROVERSY-OVER-SHADOW-INVENTORY/479370/> > Accessed on July 3, 2013

⁵⁴ KPM, INTRODUCTION, GUIDE TO UNDERSTANDING SHADOW INVENTORY, p. 3.

⁵⁵ *ibid*, p. 3

⁵⁶ *ibid*, CHAPTER ONE, p. 5

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

or \$166,667. If the bank sells it through a foreclosure auction, it typically gets about one-quarter of the value for that type of sale, which for our example would be \$125,000. In many cases, rather than take these losses, the bank would rather hold on to the house. Some banks are now renting out these houses, but some are just holding on to them. And, in its June 2013 report, the National Association of Realtors (NAR), in addition to commercial banks and mortgage holders, Fannie Mae, Freddie Mac, and other Federal housing agencies as about 1.7 million borrowers have missed more than one payment on their government-backed mortgages⁵⁷.

Another source of shadow inventory is homeowners who are either literally underwater, or effectively underwater. *LPS Mortgage Monitor*⁵⁸ reports monthly the number of mortgage holders with **Negative Equity** (owe more on their mortgage than their house is worth), and those with **Effective Negative Equity**. Those who are not technically underwater but either do not have 20% equity in their homes, or would not be able to come up with the fees and commissions required to sell their houses.

So, assuming that the shadow inventory does, in fact, exist, how might it effect Connecticut's housing recovery? The answer may lie in the 2013Q1 report by Prudential Connecticut Realty and cited above. Connecticut's standing inventory of unsold homes rose from 4.6 months for single family homes in 2012Q4 to 5.4 months in 2013Q1, though this was down from the 7.3 months in 2012Q1. And, in fact, not just for 2013Q1, but for the first half of this year, the number of Connecticut homes with foreclosure filings jumped nearly 39% compared with the same period a year ago, even as there was a decline of 19% for the nation as a whole⁵⁹ This is the result of the Robo-Foreclosure scandal in which the nation's largest lenders signed off on foreclosure documents without

⁵⁷ Realtor Mag, *It's Not Over: Report Warns Shadow Inventory Threat Remains* (June 03, 2013) National Association of Home Builders <<http://realtormag.realtor.org/daily-news/2013/06/03/its-not-over-report-warns-shadow-inventory-threat-remains>> Accessed on July 1, 2013

⁵⁸ LPS, MORTGAGE MONITOR <<http://www.lpsvcs.com/LPSCorporateInformation/CommunicationCenter/DataReports/Pages/Mortgage-Monitor.aspx>> Accessed on July 5, 2013)

⁵⁹Gosselin, Kenneth R, *Connecticut Homes With Foreclosure Filings Rose In First Half Of 2013* (July 11, 2013) HARTFORD COURANT <<http://courantblogs.com/ct-real-estate/connecticut-homes-with-foreclosure-filings-rose-in-first-half-of-2013/>> Accessed on July 12, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

verifying their accuracy. A wide-ranging investigation by state and federal officials has resulted in settlements in the tens of billions⁶⁰.

The majority of Connecticut properties with active filings, 73% of them were on loans originated between 2004 and 2008, the period of the housing-market bubble characterized by loose lending standards and some predatory loans⁶¹. As a consequence, Connecticut's foreclosure inventory is 4.1% of total homes with a mortgage, the fifth highest in the nation (see Table VI-3).

TABLE VI-3: Inventory of Foreclosures as a Percent of Total Homes with a Mortgage: Top Five States in May 2013

STATE	FORECLOSURE INVENTORY
Florida	8.8%
New Jersey	6.0%
New York	4.8%
Maine	4.1%
Connecticut	4.1%

SOURCE: CoreLogic (July 9, 2013)

In addition to inventory of foreclosures, Connecticut also ranks high for the percentage of homeowners who are delinquent on their mortgages. In 2012, the Mortgage Bankers Association National Delinquency Survey reported that the percentage of homeowners who are seriously delinquent in Connecticut was on average at 8.1%, compared to 7.1% for the U.S., and ranking the State as the 8th highest among all 50 states for the percentage of seriously delinquent loans⁶². Thus, the shadow inventory has the potential to, if not short-circuit, at least make Connecticut's housing comeback a bumpier road than it otherwise might be.

⁶⁰ *ibid.*

⁶¹ *ibid.*

⁶² Sun, Kolie, *State's 2012 Housing Market in Review* (July 2012) THE CONNECTICUT ECONOMIC DIGEST, Connecticut Department of Labor and Connecticut Department of Economic and Community Development, p. 2

HAS HOUSING LOST ITS PUNCH?

But, even if housing is turning around, the latest research indicates that it might not serve as the spending platform that it has in previous Post World War II recoveries. This diminished role for housing equity as a driver of consumer spending is a result of the residual damage done by the bursting of the housing bubble. And, it certainly will not provide the boost to consumer spending that it did over the recent bubble period, which was a significant contributor to the 2001-07 Expansion. Case, Quigley, and Shiller (2012)⁶³, in an update of their 2000 study of the effects of housing and financial wealth on consumer spending, found that their new research reinforced, and even strengthened, their original conclusions that changes in housing wealth have a much bigger impact on consumer spending.

Further, unlike the previous expansion, homeowners are not using their properties as ATM machines to boost spending and they are increasingly paying down the principal and shortening the maturities of their mortgages. In fact, “*Cash-In*” refinancings (borrowers invest more of their own money in the house), outnumbered *Cash-Outs* by more than two-to- one in the fourth quarter, according to Freddie Mac⁶⁴. In addition, the Wealth Effect is much smaller, according to recent research by Sufi (2013)⁶⁵. Because of the residual effects of the housing bubble-bust, each dollar increase in housing wealth may yield as little as an extra cent in spending. That compares with a 3-to-5-cent estimate by economists prior to the recession⁶⁶.

