



FEDERAL RESERVE BANK *of* NEW YORK

FEDPOINT

The New York Fed: Who We Are and What We Do

- **At the direction of the Federal Open Market Committee (FOMC), the top monetary policy-making group of the Federal Reserve System, the New York Fed conducts open market operations on behalf of the Federal Reserve System. The president of the New York Bank is a permanent voting member of the FOMC.**
- **The New York Fed and the 11 other Federal Reserve Banks supervise depository institutions by issuing regulations and examining member banks to check their financial soundness.**
- **The 12 Federal Reserve Banks provide depository institutions with various payment services, including collecting checks, electronically transferring funds, and distributing and receiving currency and coin.**
- **The New York Fed engages in foreign exchange operations on behalf of the U.S. Treasury Department and the Federal Reserve System, as well as for some foreign central banks and international organizations. As part of its services for foreign and international institutions, the New York Reserve Bank stores monetary gold for dozens of countries.**

The Federal Reserve Bank of New York is one of 12 regional Reserve Banks which, together with the Board of Governors in Washington, D.C., the Federal Open Market Committee (FOMC), the Federal Advisory Council, the Consumer Advisory Council, and the member banks, compose the Federal Reserve System. As the U.S. central bank, the Federal Reserve is responsible for formulating and executing monetary policy, supervising and regulating depository institutions, ensuring the smooth flow of payments, and providing banking services to the U.S. government and depository institutions.

Each of the 12 Reserve Banks supervises and regulates bank holding companies and state chartered banks in its District that are members of the Federal Reserve System. Each Reserve Bank also provides services to depository institutions in its District and functions as a fiscal agent of the U.S. government. The services the Banks perform include putting coin and currency into circulation; electronically transferring funds; selling Treasury notes, bills, and bonds; processing savings bonds, and redeeming food stamps.

The New York Fed serves the Second Federal Reserve District, which encompasses New York State; the 12 northern counties of New Jersey; Fairfield County, Connecticut., Puerto Rico, and the Virgin Islands. Though it serves a geographically small area compared with those of most other Federal Reserve Banks, the New York Fed is the largest Reserve Bank in terms of assets and volume of activity.

The New York Fed has a branch office in East Rutherford, New Jersey. The Fed's state-of-the-art operations center in East Rutherford, which opened in 1992, processes cash for the metropolitan New York and New Jersey area.

Unique Domestic Policy Functions

While the Federal Reserve Bank of New York has largely the same responsibilities as the 11 other Reserve Banks, it also has several unique responsibilities associated with its presence in the financial capital of the United States.

At the direction of the FOMC, the Federal Reserve's top monetary policy-making group, the New York Fed executes domestic open market operations on behalf of the System. Open market operations—the buying and selling of U.S. government securities in the secondary market—are the principal means through which the System implements monetary policy. Although the FOMC decides what policy to follow, the System's portfolio is directed, on a daily basis, by the Manager of the System Open Market Account at the New York Fed. The Manager, along with the rest of the Open Market Department, constantly monitors bank reserves and acts to ensure that the FOMC's directive is being fulfilled.

The FOMC is composed of the seven Board governors and five of the 12 Reserve Bank presidents, and meets eight times a year in Washington, D.C. The president of the New York Fed is a permanent voting member of the FOMC and traditionally is selected as its vice chairman. The other presidents serve one-year terms on a rotating basis. All of the presidents participate in FOMC discussions, but only the five who are members of the Committee vote on policy decisions.

Unique International Functions

In addition to its domestic trading desk responsibilities, the New York Fed, at the direction of the FOMC and U.S. Treasury, conducts all foreign exchange trading for the Treasury and the Federal Reserve System. In this role, the New York Fed intervenes in foreign exchange markets to achieve dollar exchange rate policy objectives and to counter disorderly conditions in foreign exchange markets.

The New York Fed also is responsible for maintaining relations with, and providing financial services for, foreign central banks and international organizations. One of these services is the New York Reserve Bank's unique custodial responsibility for the gold reserves of about five dozens countries, central banks, and international organizations. The New York Fed's gold vault stores approximately \$194 billion of monetary gold (valued at \$900 per troy), or one-quarter of the world's official gold supply—the largest concentration of monetary gold in the world.

Foreign official gold reserves have been held at the New York Fed since 1924 for numerous reasons, including the stability of the U.S. political system, the concentration of international trade and finance in New York City, and the convenience of centralizing gold holdings in a place where international payments can be made quickly.

July 2008



Is the Worst Over? Economic Indexes and the Course of the Recession in New York and New Jersey

Jason Bram, James Orr, Robert Rich, Rae Rosen, and Joseph Song

The New York–New Jersey region entered a pronounced downturn in 2008, but the pace of decline eased considerably in spring 2009 and then leveled off in July, according to three key Federal Reserve Bank of New York economic indexes. These developments, in conjunction with a growing consensus that the national economy is headed for recovery, suggest that the worst may be over for the region’s economy. However, a downsizing of the area’s critical finance sector could pose a major risk to the economic outlook going forward—particularly for New York City.

According to the National Bureau of Economic Research (NBER), the U.S. economy entered a recession in December 2007. While this determination is of considerable importance, the decision was not announced until November 28, 2008—almost a year after the onset of the episode. Such lags in the dating of business-cycle turning points have prompted interest in producing real-time indicators of the U.S. economy’s performance. In the late 1960s, the Department of Commerce developed a methodology that combines several data series into a *coincident index*—a single composite measure intended to gauge the current state of the aggregate economy. Today, this national coincident index provides a broad and timely measure of U.S. economic activity each month.¹

If national and regional business cycles were synchronized, a national coincident index would be sufficient to track fluctuations in regional economic activity. However, evidence from a number of studies indicates marked differences between regional and U.S. cycles.² As a result, analysts who must monitor regional business conditions are best advised to focus on measures that reflect economic activity at the local level. To assist in this effort, economists at the Federal Reserve Bank of New York have constructed indexes of coincident economic indicators (CEIs) for New York State, New York City, and New Jersey.³ The regional CEIs draw upon information from four key data series: nonfarm payroll employment, real earnings (wages and salaries), the unemployment

¹ Although peaks and troughs in the national coincident index tend to coincide with the dating of business cycles by the NBER, the Bureau determines recession dates judgmentally after considering many factors. The national coincident index is now produced by the Conference Board.

² For example, see Orr, Rich, and Rosen (1999), Crone (2004), Wall and Zoega (2004), and Crone and Clayton-Matthews (2005).

³ See Orr, Rich, and Rosen (1999).

rate, and average weekly hours worked in the manufacturing sector.⁴ The indexes enable us to analyze the region's current recession and to date historical business cycles specific to New York State, New York City, and New Jersey since the mid-1960s. In addition, they provide a basis for comparing cycles in the New York–New Jersey region with each other and with national cycles.⁵

In this issue of *Second District Highlights*, we use our three CEIs to provide an update on economic activity in the New York–New Jersey region as of July 2009. As part of our assessment, we present a brief description of the formal statistical model used to estimate the regional CEIs (see the appendix). We also offer insight into the dynamics of the current cycle by looking at some of the individual component indicators of each CEI. Our CEIs show that the region entered a pronounced downturn in 2008, a number of months after the onset of the national recession in December 2007. This lag suggests that the regional economy had more momentum and showed more resilience than the national economy during the early stages of the current national recession. The delay in the start of the region's downturn relative to the nation's contrasts sharply with the sequence of events at the time of the 1990–91 and 2001 U.S. recessions, when the regional downturn *preceded* the national recession—in the first case, by more than a year. The current recession hit the region with full force in fall 2008, with significant job losses occurring across most industry sectors and geographic areas.

During spring 2009, however, the pace of decline moderated considerably, and in July the indexes leveled off. This, in conjunction with a growing consensus that the national economy is poised for recovery, is a hopeful sign and greatly increases the likelihood that the worst is over for the region's economy. Still, it should be cautioned that seismic changes to the critical finance sector pose a major risk to the economic outlook for the region—particularly for New York City, which has already experienced a steeper downturn than a number of metropolitan areas in upstate New York. With these risks in mind, we close by discussing factors likely to shape the timing and extent of a recovery in the region.

