Metropolitan Policy Program
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MetroMonitor

Tracking Economic Recession and Recovery in America's 100 Largest Metropolitan Areas

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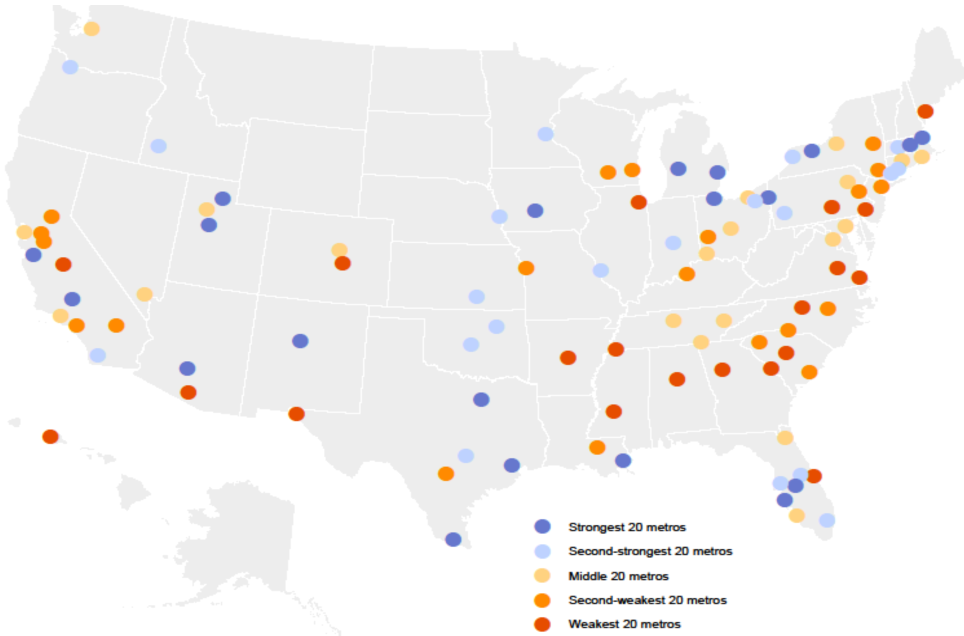
National economic indicators provide mixed signals about the future course of the painfully slow national economic recovery. The national unemployment rate in November dropped to 8.6 percent from October's 9 percent. However, only about half of this decline resulted from job growth; the rest occurred because people dropped out of the labor force. The economy gained more jobs in November than in October, but the number of jobs added in November was below the average monthly number added since the beginning of the year. During the third quarter of the year, GDP grew at its fastest rate since the end of 2010, but this rate, 2. percent, was revised downward from its previous estimate and was well below what is needed for a sustained economic recovery. Nationwide, house prices recovered from their recent lows but remained below their levels of a year ago. Manufacturing job growth slowed and government job losses accelerated.

Data for the nation's 100 largest metropolitan areas do not fully reflect the most recent national trends because most metropolitan economic indicators are available only through the third quarter of 2011 (ending in September). The metropolitan data through the third quarter show widespread but generally very slow growth in both jobs and economic output. Output growth accelerated during the third quarter in nearly all large metropolitan areas but job growth slowed in most. Unemployment rates, although lower than at the beginning of 2010 in most large metropolitan areas, remained very high. Housing markets began to improve, as most large metropolitan areas saw increases in house prices and declines in foreclosures during the quarter. Manufacturing employment continued to grow and remained an important contributor to economic recovery but this growth slowed and became less widespread during the third quarter. Government employment had an important impact on economic recovery. As always, metropolitan economic performance varied greatly among the 100 largest metropolitan areas. High technology and Great Lakes auto centers recovered strongly, while government and transportation/warehousing centers in the South generally lagged.

Recent comments by presidential candidates, news reports about Federal Reserve assistance to banks during the financial crisis, and protests by Occupy Wall Street and its allies have focused attention on the financial industries. This month's *MetroMonitor* examines recent job and wage growth in three major financial industries, comparing those industries to the economy as a whole in each of the 100 largest metropolitan areas. It finds that in most of the nation's 100 largest metropolitan areas these industries lost jobs more rapidly (or gained them more slowly) than the economy as a whole. However, financial industries differ as to whether their wages rose faster or more slowly than those in the economy as a whole.