⁶³. Case, Karl E, John M. Quigley, and Robert J. Shiller, WEALTH EFFECTS REVISITED 1975-2012 (December 2012) Cowles Foundation, Yale University: New Haven

⁶⁴ Miller, Rich, *Diminished Housing Wealth Effect Keeps Pressure on Fed* (May 5, 2013) BLOOMBERG.COM < <http://www.bloomberg.com/news/2013-05-05/diminished-housing-wealth-effect-keeps-pressure-on-fed.html> > Accessed on May 9, 2013.

⁶⁵ Sufi, Amir, *Will Housing Save the U.S. Economy?* (April 2013) UNIVERSITY OF Chicago: Booth School of Business

⁶⁶ *ibid*

**PART 3: WHERE IS THE
STATE'S ECONOMY GOING IN
2013 AND 2014?**

VII. WHERE DO WE GO FROM HERE? The Outlook for 2012Q4-2014Q4

The questions posed in the introduction to this outlook were: Is the recovery picking up: an Inflection Point? Are we heading toward recession: a Turning Point? Or, is this a continuation of the “fits-and-starts” pattern of this recovery: bursts of strong growth followed by weakening growth, which is then followed by another burst of growth?

It was especially Chapter V- CURRENT ECONOMIC CONDITIONS: Spring 2013 that attempted to identify where the Connecticut Economy might be as we complete the first half of 2013. And, it appears that, though the economy is struggling to gain strength, it is still fragile enough that periodic setbacks can endanger the recovery. Though the housing market appears to be recovering, there are some possible short-circuits that could abruptly end it: the shadow inventory, and based on research cited in Chapter VI. HAS CONNECTICUT’S HOUSING MARKET TURNED THE CORNER?, the wealth effect from increased housing values may only be a fraction of what it was before the housing bust. Further, markets are easily spooked. This was apparent when Bernanke announced that if economy data improved, then by the middle of 2014 the Fed might end its current policy of purchasing Mortgage-Backed Securities (MBS) and other assets in its QE3 program⁶⁷ The news of the Fed’s possibly ending its deflation-fighting policy sent the markets reeling. In fact, Bernanke only stated what has been the Fed’s policy, all along. Nervousness over China’s Economy and Europe’s on-going depression (in the periphery) has kept markets worried about the World Economy’s prospects, and, in fact, the IMF has lowered its World Economic Outlook in its July 2013 update⁶⁸.

⁶⁷ Robb, Greg, Bernanke: ‘Step down’ in QE could come soon (May 22,2013) MARKETWATCH < <http://www.marketwatch.com/story/bernanke-premature-tightening-could-end-growth-2013-05-22> > Accessed on July 3, 2013)

⁶⁸ International Monetary Fund, World Economic Outlook-UPDATE (July 9, 2013)<<http://www.imf.org/external/pubs/ft/weo/2013/update/02/> > Accessed on July 12, 2013. Also see IMF, *Emerging Market Slowdown Adds to Global Economy Pains* <<http://www.imf.org/external/pubs/ft/survey/so/2013/NEW070913A.htm> > Accessed on July 12, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Nevertheless, auto sales are strong⁶⁹, the housing market seems to be, at least, back from the bottom, and the U.S. jobs report for June 2013, though not spectacular, was certainly above expectations⁷⁰. So, in answer to the question posed in Chapter I-INTRODUCTION, and restated above, the employment outlook for Connecticut for 2012-14 is expecting, as the baseline forecast, basically more of the same: a recovery proceeding in fits-and-starts, but a strong likelihood that it can be sent back into recession. Particularly, since lurking in the background, which was clearly brought-to-the-fore by the markets' reaction to Bernanke's statement, is the underlying fear that deflation will set in. This coupled with the realization that any possibility for a fiscal stimulus bill to get through the current Congress is virtually zero, and that any change in Congress with the 2014 elections will not be reflected until after January 2015, implies that any dramatic change in the current trajectory of the economy, save being knocked back into recession, seems highly unlikely.

With the above introduction, the remainder of this chapter presents the industry-employment outlook for Connecticut over the current forecast horizon: 2012 to 2014. The next section sets the Base Line for the forecast. This is followed by the presentation of the Forecast for 2012-14, and then closes with the Risks to the Forecast, with subsequent discussions of two highlighted considerations with regard to the risks: Sequestration and the State Budget.

THE BASE PERIOD: Current Recovery (2010Q4-2012Q4)

Having set the economic context for this round of Connecticut's Short-Term Industry-Employment Forecasts in the previous chapters of this outlook, this section now turns to framing the base period for the 2012Q4-2012Q4 Forecasts. Every forecast has a **Base Period**, which is .the period that acts as a benchmark (i.e., a frame of reference). It is the reference period that is used as the comparison period to gauge the changes in the forecasted variables (in this case, employment), over the forecast horizon. Since the