Current Economic Activity in the Region

Our CEIs afford a comprehensive view of historical and current economic activity in New York State, New York City, and New Jersey (Charts 1–3). The top panels of each chart depict the historical behavior of the index starting in the mid-1960s, while the bottom panels focus on the last fourteen years. The bottom panels allow us to examine more closely the recent behavior of the CEI, while the top panels allow us to compare it with previous downturns. We also include vertical bands indicating the peak-to-trough periods for each

national business cycle as defined by the NBER and shade the peak-to-trough period of each local downturn as defined by our CEI.⁶

The indexes show that the New York–New Jersey region has experienced a severe economic downturn. All CEIs peaked during 2008 and were down substantially from their peaks as of July 2009. Although the two state CEIs peaked noticeably earlier than the CEI for New York City, all three peaks occurred after the cyclical peak in national economic activity in December 2007.⁷

In New York State, the peak in economic activity was reached in February 2008, and the index contracted at a 5.7 percent annual rate through June 2009 before turning up modestly in July (Chart 1). Most of the deterioration in the state economy, however, occurred after October 2008, when the pace of decline accelerated noticeably. The current level of activity is now below the peak reached in the previous cycle in 2000.

In New York City, the upward momentum in economic activity in the current cycle was maintained through June 2008, although the deterioration has been rapid since then (Chart 2). In the twelve months ending in June 2009, activity decreased by 4.9 percent, then flattened out in July. The level of activity, however, currently remains well above the prior cyclical peak in 2000 as a result of the city's robust economic growth during the last expansion.

In New Jersey, as in New York State, the peak of activity was reached in February 2008, just two months after the start of the national recession (Chart 3). An examination of the state's CEI leading up to the peak, however, reveals a prolonged period of relatively weak growth that began in early 2007 as New Jersey's economic expansion began to lose steam. For much of 2007 into early 2008, the index showed that growth was only modestly positive; it also displayed outright declines each month between July and October 2007. After peaking in February 2008, activity declined at a 5.0 percent annual rate through mid-2009 but leveled off in July. The index now stands below the trough of the previous downturn.

In both New York State and New Jersey, the lag in the onset of the current downturn relative to that of the nation differs markedly from the two prior episodes, in which the peak of activity in both states occurred before the national peak. In particular, in the late 1980s the downturns in New York State and New Jersey began about eighteen months before the start of the 1990–91 national

⁴ The emphasis on labor market indicators reflects limited data availability. Relatively few economic time series available at the state and local level meet our criteria of reliability, timeliness, and historical continuity. The choice of the four data series parallels that of the Federal Reserve Bank of Philadelphia in its construction of CEIs for New Jersey, Pennsylvania, and Delaware. See <<http://www.phil.frb.org/research-and-data/regional-economy/indexes/coincident/>>.

⁵ The indexes have also been found to be useful in projecting state and local tax revenues; see Rich et al. (2005).

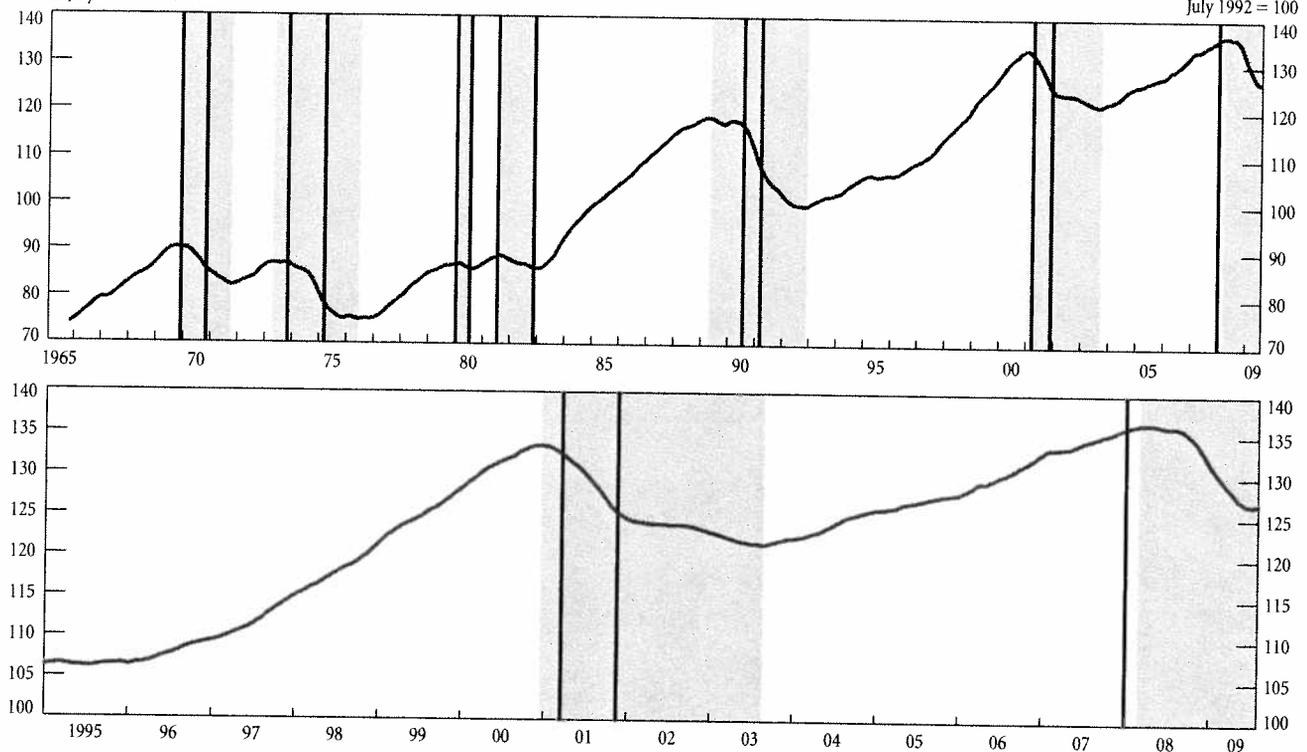
⁶ Our method of dating peaks and troughs of local business cycles differs from the method used by the NBER to date national cycles. The NBER examines a variety of economic time series to make a judgment about when a national cycle has begun or ended. By contrast, our criteria for dating regional business cycles rely on an inspection of the peaks and troughs of the estimated regional CEIs. This approach is again a consequence of the limited data availability at the state and local levels. The CEIs, however, are generally quite smooth, and the identification of regional peaks and troughs is fairly straightforward. Yet on a few occasions, such as the dating of the most recent peak for New Jersey, the turning point was based on a more judgmental determination.

⁷ The specific months that currently identify regional peaks and troughs could change as a result of subsequent data revisions. In the past, these changes have been minor, usually in the range of one to two months.

Chart 1

Economic Activity in New York State

Index: July 1992 = 100



Source: Federal Reserve Bank of New York.

Note: The black vertical bands indicate the peak-to-trough periods of each national business cycle as defined by the National Bureau of Economic Research; the shaded areas indicate the peak-to-trough periods of New York State's downturns as defined by our index of coincident economic indicators.

downturn.⁸ As Charts 1-3 show, disparities in the timing of downturns in the region and the nation are seen more broadly over our full sample period, with only the 1980 and 1982 downturns in New York State and New Jersey roughly coinciding with the U.S. cycle. In New York City, cycles have generally shown even less correspondence with those of the nation.

In addition, disparities can be seen in the timing of troughs in the region and in the nation. Notably, the recoveries in New York State, New York City, and New Jersey tend to begin much later than the national recovery. Following both the 1989 and 2001 downturns, for example, regional activity failed to recover until well after the trough in national activity. In some episodes, the regional recovery did not take hold for more than a year after the end of the national recession.

These disparities in the timing and duration of business cycles in the New York–New Jersey region and the nation reflect

differences in industrial structures as well as the influence of local-specific factors, such as commercial and residential building cycles and fiscal conditions. Also, the cyclical dynamics of a mature economy—that is, one with a low population growth rate, high land prices, and a high density of activity, such as the New York–New Jersey region—are likely to differ from the dynamics of rapidly growing economies, such as the Southwestern states.