Recovery Performance



The 20 strongest-performing metro areas		The 20 weakest-performing metro areas	
Albuquerque, NM	New Orleans, LA	Atlanta, GA	Honolulu, HI
Bakersfield, CA	North Port, FL,	Augusta, GA-SC	Jackson, MS
Boston, MA-NH	Ogden, UT	Birmingham, AL	Little Rock, AR
Dallas, TX	Phoenix, AZ	Chicago, IL-IN-WI	Memphis, TN-MS-AR
Des Moines, IA	Provo, UT	Colorado Springs, CO	Palm Bay, FL
Detroit, MI	Rochester, NY	Columbia, SC	Philadelphia, PA-NJ-DE-MD
Grand Rapids, MI	San Jose, CA	El Paso, TX	Portland, ME
Houston, TX	Toledo, OH	Fresno, CA	Richmond, VA
Lakeland, FL	Worcester, MA	Greensboro, NC	Tucson, AZ
McAllen, TX	Youngstown, OH-PA	Harrisburg, PA	Virginia Beach, VA

High technology centers and Great Lakes auto-producing areas are recovering strongly from the Great Recession. High technology centers are recovering strongly, in part because of the current upturn in the information technology industry. San Jose, Ogden, Provo (information technology centers), Worcester (which has a specialization in biotechnology), and Boston (a center for both information technology and biotechnology) are among the 20 strongest-recovering metropolitan areas, as is Rochester, which specializes in technologically cutting-edge manufacturing. Austin, Boise, Minneapolis, and San Diego are among the 40 areas that are recovering the fastest. (See the map above, which divides the 100 largest metropolitan areas into groups of 20 on the basis of the strength of their economic recoveries.)

Great Lakes metropolitan areas that specialize in the production of autos, auto parts, and related durable goods are also recovering strongly from the recession. Detroit, Grand Rapids, Toledo, and Youngstown are among the 20 metropolitan areas that have had the strongest economic recoveries, while Akron, Buffalo, and Indianapolis are among the 40 that have recovered most strongly. The recession hit many of these metropolitan areas very hard. Many remain far below their pre-recession levels of employment and output. Yet their economies have begun to turn around, in most cases because they have had strong growth in manufacturing activity during the past year.

Many Southern metropolitan areas that specialize in government or transportation/warehousing are having great difficulty recovering from the recession. Twelve of the 20 weakest-recovering metropolitan areas are in the South. These include government (including military) centers (Atlanta, Augusta, Columbia, El Paso, Jackson, Little Rock, Richmond, Virginia Beach) and transportation/warehousing hubs (Atlanta, Jackson, Little Rock, Memphis, Virginia Beach) as well as one metropolitan area that experienced a housing price collapse during and after the recession (Palm Bay). Some metropolitan areas outside the South that have strong specializations in government (Colorado Springs, Harrisburg, Honolulu), or transportation/warehousing (Chicago, Harrisburg) are also among the 20 weakest recoverers. Although most of the government centers on this list did not lose government jobs since the end of the recession, losses of transportation/warehousing jobs, accounted for much of the weakness in the economic recoveries of transportation/warehousing centers.

Texas metropolitan areas and areas hit hardest by the housing crisis exhibited mixed economic performance during the recovery, with some recovering very strongly and others recovering very weakly. Among Texas metropolitan areas, Dallas, Houston, and McAllen are among the 20 strongest-recovering metropolitan areas and Austin is also among the 40 metropolitan areas with the strongest recoveries. However, El Paso is among the 20 weakest-recovering areas and San Antonio is one of the 40 with the weakest recoveries.

The epicenters of the housing crisis are similarly split. Bakersfield, Lakeland, and Phoenix are among the 20 strongest performers in the recovery and Boise, Orlando, Miami, San Diego, and Tampa are among the top 40. On the other hand, Fresno, Palm Bay, and Tucson are among the 20 weakest recoveries and Los Angeles, Modesto, Riverside, Sacramento, and Stockton are among the bottom 40.

The metropolitan areas with the strongest economic recoveries generally gained government jobs, while those with the weakest recoveries generally lost them. Eleven of the 20 strongest-recovering metropolitan areas (Bakersfield, Boston, Dallas, Des Moines, Houston, McAllen, New Orleans, Provo, San Jose, Worcester, and Youngstown) gained government jobs (federal (including military), state, and local combined) in the time since their total employment bottomed out, while one (Lakeland) had no change in government employment. In contrast, 10 of the 20 metropolitan areas with the weakest economic recoveries (Birmingham, Chicago, Columbia, Colorado Springs, Harrisburg, Honolulu, Little Rock, Memphis, Philadelphia, and Portland (ME)) lost government jobs since their total employment hit bottom, while four (Atlanta, Fresno, Palm Bay, and Richmond) had no change in government employment.