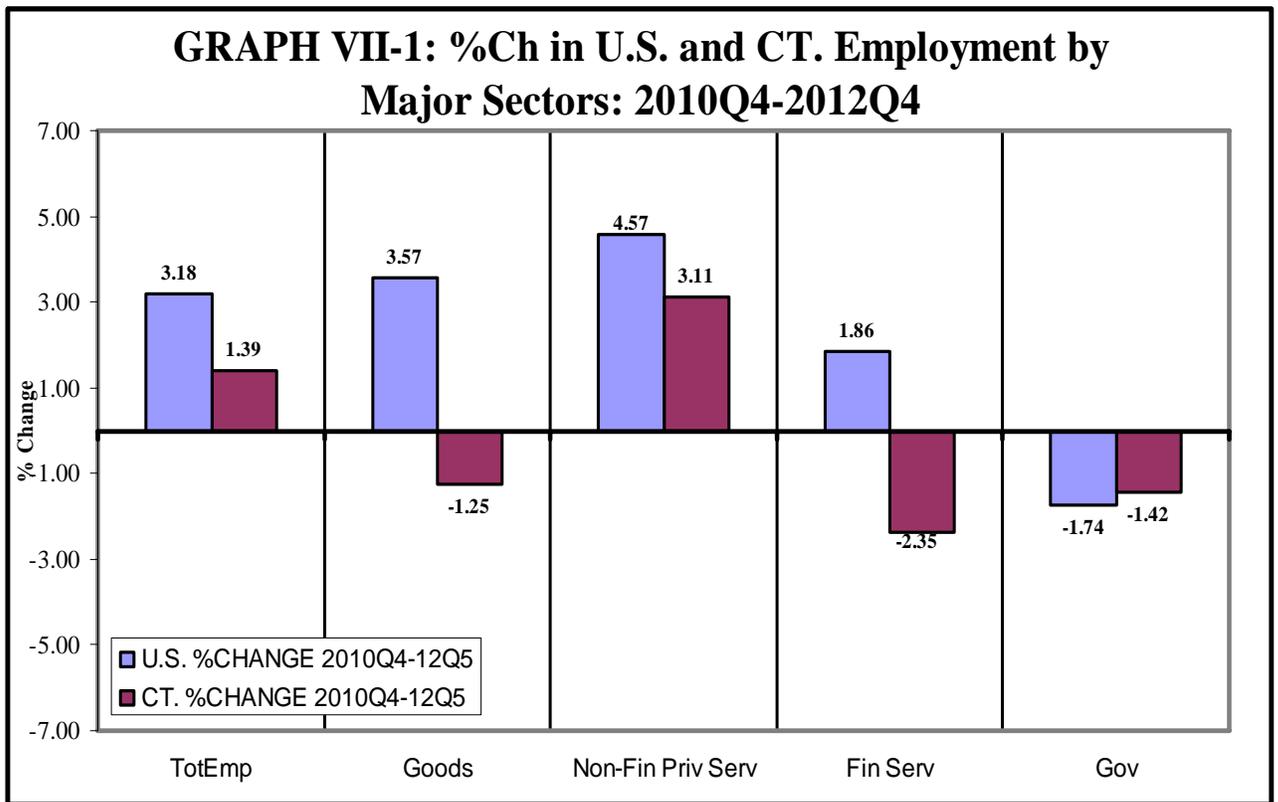
⁶⁹ Lorio, Joe, *June 2013 Auto Sales* (July 5, 2013) AUTOMOBILE MAG < http://www.automobilemag.com/features/news/1307_june_2013_auto_sales/viewall.html > Accessed on July 10, 2013)

⁷⁰ U.S. Bureau of Labor Statistics THE EMPLOYMENT SITUATION —JUNE 2013 (July 5, 2013) U.S. Department of Labor

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Forecast Period is the eight quarters between 20012Q4 and 2014Q4, the Base Period is the preceding eight-quarter period: 2010Q4 to 2012Q4. The discussion now turns to the performance of Connecticut’s labor markets over the base period for the current forecast, which coincides with the current recovery: 2010Q4 to 2012Q4.

Graph VII-1 presents the growth-rates in Total Non-Farm (NF) jobs and by four major sectors of the economy for the U.S. and Connecticut over the 2010Q4-2012Q4 current recovery/base period. The left-most bars present the U.S. and Connecticut growth-rates in Total Non-Farm Employment. As noted in the introduction, Connecticut’s strong-job growth the first four quarters of this recovery waned over the next eight quarters (see Graph I-1), and this is reflected in Graph VII-1.



SOURCE: CTDOL-Research and Author’s calculations.

For the entire eight-quarter period, U.S. NF Employment grew by 3.18%, while Connecticut’s NF jobs grew by only 1.39%. A clue to this outcome is found in the bars

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

for the four major sectors. While the U.S. had positive growth in three of the four major sectors between 2010Q4 and 2012Q4, depicted in Graph VI-1, Connecticut's NF Employment *declined* in three of the four major sectors. It should be noted that one of Connecticut's major sectors, Financial Services, may not have declined as steeply as it appears. There were some NAICS-code reclassifications that were responsible for some of the negative growth, but as noted previously, there were very real losses in Insurance and Securities, Commodities, Brokers. However, that is not the case for the Goods Producing and Government sectors. While the U.S. Goods Producing Sector grew by 3.57%, Connecticut Goods-Sector jobs contracted by 1.25%. The U.S. has had job-growth in both the Construction and Manufacturing sectors as a result of increased activity in housing and the renaissance on the auto industry. Employment in the U.S. Transport Equipment industry in Manufacturing increased by 9.44% between 2010Q4 and 2012Q4, Connecticut's Transport Equipment jobs contracted by 0.98%. This, of course reflects Connecticut's Transport Equipment concentration in aircraft and shipbuilding as opposed to motor vehicle production. Connecticut did have big gains in Wood Products (+20.24%) and Primary Metals (+13.17%). Overall, there is a low correlation between U.S. and Connecticut job-growth in Durable Goods ($r = +0.13$) over the 2010Q4-2012Q4 recovery/base period. Connecticut's job-losses were heavy in Non-Durable Goods, and the correlation with U.S. job-growth is negative ($r = -0.26$). Connecticut's Construction Sector added 1,296 jobs over the base period. The two large contributors in 2010 and 2011 were Residential Building Construction and Specialty Trades, but both industries began shedding jobs in 2012. Thus, it is Manufacturing that accounts for Connecticut's negative job growth in the Goods Production Sector over the base period.

Connecticut's job-decline in Government Employment (-1.42) was not as steep as the contraction in U.S. Government Employment (-1.74%). Nationally, 61% of the 402,700 Government jobs lost between 2010Q4 and 2012Q4 were in Local Government. However, for Connecticut, 2,900, or 97%, of the 3,000 lost Government jobs were in Local Government. For Connecticut, the significant presence of the tribal nations and the lack of county government, which are both classified as Local Government, may account

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

for the State's higher contribution of the Local Government Sector to overall job losses. Nationally, the large contribution to Government job losses by the Local Government Sector is largely due to Local Education, which shed 197,200 jobs over the base period (2010Q4-2012Q4), or 49% of Government job losses. Local public safety jobs have also accounted for a significant number of losses.