Recent Developments in the New York–New Jersey Region

New York State

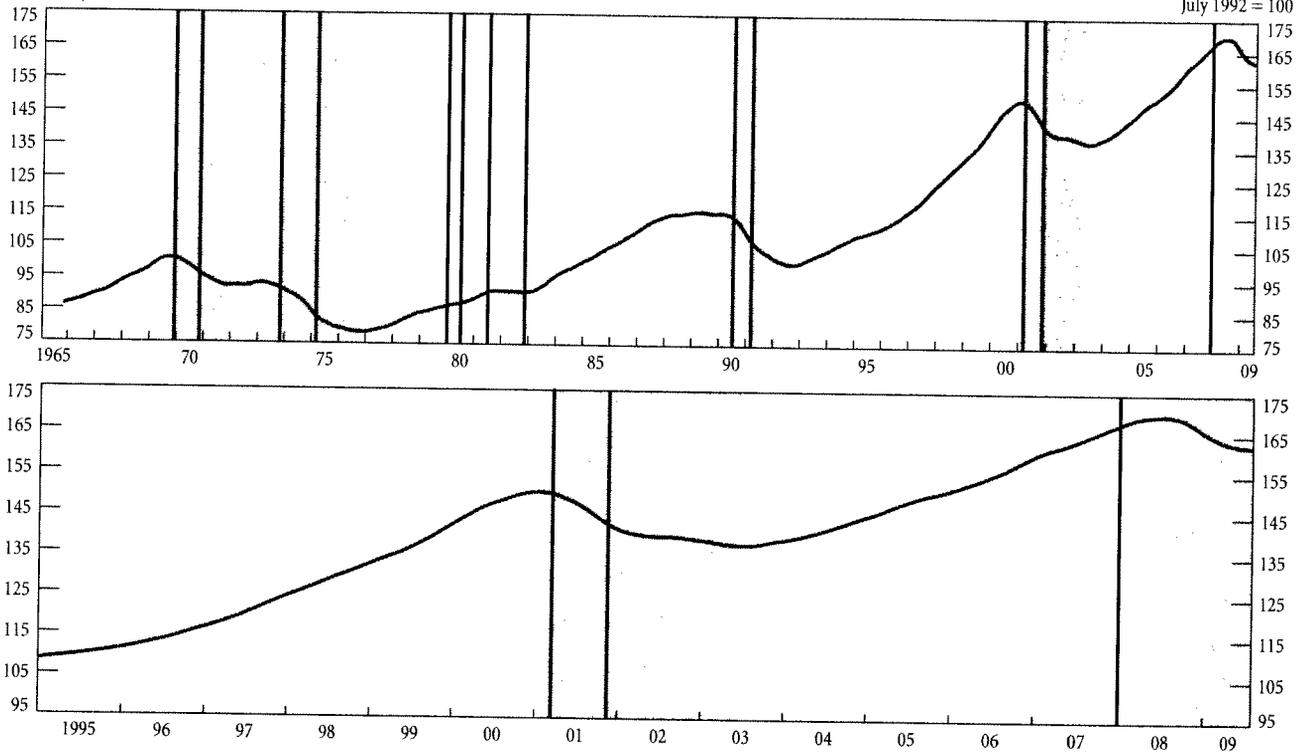
The specific components of New York State's CEI reveal that much of the state's economic weakness stems from sharp job losses in the first half of 2009 and the related steep rise in the unemployment rate. Looking back, one can see that job growth in the state averaged less than 1.0 percent in both 2005 and 2006—a figure that was only about half the nationwide rate. In 2007, however, as U.S. job growth slowed, statewide growth picked up and surpassed the national pace. In the first half of 2008, as U.S. employment turned downward, New York State job growth slowed sharply but remained positive through June. It was not until October 2008 that the pace of job loss in the state gathered momentum. Similarly, the state's unemployment rate,

⁸ At that time, the region's concentration in finance was an important reason for the weak activity in both states; the downturn in the financial sector occurred well before the national economy went into recession. See Bram, Orr, and Rosen (2008), McCarthy and Steindel (1997), and Kuttner and Sbordone (1997).

Chart 2

Economic Activity in New York City

Index: July 1992 = 100



Source: Federal Reserve Bank of New York.

Note: The black vertical bands indicate the peak-to-trough periods of each national business cycle as defined by the National Bureau of Economic Research; the shaded areas indicate the peak-to-trough periods of New York City's downturns as defined by our index of coincident economic indicators.

which began to edge up in April 2008, rose only moderately through last October. By June 2009, however, it had surged 2.8 percentage points, to 8.7 percent, though it leveled off in July.

The steepest job loss rates have been in the construction and manufacturing sectors. Construction employment had been rising through August 2008, but fell sharply thereafter, whereas manufacturing employment simply registered a moderate acceleration in its secular downward trend. The financial sector has also contributed substantially to the decline in employment, particularly in New York City. However, statewide, more than half of the overall job losses have been in the professional and business services sector and the trade, transportation, and utilities sectors, which together account for 30 percent of state employment. Although the state's job losses have been fairly broad-based, the education and health services sector has continued to add jobs, offsetting some of the weakness in other sectors—a pattern similar to that observed in past downturns.

Geographically, it appears that somewhat more of the decline in economic activity statewide has occurred in New York City and its surrounding areas than in upstate. Even though we do not calculate indexes for any substate area other than New York City, we can

gauge the relative performance of the various metro areas from local employment trends. From April 2008 to June 2009, statewide employment declined 2.6 percent. Over that period, jobs fell 2.9 percent in the New York City metro area (which includes Long Island and the Lower Hudson Valley), compared with declines of 1.7 percent or less in the Utica, Syracuse, and Rochester areas and 2.5 percent in metropolitan Albany. Job losses in the Buffalo and Binghamton areas were close to those in Albany. Parts of the District did see an upturn in employment in July 2009, largely reflecting public sector summer jobs programs.

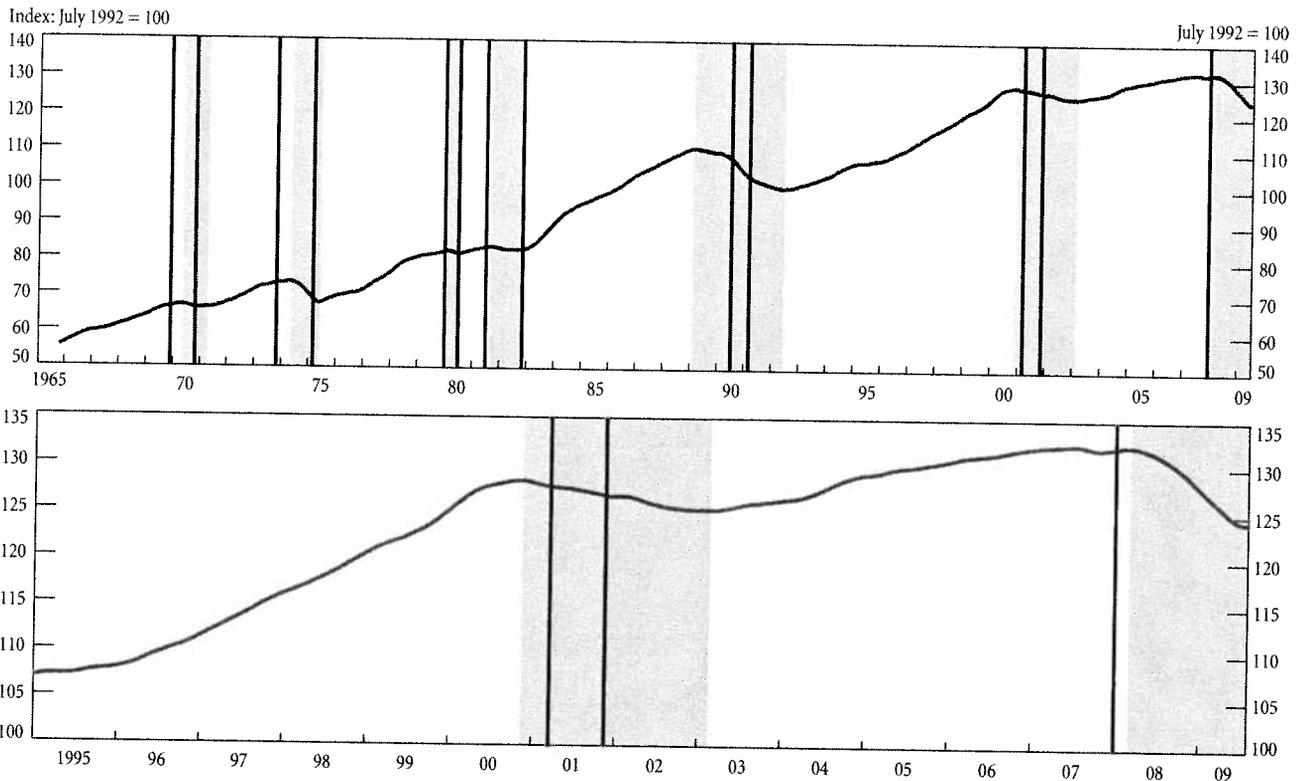
This divergence in job growth between upstate New York and the New York City metro area contrasts with their relative performance during the last expansion. Over that period, upstate lagged the city in job growth by a wide margin. Going forward, it will be of considerable interest to learn whether the more recent pattern of geographical differences in job trends persists.