The metropolitan areas with the strongest recoveries generally gained manufacturing jobs, while those with the weakest recoveries were equally split between those that gained manufacturing jobs and those that lost them. Twelve of the 20 strongest-recovering metropolitan areas (Bakersfield, Boston, Detroit, Grand Rapids, Houston, North Port, Ogden, Provo, San Jose, Toledo, Worcester, and Youngstown) gained manufacturing jobs since their total employment hit bottom, while manufacturing employment was unchanged in one (Lakeland). Of the 20 metropolitan areas with the weakest economic recoveries, eight gained manufacturing jobs since their total employment bottomed out (Augusta, Greensboro, Birmingham, Chicago, Columbia, Harrisburg, Tucson, and Portland (ME)), eight lost manufacturing jobs (El Paso, Jackson, Virginia Beach, Colorado Springs, Honolulu, Little Rock, Memphis, and Philadelphia), and the rest had no change in manufacturing employment.

The Recent Pace of Recovery

In the third quarter of 2011, most of the nation's 100 largest metropolitan areas continued to experience a very slow recovery of both employment and output. Slowdowns in the pace of employment recovery were more common than slowdowns in the rate of output recovery.

Sixty-three of the 100 largest metropolitan areas gained both jobs and output in the third quarter of 2011. Thirty-four large metropolitan areas gained output but lost jobs; there were concentrations of these in the Northeast and coastal South. Three (Cape Coral, New Orleans, and Tucson) lost output but gained jobs. No large metropolitan areas lost both jobs and output.

METROMONITOR: 3rd QUARTER 2011

The rate of output growth accelerated in 89 of the 100 largest metropolitan areas between the second and third quarters of 2011 but the rate of job growth increased in only 44 metropolitan areas. In 50 of the nation's largest metropolitan areas, metropolitan areas, including most of those in the New England, Texas, and the Intermountain West, output growth accelerated but job growth slowed between the second and third quarters of the year. In 39, including most Great Lakes metropolitan areas, both employment and output grew more rapidly in the third quarter than in the second quarter. Five metropolitan areas (Baltimore, Honolulu, Indianapolis, Louisville, and Minneapolis) saw accelerated employment growth but slowing output growth. Six metropolitan areas (Baton Rouge, Jacksonville, Las Vegas, New Orleans, New York and Omaha) had slowdowns of both job growth and output growth.

Employment

Twenty-six large metropolitan areas gained jobs in all of the last four quarters. These included metropolitan areas in the Great Lakes region (Akron, Louisville, Minneapolis, Pittsburgh, Rochester, and Youngstown) and the Southwest (Austin, Dallas, El Paso, Oklahoma City, Phoenix, Tucson, and Tulsa), and high technology centers throughout the nation (Boston, Ogden, Portland (OR), Provo, San Diego, San Jose, and Worcester). Twenty-four more metropolitan areas gained jobs in both the second and third quarters of 2011. Palm Bay was the only large metropolitan area to lose jobs in all of the last four quarters. Columbus, Denver, Fresno, Indianapolis, Lakeland, Little Rock, Modesto, New York, North Port, Raleigh, Richmond, and Philadelphia also lost jobs in both the first and second quarters of 2011.

Seventy-four of the 100 largest metropolitan areas lost a greater share of jobs 15 quarters after the start of the Great Recession (the fourth quarter of 2007) than they did during the first 15 quarters after the start of any of the previous three national recessions. Fifteen quarters after the start of the national recession, the 100 largest metropolitan areas combined had lost 5 percent of the jobs they had at the start of the Great Recession that began in 2007, compared to 0.8 percent for the 2001 recession. However, in the first 15 quarters after the start of the 1981–1982 national recession employment in the 100 largest metropolitan areas had grown by 7 percent and after the 1990–1991 recession it had grown by 1 percent.