Turning to the Private, Non-Financial Services Sector, Connecticut's only major sector that added jobs between 2010Q4 and 2012Q4, the U.S. still grew more strongly (+4.57%) compared to Connecticut (+3.11%). Connecticut's Private, Non-Financial Services Sector added 32,086 jobs over the 2010Q4-2012Q4 base period. Nearly 8,000 jobs, or one-quarter those added were in the demographic, trend-driven growth in the Health Care and Social Assistance (HCSA) Sector. Another 21%, or 6,782 added jobs came from the Accommodation and Food Services Sector, especially the Food Services and Drinking Places Industry within this sector. Connecticut's growth follows that of the national trend. Between December 2010 and December 2012, employment in the U.S. Food Services and Drinking Places Sub-Sector grew by 6.79%, and sales increased by 15.44%⁷¹. Over this same period, employment in Connecticut's Food and Drinking Sector grew by 6.26%. The correlation between job-growth, in Connecticut's Retail and Food and Drinking sectors, and their U.S. counterparts, over the base period, is very high ($r = +0.63$). It is highest for Consumer Durables ($r = +0.78$). The correlation for Consumer Non-Durables is slightly lower ($r = +0.58$). However, though Connecticut's job-growth in Consumer Non-Durables and Food and Drinking Places is positively correlated with U.S. job-growth, it appears that Connecticut's sectors are growing at a slightly lower rate.

Administration, Support, and Waste Management (Admin-Support) contributed 5,228 jobs, or 16.29%, to the growth in Private Non-Financial Services employment.

Accounting for a large share of the growth in Admin-Support is Employment Services, which accounted for 53.27% of all the growth in Admin-Support in December 2012, and it accounted for nearly 39% of all job growth in this sector between December 2010 and

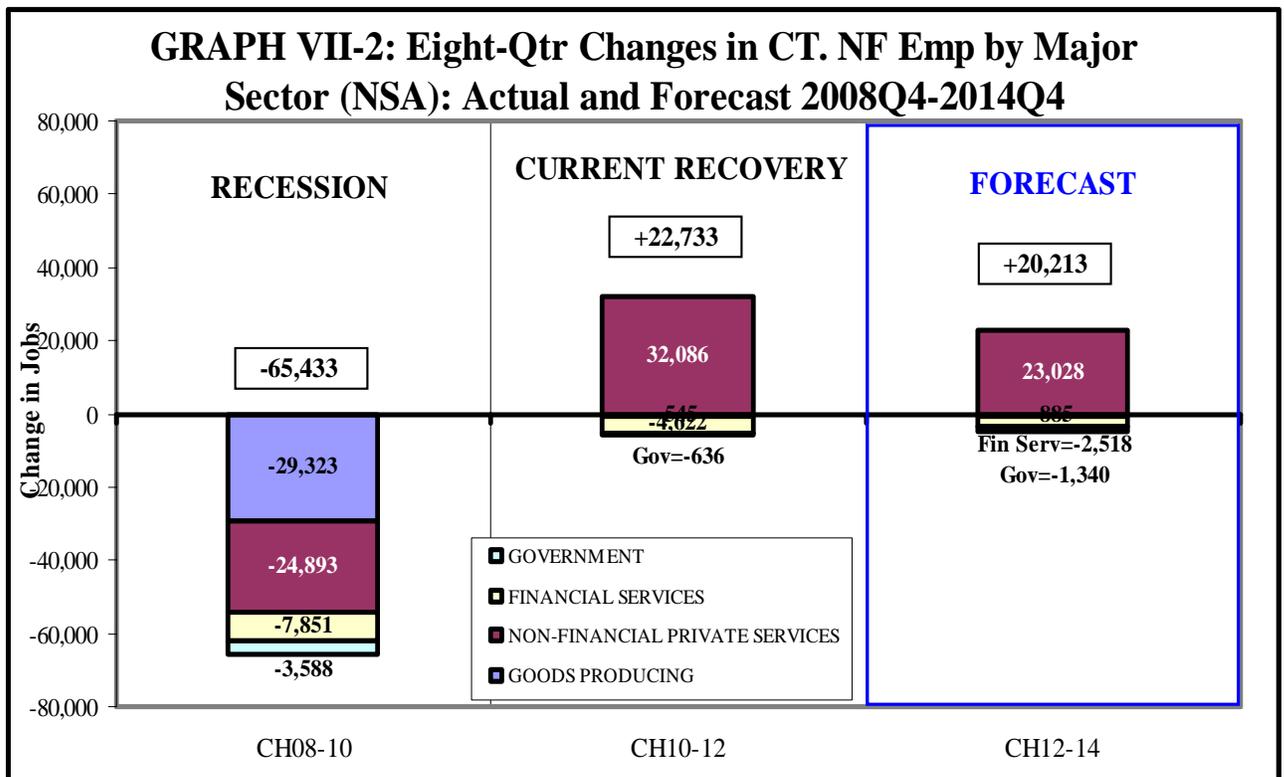
⁷¹ U.S. Bureau of the Census, RETAIL SALES

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

December 2012. This is also consistent with national trends as the use of temporary workers has been on the rise for the last couple of decades. Temporary workers, at 1.97% of the labor force, close to the record of 2.03% set in April 2000⁷².

THE OUTLOOK FOR 2012-2014: 4th Qtr-to-4th Qtr Forecasts

The outlook for the forecast horizon, 2012Q4 to 2014Q4, assumes that the Sequester (discussed below), will be a drag on the U.S. and Connecticut economies in 2013. It is expected that there will be somewhat of a rebound in growth in 2014. Thus, the forecast assumes stronger growth in 2014 than in 2013. First, the fourth-quarter-to-fourth-quarter (4th Qtr-to-4th Qtr) forecasts are presented then the major drivers and drags on the forecast will be assessed.