New York City

Although national employment levels began to decline in December 2007, jobs in New York City continued to grow at a moderate clip into 2008, peaking in August of that year. In the city, broad-based

Chart 3

Economic Activity in New Jersey



Source: Federal Reserve Bank of New York.

Note: The black vertical bands indicate the peak-to-trough periods of each national business cycle as defined by the National Bureau of Economic Research; the shaded areas indicate the peak-to-trough periods of New Jersey's downturns as defined by our index of coincident economic indicators.

growth in large sectors, such as health and education services and business and professional services, more than offset the employment declines that were developing in the financial services sector and were ongoing in the manufacturing sector. Employment in the city was also buoyed late into the cycle by growth in the leisure and hospitality sector, as the weakened dollar helped make the United States—and particularly the country's New York City “gateway”—an attractive tourist destination.

The recent weakness in the financial services sector is the key factor underlying the city's current downturn. Financial services represent about 12 percent of employment in the city, although the historically high base wages and bonus payments in that sector account for a significantly larger share of income—as much as 30 percent of total wages in a peak year. Largely because of these exceptionally high wages, each job in the city's securities industry—“Wall Street”—is estimated to generate two additional jobs in the city.⁹ These jobs can be in services that support the industry, such as advertising, accounting, and legal services, or in services that benefit from the relatively high income of these workers,

such as restaurants and real estate. In addition, the relatively large contribution of the securities industry to the city's income makes the industry an important source of tax revenue, directly through income taxes and indirectly through sales and property taxes. Thus, job losses in the city's securities industry have a disproportionate impact on the region's total activity.

The headline news stories of New York City's financial sector layoffs in the tens of thousands started as early as fall 2007, but these numbers were slow to be reflected in the local employment counts.¹⁰ Job declines in that sector began to appear in early 2008, however, and financial sector employment in the city as of July 2009 was down roughly 42,000 from its January 2008 peak, with no letup in the pace of decline.

¹⁰ Some reported losses may not have appeared in the actual job declines in New York City for several reasons. First, firms headquartered in the city tended to announce firmwide layoffs without regard to location. Affected employees could be anywhere in the United States, or even abroad. Second, the layoffs were frequently an outgrowth of firm restructuring and included many highly compensated individuals. It is not unusual for termination packages for such professionals to include six months' to as much as a year's severance pay and outplacement services. Depending upon an individual's contract, such job losses might not be counted in official employment reports until the severance package and/or outplacement service had ended.

⁹ The employment multiplier was obtained from the U.S. Bureau of Economic Analysis' RIMS II model (<<https://www.bea.gov/regional/rims>>).

New Jersey

Weakness in employment has contributed significantly to the recent sluggishness in New Jersey's CEI. Total employment in the state peaked in January 2008, but as of June 2009 it had fallen by a little more than 160,000—a decline of 3.9 percent. As in New York State, however, employment rose modestly in July. Job losses have been concentrated in the private sector and have influenced most of the state's key industries over the past year. National job trends negatively affecting several industries have been mirrored in state employment declines. Most striking has been the weakness in the finance sector. Because of the relative concentration of banks and other financial firms in the state linked to home mortgage financing, the negative effect of the unfolding financial market turmoil was seen early on in the sector. Moreover, New Jersey's financial sector has been subject to adverse conditions similar to those affecting New York City's. Employment in the financial activities sector peaked in September 2005, but is now down 9.1 percent, or slightly more than 25,000 jobs. In conjunction with the fallout from the financial crisis, employment in both real estate services and residential construction in the state has shrunk.

After experiencing only mild losses through July 2008, New Jersey's professional and business services sector saw employment begin to decline, and by June 2009 the sector had shed more than 42,000 positions. Employment has dipped in the leisure and hospitality industry, which has seen losses in casino hotel employment. Trade and transportation employment has been pulled down by heavy losses in the trucking industry.

New Jersey has also experienced relatively significant job losses in manufacturing. Employment in this sector has been undergoing a long-term deterioration, but the rate of manufacturing job losses picked up in the second half of 2008. Over the past year, government employment levels have been down only modestly. The only substantive source of growth in the state continues to be the education and health sector. Jobs there expanded throughout the previous downturn and are currently growing at a year-over-year pace of 1.0 percent. Colleges and professional schools were an important source of job gains in education, and the ambulatory care and social assistance industries were the key source of gains in health services.

Reflecting the generally adverse job trends in the state, as well as job losses among commuters to New York City, New Jersey's unemployment rate has risen sharply. The July 2009 rate of 9.3 percent was up 4.0 percentage points from a year earlier. This monthly reading was the highest since 1977, when the state was emerging from a prolonged downturn.

Outlook for the Region

The recent leveling off in all three CEI indexes is a promising sign that the worst of the region's economic troubles may be over. So, too, is recent evidence that the national economy may be turning around—seen, for example, in the July forecast from *Blue Chip Economic Indicators*, which predicts positive U.S. growth starting in the third quarter of the year. Such a rebound in national activity

would clearly spur the New York–New Jersey region's own recovery. Nevertheless, considerable uncertainty attends most forecasts of a business-cycle turning point, and the current cycle is no exception. In particular, both the timing and strength of the region's recovery will likely depend on the success of efforts to restore smoothly functioning financial markets.

Although the New York–New Jersey economy shows tentative signs of stabilization, a number of factors make it likely that the region's recovery will lag the nation's, just as it has in the past. First, this economic cycle is characterized by unusual restructuring in the financial sector. Ongoing consolidations, mergers, and financial firm closures suggest that employment in the sector may not return to its previous cyclical highs. Additionally, future regulatory changes could limit the permissible lines of business, pay structure, and size of firms. The form, shape, and timing of these forces are unknown, but they certainly have the potential to dramatically reshape this sector and play an important role in the region's recovery—particularly New York City's.

Second, state and local fiscal pressures could delay the regional recovery. As we observed earlier, the financial sector can account for as much as 30 percent of all earnings in New York City. The job and income losses in this sector and in related supporting services, as well as the more broad-based cyclical job losses attributable to the national recession, have already led to a sizable plunge in state and local income and sales tax collections. Such declines are likely to continue and to be exacerbated by steep reductions in mortgage-related tax revenues, reflecting the drop in home sales, and decreases in capital gains and corporate tax collections, reflecting a weaker economy and stock market.¹¹ These decreases in tax revenue have helped create a bigger budget gap, which states and cities typically seek to remedy through a combination of tax increases and spending cuts—measures that can crimp regional economic activity.

Third, employment growth in the private education and health sector has historically contributed some stability to state and local economies, because the demand for these services is not closely linked to cycles in the regional economy. However, the current downturn is characterized by such severe gaps between projected tax revenue collections and projected expenditures that state and municipal governments are instituting cuts in aid to these sectors. Thus, continuing job gains in health care, although possible, now appear more questionable. Finally, even if the national economy were to rebound in the second half of 2009, many analysts anticipate that a recovery in U.S. employment will trail the general economic recovery. All of these factors, coupled with the New York–New Jersey region's historical tendency to lag the nation when emerging from a recession, point to a period of sluggish activity for the region even as the U.S. economy begins to recover.

¹¹ The possibility of tax-loss carry-forwards for financial corporations makes a drop in corporate tax collections all the more likely.

Construction of the Federal Reserve Bank of New York's Regional Coincident Economic Indexes

To construct the coincident indexes for New York State, New York City, and New Jersey, we apply the Stock-Watson (1989) methodology to four data series: nonfarm payroll employment, real earnings (wages and salaries), the unemployment rate, and average weekly hours worked in manufacturing. A key assumption of the statistical framework is that a single (unobserved) factor drives the comovements in the various measures of regional economic activity. This common component forms the basis for the coincident index that measures "the state of the economy." In addition to the common component, movements in the measures of regional economic activity reflect the influence of idiosyncratic factors. Formally, the unobserved single-index (or dynamic-factor) model can be written as

$$\begin{aligned} \Delta X_t^1 &= \lambda_0^1 \Delta C_t + \lambda_1^1 \Delta C_{t-1} + \dots + \lambda_j^1 \Delta C_{t-j} + \varepsilon_t^1 \\ &\vdots \\ \Delta X_t^i &= \lambda_0^i \Delta C_t + \lambda_1^i \Delta C_{t-1} + \dots + \lambda_j^i \Delta C_{t-j} + \varepsilon_t^i \end{aligned}$$

where ΔX_t^i denotes the change in the i th coincident variable at time t , ΔC_t denotes the change in the common factor at time t , ε_t^i denotes the idiosyncratic shock to the i th coincident variable at time t , and λ_j^i is the parameter (factor loading) on the j th lagged value of the change in the common factor for the i th coincident variable. Stock and Watson discuss

additional assumptions of the model and describe how the model can be estimated by maximum likelihood using the Kalman filter, with the coincident index being the estimated value of the common factor, \hat{C}_t .