Employment rebounded from its low point in 92 of the 100 largest metropolitan areas by the third quarter of 2011, but only 22 gained back more than half the jobs they lost between their employment peak and their post-recession employment low point, and only six made a complete jobs recovery. Only Austin, Boston, Dallas, El Paso, Grand Rapids, Houston, Madison, McAllen, New Orleans, Ogden, Oklahoma City, Omaha, Pittsburgh, Provo, Rochester, San Antonio, Springfield, Washington, San Jose, Milwaukee, Nashville and Worcester regained more than half of the jobs they had lost between their pre-recession high and their post-recession low, while 18 additional large metropolitan areas regained at least a quarter of the jobs they lost in the recession. Only Austin, El Paso, Houston, McAllen, San Antonio, and Worcester made a complete jobs recovery by the third quarter. Meanwhile, Albuquerque, Atlanta, Baton Rouge, Fresno, Indianapolis, Lakeland, Palm Bay, and Richmond had not yet recovered any of the jobs they lost since their employment peaks. In general, metropolitan areas in Texas and those that are centers of high technology industry or government recovered larger percentages of their lost jobs than areas in Florida and the Southwest, which suffered the most severe house price declines during and after the recession.

In the third quarter of 2011, overall government employment rose in 53 of the 100 largest metropolitan areas because increases in federal government employment outweighed state and local government job cuts. Federal government employment rose in 81 large metropolitan areas, while state government employment fell in 60 and local government employment fell in 53. In the period since total employment began to recover, overall government employment fell in 62 large metropolitan areas and was unchanged in seven.

Between the first quarter of 2010 and the third quarter of 2011, manufacturing employment grew in 60 of the 100 largest metropolitan areas, including all but five of Great Lakes metropolitan areas. During this period, when nationwide manufacturing employment grew by 2.5 percent, Youngstown, Tulsa, Provo, Akron, and Modesto had manufacturing job growth of more than 10 percent during this period, while 13 additional large metropolitan areas (Detroit, Ogden, Columbia, Oklahoma City, Houston, Charleston, San Antonio, Louisville, Milwaukee, Grand Rapids, Cincinnati, Toledo and Seattle) had manufacturing job growth between 5 percent and 10 percent. The only Great Lakes metropolitan areas that lost manufacturing jobs since the first quarter of 2010 were Buffalo, Columbus, Dayton, Indianapolis, and Syracuse. The strong rebound of manufacturing, especially in autos, auto parts, and related durable goods, is responsible for the strong economic recoveries of many Great Lakes metropolitan areas. It propelled Detroit, Grand Rapids, Toledo, and Youngstown into the ranks of the 20 best-performing metropolitan economies during the recovery.

The manufacturing job recovery slowed and became less widespread during the third quarter of 2011. In the 100 largest metropolitan areas combined, manufacturing job growth slowed from 0.7 percent in the second quarter to 0.2 percent in the third quarter. Meanwhile, the number of large metropolitan areas experiencing manufacturing job growth fell from 72 in the second quarter to 54 in the third quarter.

Unemployment

The unemployment rate in September 2011 remained above 6 percent in all but seven large metropolitan areas. Omaha's unemployment rate in September, 4.5 percent, was the lowest among the 100 largest metropolitan areas. Madison, Oklahoma City, Des Moines, Honolulu, Minneapolis-St. Paul, and Portland (ME) also had unemployment rates below 6 percent. Modesto and Stockton had unemployment rates in excess of 15 percent and 23 other metropolitan areas had unemployment rates between 10 percent and 15 percent. State capitals and other government or military centers generally had the lowest unemployment rates, while unemployment rates were generally highest in the California, Nevada, and Florida metropolitan areas that suffered severe house price declines during and after the recession.

In September 2011, the unemployment rate was lower than it was a year ago in 77 of the 100 largest metropolitan areas. The greatest declines in the unemployment rate generally occurred in three types of metropolitan areas: those that suffered severe house price declines during and after the recession (Las Vegas, Cape Coral, North Port, Orlando, Jacksonville, Riverside, Lakeland, and Miami), those that had very strong gains in manufacturing employment since the beginning of last year (Grand Rapids, Detroit, Youngstown, and Tulsa), and high technology centers (Portland (OR), San Jose, and Worcester). Metropolitan areas throughout the South generally had higher unemployment rates in September 2011 than in September 2010. All of the 100 largest metropolitan areas had higher unemployment rates in September 2011 than in September 2008.