SOURCE: CT DOL-Research and Author's calculations.

⁷² Green, Jeff, *Temporary Workers Near U.S. Record Makes Kelly a Winner* (May 10, 2013) BLOOMBERG.COM < <http://www.bloomberg.com/news/2013-05-10/temporary-workers-near-u-s-record-makes-kelly-a-winner.html> > Accessed on May 10, 2013.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Graph VII-2 summarizes the eight-quarter changes in Connecticut Employment for the 2008Q4-10Q4 recession period, the 2010Q4-12Q4 current recovery/base period, and the 2012Q4-14Q4 forecast horizon. Graph VII-2 also shows the contribution of the four major sectors to the change in jobs. Table VII-1 presents three historical periods, 2008Q4, 2010Q4, and 2012Q4, and the forecast period, 2014Q4. Thee eight-quarter changes, and percent-changes in jobs corresponding to the three periods depicted in Graph VII-2, the Recession Period, the Base Period, and the Forecast Period, are presented for the 19 Non-Agricultural NAICS, two-digit sectors.

Over the 2008Q4-to-2010Q4 recession period, 80% of Connecticut's job losses were in the Goods Producing and Non-Financial Private Services sectors. The only sector making a positive contribution to job-growth over the recovery/base period is Non-Financial Private Services. The remaining three major sectors all subtracted jobs between 2010Q4 and 2012Q4. This pattern is expected to continue over the forecast period. The forecast projects that Non-Financial Services will, once again be the only major sector to add jobs between 2012Q4 and 2014Q4. Nevertheless, job-growth in this sector is expected to decelerate slightly, resulting in a modest slowing of total job-growth from 22,733 jobs over the 2010Q4-2012Q4 base period to a more modest 20, 213 jobs between 2012Q4 and 2014Q4. This is largely due to an expected slowdown in growth in 2013 (discussed below), with somewhat of a bounce-back in job-growth in 2014. Between 2010Q4 and 2012Q4 Connecticut Employment grew by 1.39%, because of the expected 2013 slowdown, that growth is projected to decelerate to 1.22% over the 2012Q4-2014Q4 Forecast Period.

The principle driver of growth in the Private Non-Financial Services major sector, as was the case over the base period, is the demographic/trend-driven HCSA Sector. HCSA is expected to add 8,160 jobs between 2012Q4 and 2014Q4, and account for 35.44% of all the jobs added by the Non-Financial Private Services major sector (see Table VII-1). Admin-Support, driven by the expanded use of temporary workers, is projected to add 3,887 jobs and account for 16.88% of the growth in Non-Financial Private Services.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

TABLE VII-1: Connecticut Non-Agricultural Employment: History and Forecast

INDUSTRY	HISTORICAL			FORECAST	NUMERICAL CHANGES			PERCENT CHANGES		
	2008:Q4	2010:Q4	2012:Q4	2014:Q4	CH08-10	CH10-12	CH12-14	%CH08-10	%CH10-12	%CH12-14
TOTAL	1,700,100	1,634,667	1,657,400	1,677,613	-65,433	22,733	20,213	-3.85	1.39	1.22
GOODS PRODUCING.....	248,551	219,228	218,683	217,798	-29,323	-545	-885	-11.80	-0.25	-0.40
Mining.....	747	581	562	540	-166	-19	-22	-22.26	-3.27	-3.99
Construction.....	63,300	52,246	53,541	54,239	-11,055	1,296	698	-17.46	2.48	1.30
Manufacturing.....	184,503	166,401	164,580	163,019	-18,102	-1,822	-1,561	-9.81	-1.09	-0.95
SERVICE PROVIDING.....	1,437,437	1,401,105	1,427,933	1,447,103	-36,332	26,828	19,170	-2.53	1.91	1.34
Wholesale Trade.....	68,531	63,337	63,600	63,840	-5,195	263	240	-7.58	0.42	0.38
Retail Trade.....	190,245	184,656	187,884	189,831	-5,589	3,228	1,947	-2.94	1.75	1.04
Transportation and Warehousing.....	53,054	49,286	50,349	51,487	-3,769	1,063	1,138	-7.10	2.16	2.26
Utilities.....	6,875	6,341	5,886	5,255	-535	-454	-632	-7.78	-7.17	-10.73
Information.....	36,643	31,773	31,373	30,976	-4,870	-400	-397	-13.29	-1.26	-1.26
Finance and Insurance.....	121,969	115,244	111,026	108,978	-6,724	-4,218	-2,048	-5.51	-3.66	-1.84
Real Estate and Rental and Leasing.....	20,210	19,084	18,680	18,209	-1,126	-404	-470	-5.57	-2.12	-2.52
Professional, Scientific, and Technical Services....	91,574	86,759	89,652	91,652	-4,815	2,893	2,000	-5.26	3.33	2.23
Management of Companies and Enterprises.....	28,455	27,690	31,626	32,858	-766	3,937	1,232	-2.69	14.22	3.90
Admin and Support/Waste Manage/Remediation..	82,974	80,476	85,704	89,591	-2,498	5,228	3,887	-3.01	6.50	4.54
Educational Services.....	180,370	180,769	180,671	181,688	399	-98	1,017	0.22	-0.05	0.56
Health Care and Social Assistance.....	263,215	269,809	277,765	285,925	6,594	7,956	8,160	2.51	2.95	2.94
Arts, Entertainment, and Recreation.....	43,097	39,943	39,857	39,449	-3,154	-85	-408	-7.32	-0.21	-1.02
Accommodation and Food Services.....	112,158	112,074	118,856	122,570	-84	6,782	3,714	-0.07	6.05	3.12
Other Services.....	57,899	57,287	59,058	60,187	-613	1,772	1,129	-1.06	3.09	1.91
Government**.....	80,169	76,581	75,945	74,605	-3,588	-636	-1,340	-4.48	-0.83	-1.76

SOURCE: Connecticut Department of Labor, Office of Research NOTE: Data not seasonally adjusted

**State and local-government employment did not actually increase by 29,769 between 2007Q4 and 2009Q4. Reporting requirements changed, which caused a jump in jobs reported by the State and local governments.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

Continuing a pattern that began with the current recovery, driven by its Food Services and Drinking Places Sub-Sector, Accommodation and Food Services is expected to add 3,714 jobs over the forecast period and account for 16.13% of the job-growth in Private Non-Financial Services. Finally, Retail Trade and Professional and Technical Service together projected to account for 17% of the new jobs in the Private Non-Financial Services major sector (see Table VII-1).