Alternatively, the coincident index can be expressed as a weighted average of the coincident variables:

$$\Delta C_t = \sum_{k=0} w_k^1 \Delta X_{t-k}^1 + \dots + \sum_{k=0} w_k^i \Delta X_{t-k}^i,$$

where w_k^i is the weight on the k th lagged value of the change in the i th coincident variable. The weights associated with the CEIs are determined through model estimation. A more detailed description of the data and the estimation procedures used to construct the CEIs can be found at <http://www.newyorkfed.org/research/regional_economy/construction_frbny_cei.pdf>.

The regional CEIs have been in production at the Federal Reserve Bank of New York since 1999. The indexes are updated monthly and can be found at <http://www.newyorkfed.org/research/regional_economy/coincident_summary.html>.

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Current Issues

IN ECONOMICS AND FINANCE

SECOND DISTRICT HIGHLIGHTS

Employment in the New York–New Jersey Region: 2008 Review and Outlook

Jason Bram, James Orr, and Rae Rosen

The 2007 slowing in job growth in the New York–New Jersey region continued through August 2008. A projected weakening in the national economy through the end of 2008 combined with the market turmoil affecting New York City's finance sector suggests that the region will post substantially smaller job gains this year than it did in 2007. Beyond 2008, continued financial stress could lead to an even sharper and more protracted contraction in the city's finance sector, potentially spreading to other sectors of the region's economy.

Economic activity in New York and New Jersey began to slow in the second half of 2007 and further weakened through the summer of 2008. Our composite measures of economic performance show that starting in March of this year, overall activity in the region declined, although activity in New York City merely decelerated. Job growth in the region also slowed in 2007, and the deceleration continued through August 2008. Within the region, employment in New Jersey was relatively flat through most of 2007, and it fell modestly in the first eight months of 2008; job counts in New York City and New York State leveled off in early 2008 and as of August were little changed.

Through the end of 2008, employment trends in the New York–New Jersey region will depend on several factors. First, job trends are expected to be depressed by the continued slowing in the growth of real, or inflation-adjusted, GDP at the national level as projected by the Blue Chip Consensus forecast.¹ The slowing in U.S. economic

activity can be expected to have a broad impact on the region. Second, the course of employment in New York City, and particularly in the finance sector, will be determined largely by the depth and duration of the fallout from the ongoing turmoil in the financial markets.² The turmoil began in the summer of 2007 with sharp increases in mortgage delinquencies and foreclosures that depressed the market for financial instruments tied to housing and mortgages. The uncertainty created by home price declines and financial market stress has created a great deal of risk for the regional and especially the New York City economy. Other important factors influencing employment include the degree of slack in the markets for housing and office space and trends in key local industries other than finance in the New York City area and upstate New York.

¹ The forecast is published monthly in *Blue Chip Economic Indicators*.

² The finance sector, or, more formally, the financial activities sector, includes establishments engaged in a variety of financial activities, including commercial banks, securities and commodities brokers and traders, clearinghouses, and the central bank. The securities industry is a subset of this broader financial activities sector that comprises only the securities and commodities brokerage and trading establishments.

This edition of *Second District Highlights* reviews regional trends in economic activity—and specifically employment—in 2007 and the first eight months of 2008. Our discussion focuses on New York State, New York City, and New Jersey, but it also considers job trends in selected upstate metropolitan areas. We highlight major influences on the region's employment growth in 2008, emphasizing the importance of the finance sector to the New York City economy. Our assessment of the magnitude and timing of potential job losses in finance is informed by the city's experience with employment and income declines during previous finance sector downturns. While the region will almost certainly add significantly fewer jobs in 2008 than in 2007, we present no specific point estimates for job growth; rather, we rely on the city's past experience to suggest possible future paths for employment.³ We also consider risks to employment and income growth in the city.

Recent Economic Performance in the New York–New Jersey Region

To measure economic activity in the region, we use the Federal Reserve Bank of New York's indexes of coincident economic indicators (CEI), reported monthly and constructed separately for New York State, New York City, and New Jersey.⁴ Each index is a single composite measure calculated from four variables: payroll employment, the unemployment rate, average weekly hours worked in the manufacturing sector, and real wage and salary earnings. The indexes show that the expansion of activity that had taken hold in the region in 2003 continued through the end of 2007, but only New York City appeared to have maintained any upward momentum into 2008.

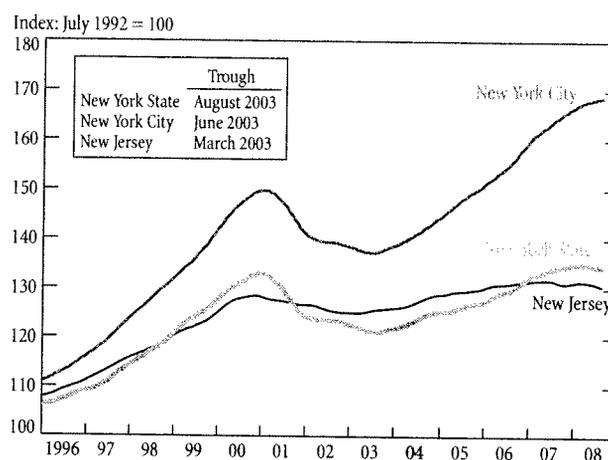
In New York State, the CEI expanded 3.2 percent in 2007, up from 2.7 percent in 2006, and for the first time the level of economic activity surpassed the peak reached in 2001 (Chart 1). Readings through the first eight months of 2008, however, show that activity in the state began to decline in March and, by August, was at the same level as a year earlier.

Within the state, economic activity continued to expand in New York City through the summer of 2008, although at a more modest pace than in the preceding four years. As of August 2008, the readings show growth in activity slowing to 2.5 percent on a year-over-year basis, though the city's CEI was almost 12 percent above its peak during the previous

³ Total employment throughout the region is almost certain to be lower in December 2008 than it was at the end of 2007; however, on an annual average basis, employment is still expected to be higher in 2008 than in 2007.

⁴ See Orr, Rich, and Rosen (1999) for details on the construction of the indexes; the complete historical series is available at <http://www.newyorkfed.org/research/regional_economy/index.html>.

Chart 1
Indexes of Coincident Economic Indicators



Source: Federal Reserve Bank of New York staff calculations.

expansion. The strength of the city's economy in 2007 and through the first eight months of the year compared with that of the statewide economy implies little or no growth upstate as well as in New York City's suburbs.

In New Jersey, the modest downturn in activity in the second half of 2007, which followed a slowing in growth in 2006, continued into 2008. The CEI revealed outright declines in activity from July to October 2007 and from March to August 2008, at which point the index was down 0.6 percent from its level a year earlier.

Recent Employment Trends in the Region

New York State

Buoyed by New York City's performance, job growth in the state exceeded the national average through August 2008. Employment trends in other downstate areas initially lagged those in New York City: In 2006 and 2007, job growth in Long Island and in the Lower Hudson Valley was approximately 1 percentage point lower than growth in the city; in the first eight months of 2008, however, it roughly equaled the city's growth. Employment upstate remained generally sluggish, with the industrial composition of employment continuing to shift to a more service-oriented economy. (The box summarizes employment conditions in selected upstate New York metro areas.)