Output

Sixty-one of the 100 largest metropolitan areas had made a complete output recovery by the third quarter of 2011. In all but one large metropolitan area (Cape Coral), output had increased from its recent low point. However, eight other metropolitan areas (Detroit, Las Vegas, Miami, North Port, Phoenix, Sacramento, Tampa, and Tucson), mostly ones that suffered severe housing price declines during and after the recession, recovered less than a quarter of the output they had lost during the recession and another 14 recovered less than half of their lost output.

Forty-three large metropolitan areas gained output in all of the last four quarters. However, Cape Coral lost output in all of the last four quarters, while Tucson and New Orleans lost output in all of the last three quarters. Metropolitan areas that suffered severe housing price declines during and after the recession generally had fewer quarters of output growth during the past year than those in Texas and the Northeast. Great Lakes auto-producing metropolitan areas and high technology centers had mixed performance; some had four quarters of output growth during the year but others had only two or three.

In the third quarter, only 19 large metropolitan areas had a rate of output growth that was consistent with sustained economic recovery. When sustained economic growth returned after each of the three recessions before the Great Recession, national GDP grew consistently at an annual rate of more than 3 percent.[1] That annual growth rate is equivalent to a quarterly output growth rate of just under 0.8 percent. In the third quarter of this year, 19 large metropolitan areas (Albany, Austin, Boston, Buffalo, Dallas, McAllen, Houston, Ogden, Oklahoma City, Oxnard, Providence, Provo, Riverside, Rochester, Salt Lake City, San Jose, Seattle, Syracuse, and Tulsa) had output growth rates that high.

Housing

In the third quarter of 2011, house prices had recovered from their second-quarter lows in 69 of the 100 largest metropolitan areas. However, house prices hit new lows in the third quarter in the remaining 31 metropolitan areas, which included both a few areas that suffered severe house price declines during and after the recession (Cape Coral, Fresno, Las Vegas, Modesto, Oxnard, Stockton, Tucson) and many more that did not.

House prices in the third quarter remained more than 40 percent below peak levels in Detroit and 21 metropolitan areas that suffered severe house price declines during and after the recession. Those 21 were Bakersfield, Boise, Cape Coral, Fresno, Jacksonville, Lakeland, Las Vegas, Los Angeles, Miami, Modesto, North Port, Orlando, Oxnard, Palm Bay, Phoenix, Riverside, Sacramento, San Diego, Stockton, Tampa, and Tucson. Prices were more than 60 percent below peak levels in Las Vegas, Modesto, and Stockton. At the other extreme, they were less than 10 percent below peak levels in Buffalo, Pittsburgh, and Rochester

The number of foreclosures fell in the third quarter of 2011 in all but ten large metropolitan areas. Only ten large metropolitan areas in the South and Great Lakes regions (Akron, Baton Rouge, Cincinnati, Cleveland, Columbia, Greensboro, Madison, North Port, Omaha, Raleigh) had increases in the number of real estate-owned properties during the quarter. Of these areas, only North Port had a percentage of real estate-owned properties that was above the national average. The metropolitan areas with real estate-owned percentages above the national average were mainly areas that had experienced severe house price declines during and after the recession.

1. Following the recession of 2001 annual output growth did not exceed 3 percent until 2004, though annualized quarterly rates met this level in the first quarter of 2002 and in each of the last three quarters of 2003.

The Financial Industries

This section examines three major financial industry groups: credit intermediation (a category that consists mainly of banks but also includes credit card issuers, mortgage brokers, and other kinds of lenders), securities and commodities (including investment banks, securities and commodities brokers, and investment advisors, among others), and funds and trusts (including investment funds, pension funds, and trusts and estates, among others). The section presents an overview of how wage and job trends in each of these industries compare to overall wage and job trends in the 100 largest metropolitan areas. Detailed comparisons for each metropolitan area may be found in additional documents for wage trends and job trends.

Since the national recession began in the last quarter of 2007, the average wages in credit intermediation and securities and commodities grew more slowly than the overall average wage in most large metropolitan areas. Between the fourth quarter of 2007 and the fourth quarter of 2010 (the most recent quarter for which wage data are available), the average wage in credit intermediation increased more slowly than the overall average wage in 63 of the 100 largest metropolitan areas, including all the metropolitan areas that specialize strongly in credit intermediation. The average wage in securities and commodities rose more slowly than the overall average wage in 65 large metropolitan areas, including all but one (Charlotte) that specialize strongly in that industry.[2]

In Des Moines, the large metropolitan area that specializes most strongly in credit intermediation, the average inflation-adjusted wage in credit intermediation fell by 1.9 percent between the fourth quarter of 2007 and the fourth quarter of 2010, while the overall average inflation-adjusted wage increased by 1.9 percent. In Bridgeport, the large metropolitan area that specializes most strongly in securities and commodities, the average wage in securities and commodities declined by 8.8 percent during this period, while the overall average wage fell by 0.8 percent.