As for the current recovery/base period, the principle drags on job-growth over the forecast period are expected to be the Goods Producing, Financial Services, and Government major sectors. As over the current recovery, the Manufacturing Sector is expected to decline, especially in Non-Durable Goods over the forecast period. This will be off-set by continued growth in Construction (although a principle driver, Residential Building Construction, began shedding jobs again in 2012). The net result will be the continued modest decline in Goods Producing jobs. Insurance is expected to continue to lose jobs over the forecast horizon. And, losses in Credit Intermediation should be mitigated somewhat as it was partly driven by reclassifications within the NAICS coding system. Securities, Commodities and Brokers had large losses in 2012, which should subside somewhat (see Table VII-1). The net result: the Financial Sector is expected to shed another 2,518 jobs between 2012Q4 and 2014Q4 (see Graph VII-2). Finally, the pattern of Government job-losses is expected to continue into the forecast period. Not only will Federal budget issues, including the Sequester, continue the reduction in Government Employment, not only Federal, but especially in Local Government Employment, both nationally and at the State level, and in particular, with Connecticut's budget situation, local aid to cities and towns may be cut with the new fiscal year's budget. The net result: the forecast expects Government job-losses to double to 1,340 over the 2012Q4-2014Q4 Forecast Period, compared to the base period.

RISKS TO THE FORECAST

There are both Positive and Negative risks to the forecast. Factors that result in employment growing faster than forecasted over the forecast horizon represent a *Positive Risk* to the forecast. *Negative Risks* are those factors that cause job-growth to fall below

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

what is forecasted. The risks to the forecast posed by the Sequester are discussed separately below.

The biggest Positive Risk to the forecast is housing. If the recovery has traction and provides a bigger boost to spending than anticipated, then the forecast will be too pessimistic. And, if the end of the Payroll Tax Holiday, and Sequester impacts do not have their expected drag on consumer spending, particularly, if the labor market continues to strengthen, then the forecast will be too pessimistic.

There are several Negative Risks to the forecast. Of course, if the ECRI is correct, then we are already in another recession. With the cumulative effects of the Sequester and the end of Payroll Tax Holiday, in conjunction with declining PI, noted above, the forecast could very well be overly optimistic. This could also be the case if the EU Crisis flares up again. Even without another flare-up, two of Connecticut's three largest export destinations are EU members France and Germany, both skirting recession.

SEQUESTER AND THE CONNECTICUT ECONOMY

Finally, a significant risk to the forecast is the Sequester, which was part of the *Budget Control Act of 2011* (BCA) and modified by *The American Taxpayer Relief Act of 2012* (the "Fiscal Cliff" deal). As was discussed in Chapter III-"SEQUESTRATION" AND CONNECTICUT'S ECONOMY, cuts in both, Defense and Non-Defense spending went into effect on March 1, 2013. Though the "Fiscal Cliff" deal reduced total amount of the cuts as originally required under the BCA, they are still substantial. The Fiscal Cliff deal reduced the level of the FY2013 Joint Committee Sequester to about \$85 billion, with estimated reductions of about \$42.7 billion each for both Defense and Non-Defense spending.

As cited in Chapter III, a study by Fuller (2012)⁷³ at George Mason University, the hit to Connecticut from the Sequester would be relatively significant. The State would account

⁷³. Fuller, Stephen S, *The Economic Impact of the Budget Control Act of 2011 on DOD and Non-DOD Agencies* (July 17, 2012) Center of Regional Analysis, George Mason University: Arlington, VA.

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

for 2% of total cuts nationally, while only accounting for 1.23% of all U.S. Non-Farm jobs in 2012. Connecticut's biggest exposure would be in the Defense job cuts where the State would account for 3.32% of defense-related job-cuts in FY 2013. Though the estimated levels were made before the Fiscal Cliff deal, it is assumed that the disproportionate shares of cuts would still hold.

However, for long-term, more strategic oriented programs, Connecticut will be minimally impacted according to the State's Office of Military Affairs. For instance the Navy's contract with General Dynamics for Ohio-class replacement subs will be little affected by Sequestration⁷⁴ However, the State may feel a short-term impact from the cuts particularly over the 2012-14 Forecast Horizon. Total Defense Department (DOD) purchases in Connecticut declined by \$2.190 billion in 2012⁷⁵. Over the forecast horizon years, 2013 and 2014, DOD purchases are projected to decline \$62 million in 2013, but then decline much more steeply by \$1.279 billion in 2014. Beyond the forecast horizon in 2015, DOD purchases in Connecticut are expected to begin to rise again⁷⁶. Thus, Connecticut's more strategic position in the defense procurement program should help in the long-run, but the State still may be subject to some cuts in the short-term, particularly over the forecast horizon.