In New York State, private sector employment expanded at a 1.2 percent pace from 2005 to 2006 and accelerated to 1.5 percent in calendar-year 2007. However, growth slowed to just 0.4 percent by August 2008 on a year-over-year basis, in conjunction with the nationwide slowing in job growth

Upstate New York Employment Trends

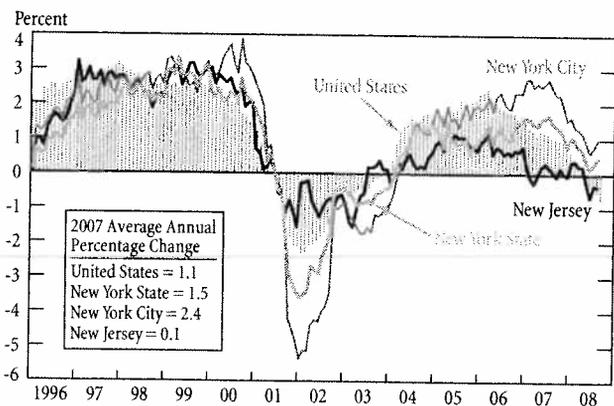
- The **Albany** metropolitan area experienced virtually no job growth in 2007 and the first eight months of 2008. The weakest sectors were manufacturing and especially financial activities, where employment fell roughly 3 percent in 2007 and is on track for a similar decline in 2008. However, this weakness was largely offset by continued job gains in education and health services as well as in professional and business services. Employment in state government has continued to expand moderately.
- Employment in metropolitan **Binghamton** expanded modestly but steadily in 2007 and early 2008 but turned down slightly over the summer. Much of the recent weakening reflects a sharp slowdown in job growth in construction. Leisure and hospitality and education and health services registered modest gains. However, moderate job losses have also occurred in manufacturing, financial services, transportation, warehousing, and utilities.
- **Buffalo** area employment, which had been little changed from 2006 to 2007, remained essentially flat in the first eight months of 2008. Construction employment has fallen sharply thus far in 2008 and manufacturing employment has continued to decline at an annual rate of roughly 3 percent. Jobs in financial activities, transportation, and utilities, however, expanded in the first eight months of 2008.
- Employment in the **Glens Falls** metro area, which had been flat during 2007, picked up in early 2008 but weakened noticeably into the summer months. Employment has leveled off in construction and leisure and hospitality, while it has turned down in professional and business services, trade, transportation, and utilities.
- Metropolitan **Ithaca** saw moderate job gains in 2007 but employment flattened in the first eight months of 2008. Job increases in education services, a key local sector, offset declines in a variety of other service sectors and in manufacturing.
- The **Rochester** area's labor market showed signs of cooling in late 2007 and into the first eight months of 2008, with private sector employment falling below prior-year levels, led by ongoing steep losses in manufacturing. Employment was also depressed by declines in financial activities, professional and business services, and leisure and hospitality. Continued job gains in education and health services, however, offset some of this decline.
- The **Syracuse** area registered moderate job growth in 2007, but employment leveled off into the summer of 2008. So far this year, there have been modest gains in construction, professional and business services, education and health services, and leisure and hospitality; job losses in manufacturing were fairly modest, placing less of a drag on growth than in other metro areas.
- Metropolitan **Utica-Rome's** labor market remained sluggish. Private sector employment was virtually flat in 2007 and was down moderately in the first eight months of 2008. Fairly steep job losses in financial activities and manufacturing more than offset gains in education and health services.

(Chart 2). The strongest growth sectors in 2007 were education and health services, construction, and business and professional services, although the latter two sectors saw a significant deceleration through August 2008. In the education and health services sector, job growth statewide exceeded expansion in the city. Information sector employment, which includes new media and motion pictures in New York City, picked up markedly in 2008 after declining in 2006 and 2007.

New York City

In 2006 and 2007, the city's job growth rate exceeded the national average—a rare occurrence in the past half-century. Private sector employment expanded 2.1 percent from 2005 to 2006 and a robust 2.4 percent from 2006 to 2007, although the pace tapered off toward the end of the year. While the year-over-year job growth rate continued to slow through the summer of 2008, it was still more than 1 percentage point above the national average in August.

Chart 2
Private Sector Job Growth in the United States and the Region
Twelve-Month Percentage Change in Employment



Sources: U.S. Department of Labor, Bureau of Labor Statistics; Moody's Economy.com.

The financial activities sector is a key driver of city employment. Jobs in the industry grew 3.0 percent in 2006 and 2.1 percent in 2007, with the number of jobs peaking in March 2008. Between March and August of this year, employment in the sector fell by about 10,000, or roughly 2 percent. Employment in the securities industry, or “Wall Street jobs,” the engine behind the city’s financial activities sector, peaked in September 2007. The timing of the peak occurred shortly after the financial market turmoil developed. Securities industry jobs weakened through August 2008, tumbling by 9,000, or about 5 percent of employment, and accounting for the bulk of the financial job losses to date.

The sharpest drop in New York City job growth occurred in professional and business services, a sector that includes such industries as corporate headquarters management, legal services, advertising, and accounting. Employment in this sector is typically boosted by demand from financial services and by an expanding national economy.⁵ In 2007, city professional and business services jobs rose by a striking 3.5 percent. By August 2008, however, jobs in this sector were up just 0.2 percent from a year earlier and were down about 2,000, or roughly 0.3 percent, from the fourth-quarter level. In contrast, continued job growth in three sectors—education and health, leisure and hospitality, and information—supported overall job growth in the city in 2008. Although growth rates in these sectors slowed moderately from their 2007 annual averages, they remained above comparable nationwide growth rates.

New Jersey

New Jersey’s industry mix is somewhat similar to the nation’s, and the state typically tracks national employment trends. In 2006 and 2007, however, New Jersey lagged the United States in job growth by more than 1 percentage point. As of August 2008, employment was down 0.3 percent from a year earlier, a drop similar to the nationwide decline. New Jersey’s finance sector has experienced significant job losses: Following a late 2005 peak, 15,000 positions had been shed as of August 2008, representing about 5 percent of sector employment. Commercial banks and mortgage firms were hit the hardest. In sharp contrast with New York City, the professional and business services sector in New Jersey registered continued growth in the first eight months of 2008: As of August, jobs were up 0.8 percent from a year earlier, matching the 0.8 percent gain for 2007. The education and health services sector has seen little or no easing in the pace of job creation. Employment in the transportation and utili-

ties sectors in August was down from the high reached earlier in the year, to roughly its August 2007 level.

Factors Shaping the Regional Employment Outlook

The overall outlook through year-end 2008 and into 2009 will depend on several factors—most notably, the performance of the U.S. economy and developments in New York City’s financial sector. These forces will, in turn, strongly influence employment trends. A weakening national economy would tend to reduce demand for the region’s traded goods and services, which include not only financial services but also professional and business services, leisure and hospitality, information services, and manufactured goods. While manufacturing has shed jobs fairly steadily, as a group these other sectors were a key source of employment growth in 2006 and 2007. The projected slowing in growth of real GDP at the national level is expected to weigh down employment prospects in the region through the end of 2008 and into 2009.⁶ (The October Blue Chip Consensus forecast projected a drop in GDP growth to 1.5 percent in calendar-year 2008, from 2.0 percent in 2007, and a further decline in growth to 0.5 percent in 2009.⁷) This effect would resonate in New Jersey and upstate New York, where the industrial composition of employment resembles that of the nation.

While national conditions will influence the path of regional employment going forward, developments and trends in New York City’s finance sector will also come into play. According to 2007 data, wages and salaries in the sector account for more than 35 percent of total city earnings. Thus, a major concern of our outlook is the extent to which the current financial turbulence will affect local employment and especially income, not just in the financial sector but in the region’s economy as a whole. The uncertainty surrounding the time path and ultimate resolution of the stresses affecting the financial markets makes it difficult to estimate these effects. For this reason, we take a different approach to the outlook, turning to past finance sector downturns in New York City to gain insight into the current turmoil’s potential influence on employment and earnings in the sector.

New York City’s Finance Sector

Employment in the financial activities sector includes workers in establishments engaged in a broad array of activities,

⁵ For every \$1 million of output in the city’s finance sector, output in the city’s professional and business services sector expands by roughly \$120,000. Input-output coefficients for New York City are available from the U.S. Bureau of Economic Analysis’ RIMS II model, <<https://www.bea.gov/regional/rims>>.

⁶ Changes in employment and income in the New York metropolitan area have been estimated to be tightly linked to similar changes nationwide. See McCarthy and Steindel (1997).

⁷ See *Blue Chip Economic Indicators* (2008). Projections reported in June by the Board of Governors of the Federal Reserve System and the regional Federal Reserve Bank presidents also see real GDP growth weakening in 2008, with projected growth rates ranging from 1.0 percent to 1.6 percent (this was the central tendency of the Board and the Bank presidents for fourth-quarter-over-fourth-quarter growth rates)—down from the 2.3 percent growth rate recorded in 2007.

such as commercial banking and securities underwriting and trading.⁸ The sector is disproportionately large in New York City: In 2007, finance jobs accounted for 12.7 percent of employment and 36.0 percent of earnings, while the shares for the nation were 6.0 percent and 10.0 percent, respectively. Employment in the city's finance sector has declined modestly since 1987. The decline in part reflects the relocation of support operations and relatively routine functions to New Jersey, other areas of the country, and other countries; the generally more modest expansion of employment during successive cyclical upturns; and job losses from mergers in the sector.