However, since the national economic recovery began in the second quarter of 2009, the average wages in credit intermediation and securities and commodities grew more rapidly than the overall average wage in most large metropolitan areas. Between the second quarter of 2009 and the last quarter of 2010, the average wage in credit intermediation grew more rapidly than the overall average wage in 52 of the 100 largest metropolitan areas, including all but two (Dallas and Birmingham) that specialize strongly in that industry. The average wage in securities and commodities grew more rapidly than the overall average wage in 84 of the 100 largest metropolitan areas, including all but two (Chicago and San Francisco) that specialize strongly in that industry.

In Des Moines, the average wage in credit intermediation increased by 5.2 percent between the second quarter of 2009 and the fourth quarter of 2010, while the overall average wage increased by 2.6 percent. In Bridgeport, the average wage in securities and commodities rose by 18.4 percent during this period, while the overall average wage rose by 4.2 percent.

In most large metropolitan areas, the average wage in funds and trusts grew more rapidly than the overall average wage both since the beginning of the national recession and since the beginning of the national recovery. For funds and trusts, the industry average wage grew more rapidly than the overall average wage in 51 large metropolitan areas between the last quarter of 2007 and the last quarter of 2010 and in 56 large metropolitan areas between the second quarter of 2009 and the last quarter of

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2. In this report, a metropolitan area is considered to have a strong specialization in (or be a major center of) a financial industry if that industry's percentage of the metropolitan area's employment exceeded its percentage of nationwide employment by at least 50 percent in the third quarter of 2011. By this criterion, the metropolitan areas that specialize strongly in credit intermediation are Des Moines, Charlotte, Jacksonville, Salt Lake City, Phoenix, Dallas, Oxnard, and Birmingham. Those that specialize strongly in securities and commodities are Bridgeport, New York, Boston, San Francisco, Charlotte, Philadelphia, Chicago, and Minneapolis-St. Paul. Those that specialize strongly in funds and trusts are Hartford, Denver, San Francisco, Salt Lake City, Sacramento, Des Moines, San Diego, Philadelphia, Minneapolis, Houston, Bridgeport, Dallas, Albany, Baltimore, San Antonio, Milwaukee, and Madison.

2010. In each period, some major centers of the funds and trusts industry saw industry wages rise more rapidly than overall wages, while others saw industry wages rise more slowly.

In Hartford, the large metropolitan area that specializes most strongly in funds and trusts, the average wage in funds and trusts decreased by 24.7 percent from the fourth quarter of 2007 through the fourth quarter of 2010, while the overall average wage in Hartford declined by 4.6 percent. From the second quarter of 2009 through the fourth quarter of 2010, the corresponding percentages in Hartford were a 2.9 percent decline for funds and trusts and 0.4 percent decline in overall wages.

Both since the national recession began in the last quarter of 2007 and since the national recovery began in the second quarter of 2009, each major financial industry lost jobs more rapidly (or gained them more slowly) in most of the 100 largest metropolitan areas. Between the last quarter of 2007 and the last quarter of 2010, credit intermediation lost jobs at a faster rate (or gained them at a slower rate) than the economy as a whole in 73 of the 100 largest metropolitan areas. This was also true in 67 of the 100 largest metropolitan areas for the period from the second quarter of 2009 through the last quarter of 2010. For securities and commodities, these figures were 55 and 61 metropolitan areas, respectively; and for funds and trusts, 57 and 67 metropolitan areas, respectively. However, the opposite occurred in each of the top centers of each financial industry. In the metropolitan area that specializes most strongly in each industry, that industry gained jobs more rapidly than the economy as a whole.

In Des Moines, credit intermediation employment grew by 11.7 percent between the fourth quarter of 2007 and the fourth quarter of 2010, while overall employment in Des Moines fell by 3.2 percent. Between the second quarter of 2009 and the fourth quarter of 2010, the corresponding percentages for Des Moines were 9.4 percent increase for credit intermediation and 1.1 percent decline in overall employment.