THE STATE BUDGET AND THE CONNECTICUT ECONOMY

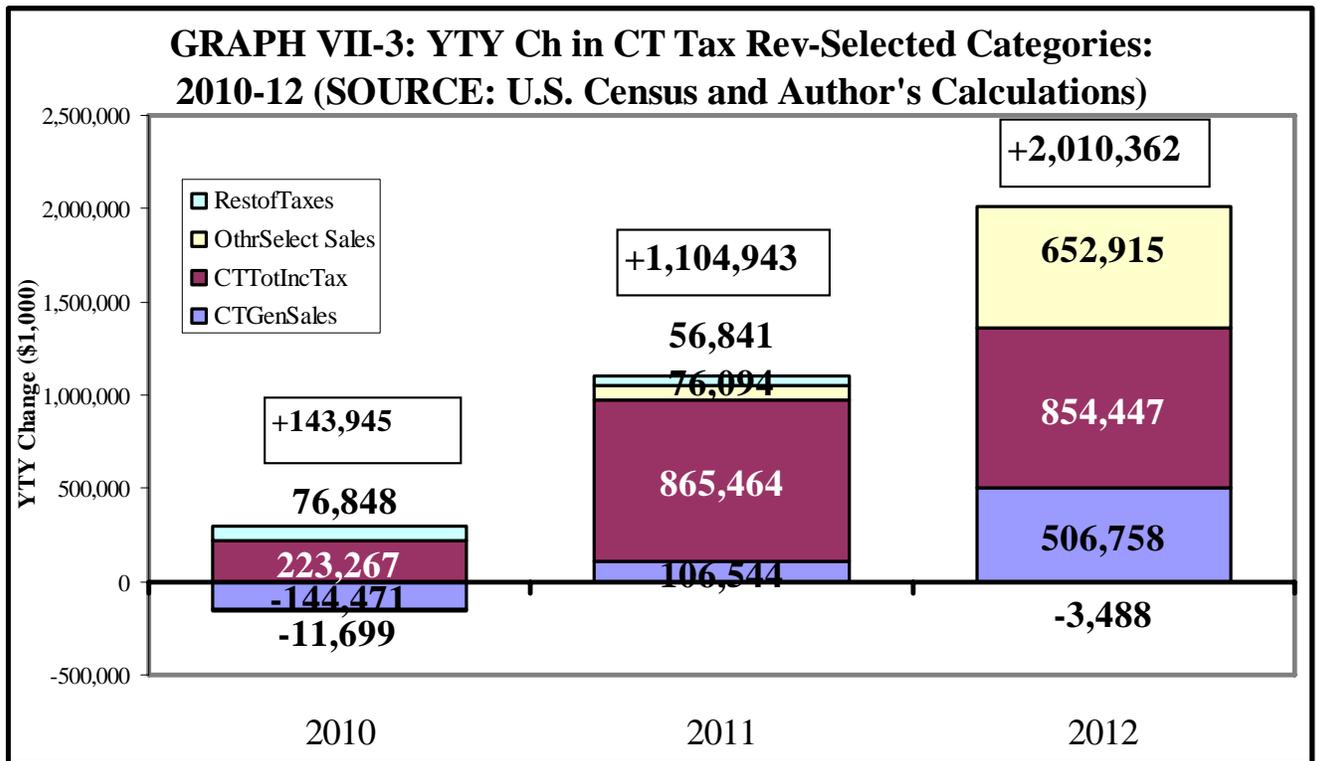
As presented in Graph VII-3, which covers the first three years of the current recovery, after being flat in 2010, Connecticut's total tax revenue grew by \$1.1 billion in 2011 and \$2.0 billion in 2012. And, in his September 2013 report on Connecticut's Budget, The Comptroller announced that Fiscal Year (FY) 2013 (i.e., June 30, 2013) will end with a surplus of approximately \$398.79 million⁷⁷. In his report, and letter to the Governor, Comptroller Lembo noted that:

⁷⁴ Osborn, Kris, *Sequestration Poses Minimal Threat To Ohio-class Replacement Subs* (April 9, 2013) Connecticut Office of Military Affairs < <http://www.ct.gov/oma/cwp/view.asp?a=3422&q=522578> Accessed on April 22, 2013.

⁷⁵ Ross, Robert T, ANNUAL REPORT 2011-2012, State of Connecticut, Office of Military Affairs, Figure 1, p. 8.

⁷⁶ *ibid.*

⁷⁷ Lembo, Kevin, COMPTROLLER LEMBO REPORTS \$398.79-MILLION SURPLUS FOR FISCAL YEAR 2013 (Tuesday, September 3, 2013) Office of the Comptroller, State of Connecticut



SOURCE: U.S. Census and Author's calculations.

“The state’s surplus should be a sign of cautious optimism for the future – a good outcome, but potentially the result of one-time revenue windfalls. The growth was largely driven by strong stock market performance and an increase in the federal capital gains tax rate that pushed future year gains into Fiscal Year 2013. The payroll component of the income tax, which accounts for 60 percent of the total income tax receipts, was down slightly from last year.”⁷⁸

As the Comptroller stated, the Income Tax was a large part of the surplus, and was the major contributor to the gains in total tax revenue in 2011 and 2012 depicted in Graph VII-3. However, as the Comptroller also noted, there were some one-time revenue windfalls that contributed to the surplus, specifically an Inheritance Tax windfall and a boost in Income Tax revenues driven by the bull stock market and the increase in the Federal Capital Gains Tax. As noted in the citation above, 60% of the Income Tax is the Payroll component, and that was down. So, this is a report of cautious optimism.

⁷⁸ *ibid*

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

A possible question mark with regard to the FY2014 budget projections concerns Medicaid. . Under former Gov. M. Jodi Rell, Connecticut became the first state to expand the Low-Income Adults Program portion of Medicaid, which previously had been solely funded by the state. In three years, enrollment in the program has doubled from 45,000 to more than 90,000⁷⁹. As a consequence, in his monthly letter to state Comptroller Kevin Lembo, Office of Policy and Management Secretary Ben Barnes said the 2014 budget the General Assembly passed in June is balanced, but he warned of future challenges. Specifically, two significant issues will require close monitoring over the coming months and may impact future expenditure projections:

1. Based on limited data year-to-date, expenditure trends in the Medicaid program appear to be on track to exceed projected levels.
2. Implementation of the *Affordable Care Act* in January could impact health care expenditures in the Department of Social Services and in other agencies, to the extent that actual costs deviate from projections used in constructing the budget,⁸⁰