Within the financial sector, the securities industry has assumed an increasingly important role in New York City's economy. Overall, the industry accounted for 5 percent of total city employment in 2007, or roughly nine times the national average, and almost 25 percent of earnings, the highest share in the city's history.⁹ The mean annual salary in 2007 was slightly less than \$400,000. Moreover, each securities job is estimated to generate 2.3 other city jobs by spurring demand for business and professional services such as legal services, software development, and real estate, as well as other services such as hotels and restaurants.¹⁰ In addition to generating these employment effects, the securities industry is a major source of tax revenues for New York City and New York State.¹¹ Downturns in the finance sector generally—and in the narrower securities industry especially—can therefore have a sizable impact on the local and state economies.

The City's Finance Sector in Earlier Periods of Market Stress

As of August 2008, as noted earlier, employment in New York City's finance sector was down about 10,000 jobs—or approximately 2 percent—from the recent cyclical peak. There are concerns that job losses in the sector will intensify, and that the loss of income to these workers will have deleterious consequences for other areas of the city's and region's economies.¹² To assess the potential effects of the current financial turmoil on the sector's job growth prospects, we compare developments through August in the city's finance sector and in the

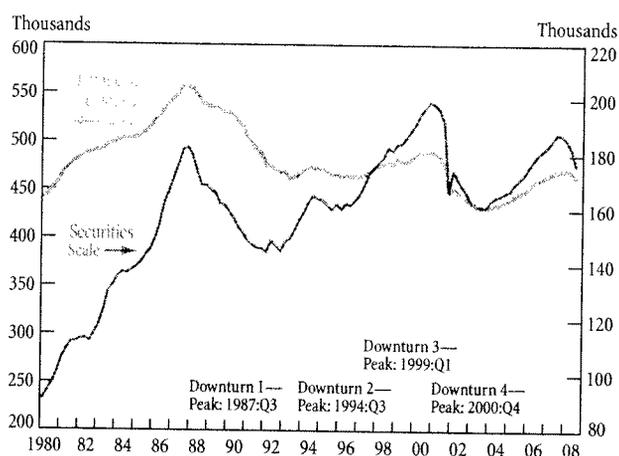
⁸ See Hyde et al. (2000) for details on the composition of New York City's finance sector.

⁹ During the late 1990s, the securities industry's share of New York City employment slightly exceeded the current level of 5 percent, but it accounted for a smaller share—20 percent—of wage and salary income. In 1990, the industry accounted for 4 percent of city employment and 11 percent of income. (Some of the earnings attributed to the securities industry could come from the securities affiliates of bank holding companies.)

¹⁰ The employment multiplier is from the U.S. Bureau of Economic Analysis' RIMS II model. <<https://www.bea.gov/regional/rims>>.

¹¹ See New York State Office of the Comptroller (2007).

Chart 3
Employment in New York City's Finance Sector



Sources: U.S. Department of Labor, Bureau of Labor Statistics; New York State Department of Labor; Moody's Economy.com; Federal Reserve Bank of New York calculations.

Note: Employment data for the securities and financial activities sectors are based on North American Industry Classification System (NAICS) definitions and are seasonally adjusted by the Federal Reserve Bank of New York; data prior to 1990 are estimated using Standard Industrial Classification (SIC) data, based on the assumption that the proportional relationship between the corresponding SIC and NAICS series prior to 1990 was constant at 1990 levels.

broader local and national economies with developments during prior periods of significant market turmoil.

We consider four distinct cyclical downturns—those starting in 1987, 1994, 1999, and 2000—in New York City's finance sector (Chart 3).¹³ The chart plots, by quarter, employment levels in the broad financial activities sector and in the securities segment of that sector; the bands indicate the peak-to-trough period in financial activities employment in each of the four cycles. The chart shows that the magnitude and timing of the employment changes varied considerably across the four cycles. Employment in the first cycle peaked in the third quarter of 1987 and was followed by a loss of about 95,000 jobs, roughly 17 percent, over the next five years. Employment in the second cycle peaked in the third quarter of 1994 and job counts were down about 10,000 over the subsequent two years. In the third cycle, employment peaked in the first quarter of 1999 with only minimal job losses in the two subsequent quarters. Employment in the fourth cycle peaked in the fourth quarter of 2000; over the following three years, about 60,000 jobs were lost, or roughly 12 percent of employment. The chart

¹² Of the 60,000 or so announced major job cutbacks by New York City-based financial firms as of May 2008, an estimated 22,000 are located in New York City. See *Crain's New York Business*, June 2-8, 2008.

¹³ New York City's Office of Management and Budget followed a similar analytical approach in its "Monthly Report on Current Economic Conditions," April 4, 2008, available at <http://www.nyc.gov/html/omb/pdf/oc03_08.pdf>.

also shows that, with the exception of the 1999 cycle, the timing and relative severity of the employment downturns in the securities industry were generally similar to those in the broader financial activities sector.

1987-93 Downturn. The cyclical downturn in the city's financial activities employment that began in 1987 was sparked by the October 1987 stock market crash. The severe and prolonged decline following the crash reflected a variety of cyclical and longer term influences, including reduced securities trading volumes and consolidation among securities firms and commercial banks. Moreover, weakness in real estate markets in the United States in the late 1980s led to sizable losses throughout the savings and loan industry and to significant reductions in the activity of thrift institutions. Financial activity and employment in the city were not on solid ground even several years after the stock market decline, and they were weakened further by the national recession that started in the third quarter of 1990.¹⁴ Not until 1993—more than five years after the onset of the downturn—did finance employment in the city begin to recover. Real earnings fell 10 percent over the 1988:Q4-1991:Q3 period before starting to recover.

1994-97 Downturn. Unlike the sharp decline in the 1987 downturn, the mild decline in the city's jobs in the 1994 financial sector downturn can be viewed as a mid-decade pause in growth. The decline was tied to an increase in interest rates leading to a slowdown in activity on Wall Street and a sharp fall-off in mortgage lending. In contrast to the 1987 downturn, stock prices and trading volumes generally held up and the national economy continued to expand. Employment losses in the city's securities sector were ultimately modest and short-lived. However, real earnings again declined—this time by 9 percent.

1999 Downturn. The brief downturn that began in the first quarter of 1999 shared a number of features with the mid-1990s slowdown. The financial crises that arose in East Asia in 1997 and in Russia in the summer of 1998 affected a number of U.S. financial firms and heightened concern about a potential widespread collapse of credit markets. However, a reduction in interest rates, a strong ongoing U.S. expansion, and a generally surging stock market throughout the period likely helped limit losses in the city's financial activities employment as well as in real earnings in the sector—earnings declined less than 2 percent.

2000-03 Downturn. New York City's steep decrease in financial activities employment during the downturn that began in 2000 initially reflected a sharply declining stock market.¹⁵ Employment losses in the sector were compounded by a national recession that began in March 2001, as well as by

the attacks of September 11, 2001, on the World Trade Center. While employment in the city's financial sector fell about 12 percent over the cycle, income declines were much sharper: Following a sharp run-up in 2000 and the first half of 2001, real earnings in the city's financial activities sector fell 27 percent over a two-year period before recovering.

Over these four downturns, financial employment losses ranged from approximately 0 percent to 17 percent while real earnings declines ranged from about 0 percent to 27 percent. The proportionately larger decline in real earnings in the 2000-03 downturn compared with the downturn in the late 1980s reflects the significant increase in average wages in the finance sector, which far outpaced earnings gains in any major sector of the economy.

Employment Outlook

The depth and duration of the current cyclical downturn in the finance sector will be an important determinant of the overall employment outlook for New York City. Our brief survey of past downturns affecting the city shows that, while each had unique features, the relatively severe downturns in 1987 and 2000 appear to have several elements in common with the current cycle. As in the current cycle, the late 1980s cyclical downturn was associated with weakness in both the housing market and financial activity more broadly. Although the job losses reported through the summer of 2008 were relatively moderate, the sharp losses that accompanied the finance sector weakness in the late 1980s might indicate that the city's finance sector stands on the verge of a significant multiyear downturn in employment and in real earnings.

The duration and magnitude of potential job losses in the finance sector, however, could be tempered by two features of the current cycle. First, the weakening in the financial sector coincides more closely with the weakening in the national economy than it did in the late 1980s. The roughly five-year decline in finance employment in the late 1980s was prolonged by a U.S. recession that did not begin until mid-1990. The current weakening appears to be following the pattern of the approximately three-year decline in financial sector employment in 2000-03, which started at about the same time as the national recession. The concurrence of the regional and national downturns now could thus limit to some degree the time period over which the losses would occur.