In Bridgeport, securities and commodities employment grew by 4.7 percent between the fourth quarter of 2007 and the fourth quarter of 2010, while overall employment fell by 7.8 percent. Between the second quarter of 2009 and the fourth quarter of 2010, the corresponding percentages for Bridgeport were a 7.1 percent increase for securities and commodities and 1.0 percent decrease in overall employment.

In Hartford, funds and trusts employment grew by 38.7 percent between the fourth quarter of 2007 and the fourth quarter of 2010, while overall employment fell by 1.1 percent. Between the second quarter of 2009 and the fourth quarter of 2010, the corresponding percentages for Hartford were a 42.8 percent increase for funds and trusts and 0.2 percent decline in overall employment.

Methodology

The *MetroMonitor* tracks quarterly indicators of economic recession and recovery in the nation's 100 largest metropolitan areas—those with at least 500,000 residents in 2007—which collectively contain two-thirds of the nation's jobs and generate three-quarters of GDP. These indicators include:

- **Employment**: Total wage and salary jobs, seasonally adjusted. Percentage change in employment is shown from each metropolitan area's peak employment quarter to the most recent quarter, measuring the extent to which employment has returned to its pre-recession level and from each area's trough employment quarter to the most recent quarter, measuring the extent of employment recovery since the employment low point. Peaks are defined as the highest employment level attained between the first quarter of 2004 and the second quarter of 2009; in some metro areas where this peak occurred in the second quarter of 2009, the peak was defined as the highest level attained between 2004 and the most recent quarter of employment losses prior to the second quarter of 2009. Troughs are defined as the lowest employment level reached since the peak. Percentage change in employment is also shown from the previous quarter to the most recent quarter, measuring the extent to which employment is moving toward or away from recovery. Source: Moody's Analytics.
- **Unemployment rate**: Percentage of the labor force that was unemployed in the last month of the quarter. The data are not seasonally adjusted. Therefore, changes in the unemployment rate are shown from the same month three years ago to the most recent month, and from the same month one year ago to the most recent month. Source: Bureau of Labor Statistics.
- **Gross metropolitan product (GMP)**: Total value of goods and services produced in a metropolitan area. Percentage change in GMP is shown from each metropolitan area's peak GMP quarter to the most recent quarter and from each area's trough GMP quarter to the most recent quarter. Peak and trough quarters are defined in the same way as peak and trough employment quarters, but using GMP rather than employment. Percentage change in GMP is also shown from the previous quarter to the most recent quarter. Source: Moody's Analytics.
- **Housing prices**: Prices of single-family properties whose mortgages have been purchased or securitized by Fannie Mae or Freddie Mac. Percentage change in housing prices is shown from each metropolitan area's peak housing price quarter to the most recent quarter, and from each area's trough housing price quarter to the most recent quarter. Peaks are defined as the highest house price level attained between the first quarter of 2005 and the second quarter of 2009. Troughs are defined as the lowest house price level reached since the peak. Percentage change in housing prices is also shown from the previous quarter to the most recent quarter and year-over-year. Source: Federal Housing Finance Agency House Price Index.
- **Real estate-owned (REO) properties**: Foreclosed properties that fail to sell at auction and thus become owned by the lending institution. Shown as the share of all mortgageable properties in each metro area in the last month of the most recent quarter, and change in share from last month in previous quarter. Source: McDash Analytics.
- **Recession Comparisons:** The percent of employment recovery in each recession is measured by employment in the thirteenth quarter following the official first quarter of a national recession (as defined by the National Bureau of Economic Research) as a percentage of employment in that first quarter of the recession in question. Source: Moody's Analytics.

The *MetroMonitor*'s rankings of metropolitan economic performance combine four key indicators: (1) percent change in employment, (2) percentage point change in unemployment rate, (3) percent change in GMP, and (4) percent change in House Price Index. **Performance during the recovery measures changes in** employment, GMP, and the House Price Index from trough quarter to the third quarter of 2011. Unemployment rate change is measured from September 2010 to September 2011.

For each set of rankings, metropolitan areas are classified into groups of 20 based on their rank, among the 100 largest metropolitan areas, on the average of the standardized scores for the four key indicators.

Interactive *MetroMonitor* maps, underlying indicator data, and one-page profiles of each of the 100 largest metropolitan areas are also available at www.brookings.edu/metromonitor.

About the Metropolitan Policy Program at the Brookings Institution

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