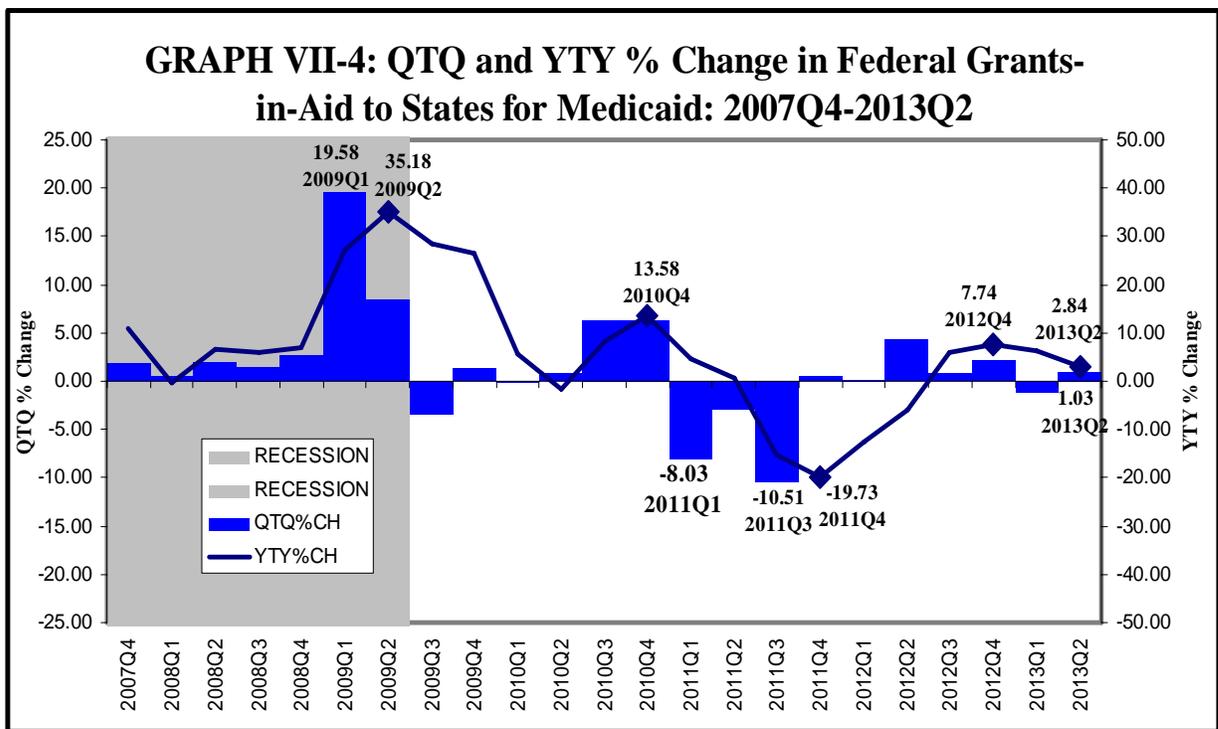
As depicted in Graph VII-4, Secretary Barnes's concerns seem to be borne out. The growth in Federal Grants-in-Aid to States for Medicaid peaked, on a Quarter-to-Quarter (QTQ) growth-rate basis in the first quarter of 2009 at +19.58%. The next quarter (2009Q2) the NBER-declared Trough of the recession, the Year-to-Year (YTY) growth-rate peaked at +35.18%. This was followed by flat-to-declining QTQ growth and decelerating YTY growth in Federal Grants-in-Aid to the states for Medicaid. The YTY growth-rate had a modest resurgence to 13.58% by 2010Q4. But, this was followed by steep reductions in Federal Grants-in-Aid for Medicaid in 2011. The QTQ growth-rate declined by the two steepest amounts (-8.03% in 2011Q1 and -10.51% in 2011Q3) in 2011, and by the fourth quarter, YTY, Medicaid grants were 19.73% below their levels of the previous year. There was a very modest rebound in the YTY growth-rate in 2012, peaking at +7.74% in 2012Q4. Since then, the YTY growth-rate has decelerated to +2.84% in 2013Q2 and after declining in the first quarter, QTQ, Medicaid grants grew

⁷⁹ Stuart, Christine, *Medicaid Program Leaves A Question Mark for 2014 Budget Projections* (August 20, 2013) CT NEWS JUNKIE < http://www.ctnewsjunkie.com/ctnj.php/archives/entry/medicaid_program_leaves_a_question_mark_in_budget_projections/ > Accessed on September 9, 2013.

⁸⁰ *ibid*

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

1.03% in 2013Q2. Clearly, the growth in Medicaid Grants-in-Aid to the states has been on a downward trajectory, and as the current recovery has been skewed toward the top income earners, and a large percentage of the new jobs have been lower-wage, at the very least, this implies the demand for Medicaid is not going to subside any time soon. This, in conjunction with the decline in Federal Grants-in-Aid to the states for Medicaid translates into additional pressures on states' budgets. One mitigating factor could be the Federal Government's picking up 100% of Medicaid costs for the first five years under the *Affordable Care Act*, but, how its implementation plays out remains to be seen.



SOURCE: U.S. BEA and Author's calculations.

The final set of factors that could impact the State's budget is the possible return of two more manufactured crises by extremists in the House of Representatives. The first would be a shutdown of the Government September 30th, the end of the Fiscal Year, over attaching an effort to defund the *Affordable Care Act* as a "poison pill" in the continuing resolution. The other would be to attempt the same poison-pill strategy over raising the Debt Ceiling in October, which would be part two of the clown show of Mid-2011. And,

**CURRENT CONDITIONS AND OUTLOOK FOR THE
U.S. AND CONNECTICUT ECONOMIES: 2012-2014**

throughout this whole new round of manufactured crises, and lurking in the background, is another slow-motion, manufactured crisis: Sequestration, which is proceeding along quietly doing its damage (see discussion above and in Chapter III).