Second, as a result of the longstanding trend of moving many employees to lower cost locations outside the city, the financial activities sector is now composed of a larger share of relatively high-paid employees, particularly in the increasingly important securities sector. Therefore, compared with the pattern of the late 1980s downturn, the current weakness

¹⁴ See Groshen, Potter, and Sela (2004) for evidence of longer term structural changes adversely affecting employment in finance and other major industries in New York State during cyclical downturns.

¹⁵ The weakness in the financial markets began in the stock market with the sell-off in the NASDAQ in early 2000. That decline lasted for about three years, during which time the NASDAQ composite price index fell about 70 percent.

in the financial sector may be more likely to manifest itself in severe declines in income rather than in employment—a pattern more reminiscent of the decline that started in 2000. However, this outcome would also imply that the losses in real earnings would be at the higher end of the historical range, perhaps as much as, or more than, the 27 percent decline seen in the 2000 cycle, compared with the smaller income losses experienced in the 1980s and 1990s cycles.

Conclusion

Our employment outlook for the New York–New Jersey region suggests substantially smaller job gains in calendar-year 2008 than the 35,000 net new jobs recorded in 2007. The outlook assumes that the Blue Chip Consensus forecast will be on target with its projection of a slowing in the nation’s real GDP growth in 2008, and that the current financial turmoil will weaken employment in the city’s finance sector.

The uncertainty surrounding the national economy and the unfolding of events in the financial markets influences our outlook for employment. If growth of the U.S. economy falls short of expectations, employment in a number of the region’s sectors, including manufacturing, would decline significantly. These effects would be especially pronounced in upstate New York and New Jersey. The key downside risk to New York City is that the recent sharp deterioration in financial market conditions will not be reversed in the near term and that the finance sector—particularly the securities industry—will continue to weaken.

Through August 2008, the payroll employment figures did not fully reflect the numerous lay-off and restructuring announcements in the local and national media in the first half of the year (and, of course, did not incorporate more recent announcements). In addition, high bonus payments

to finance industry workers in late 2007 and early 2008 had at the time mitigated some of the potential negative effects working through the finance sector to the broader economy. In any case, it is clear that the marked contraction in financial activity that could arise from the ongoing stress in the financial markets will likely deter employment and income generation in the sector. Thus, given the great importance of the sector for the city and the broader New York–New Jersey region, there will be negative repercussions for employment and income in the area. The risk going forward is that continued, or intensified, contraction in the finance sector could substantially affect other sectors of the region’s economy.

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We are saddened to announce the death of Leonardo Bartolini, coeditor of *Current Issues in Economics and Finance* and a senior vice president in the International Research division of the Bank’s Research and Statistics Group. A highly respected analyst of global economic and monetary policy issues, Leonardo was very effective in encouraging his fellow economists to make their technical research accessible to a broad audience by publishing in *Current Issues*. In working with authors, he was quick to see the strengths in their papers and adept at providing constructive suggestions to remedy the weaknesses. We remember him as a person of expert and fair judgment and as a warm and generous friend.

—The editor and staff of *Current Issues*

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Current Issues

IN ECONOMICS AND FINANCE

SECOND DISTRICT HIGHLIGHTS

The Price of Land in the New York Metropolitan Area

Andrew Haughwout, James Orr, and David Bedoll

The price of vacant land in an urban area is a fundamental indicator of an area's attractiveness. However, because the value of vacant land is hard to measure, indirect methods are typically used to gauge prices. A more direct approach to measuring land prices, using a unique data set, reveals that the price of unimproved land in the New York area is high, and rose sharply from 1999 to 2006. The rising trend suggests the underlying strength of the area's economy and the increasing value of the area's productivity and amenities.

On November 1, 2000, a 3.4-acre parcel of land at 10 Columbus Circle in Manhattan sold for \$345 million, or roughly \$2,300 per square foot.¹ The parcel is located 1.3 miles from the Empire State Building at the southwest corner of Central Park, and housed an exposition and convention center known as the New York Coliseum. The buyers quickly demolished that complex to make way for construction of the Time Warner Center, a 2.8-million-square-foot, largely commercial development that includes two office towers, a hotel, retail stores, and a parking garage. The Time Warner Center is now one of the most valuable properties in New York.

Physical space is a requirement for all types of economic activity, from housing to manufacturing and service production, making the value of land an important feature of any economy. The high price of the Columbus Circle property reminds us that the price of land in an urban area is a fundamental measure of the area's attractiveness. Moreover, changes in the value of land over time and space can provide insight into a host of important regional and macroeconomic issues. However, because land often comes bundled with a structure—and thus is generally not priced separately in a real estate transaction—its value is difficult to measure.

Although comprehensive data on the price of residential land are sparse, there is a common belief that prices rose sharply in the United States in recent years. Over the ten-year period ending in 2007, the widely cited Office of Federal Housing Enterprise Oversight (OFHEO) measure of home prices almost doubled nationally and rose 160 percent in the New York metropolitan area—substantial increases that suggest a jump in both the price of land and the price of houses.² While some of the factors that account for the rapid run-up in residential property prices, such as significant improvements to the housing stock in the form of renovations and additions, reflect the increasing amount of capital on the land, other factors—including market optimism, low interest rates, and generally sound economic fundamentals—would also drive up the value of land.³

Precise data on land sales have largely been lacking, however, and analysts have turned to indirect methods to measure land prices. Recent studies, for example, have sought to capture changes in the price of residential land as a weighted difference between changes in overall house price appreciation and changes in home construction costs.⁴

¹ Source: CoStar Group (<<http://www.costar.com>>).

² The OFHEO index is a measure of home price appreciation that controls for the quality of units by using a repeat-sale methodology.

³ See McCarthy and Peach (2004).

In this issue of *Second District Highlights*, we take a more direct approach to measuring land prices. Specifically, we rely on a unique data set—one that, to date, has been used primarily by brokers, developers, owners, and appraisers—to calculate and analyze the price of land in the New York metropolitan area (Box 1).⁵ The data set's detailed information on land transactions in the area from 1999 on allows us to identify purchases of vacant parcels of land or parcels with structures that the buyer intends to remove.⁶ Isolating these purchases from the larger pool of land transactions is important because in these instances, the asset that the buyer values is strictly the land, not any structure that may be present. Apart from any demolition costs, the price of these properties thus provides a pure measure of the value of a particular location at a point in time. Moreover, because the purchase of land gives the new owner an option to build the optimal structure, subject to local regulations, the price of the parcel reflects the buyer's expected return on the development of the site. Changes in the price of land over time thus potentially offer insight into expectations of the future state of a local economy and the real estate market.

We find that the price of raw, or unimproved, land in New York is very high. Indeed, we estimate that the price of an acre of raw land near the Empire State Building rose sharply between 1999 and 2006 and was more than \$90 million in mid-2006.⁷ Moreover, proximity to the center of the metro area is extremely valuable, and firms and households are willing to pay a sizable premium to locate in or near Midtown Manhattan.

Land Transactions in the New York Metropolitan Area

Conventional wisdom holds that vacant land is rare in urban areas, particularly in the New York area. Of the 6,186 land sales we examine between 1999 and mid-2006, 623 transactions or roughly 10 percent, were in Manhattan and 1,639, or about 25 percent, took place in the other parts of New York City; the remaining sales took place in northern and central New Jersey. Overall, vacant land transactions occurred throughout the region, with a heavy concentration in the most densely developed areas (see map).

Prices reflect the relative scarcity and desirability of vacant land. In the New York area, the average price of land transactions rose sharply during our sample period (see table). Note, however, that the figures in the table are not adjusted for any charac-

⁴ See Davis and Heathcote (2007) and Davis and Palumbo (2006).

⁵ For this article, we define the New York metro area as four boroughs of New York City—the Bronx, Brooklyn, Manhattan, and Queens—and ten counties in northern and central New Jersey. We exclude Staten Island, the fifth New York City borough, because transaction data are unavailable.

⁶ The earliest year for which there is adequate coverage of land transactions is 1999; we end the sample period at June 30, 2006.

⁷ Note that because our sample period ends in 2006, we do not address the effects of the current turmoil in the housing market.

Box 1

Data Set and Methodology

Our analysis of land transactions uses "COMPS," a micro data set of commercial real estate transactions produced by the CoStar Group.⁸ The CoStar Group compiles the data—including information on both the terms of the sales and the characteristics of the properties sold—from the public records of buildings departments and other government agencies, supplemented by selected field surveys of the properties and by telephone interviews of parties to the transaction. Transactions are added to the data set as they are identified, making the data as timely as possible. Sales below \$250,000 are largely omitted. The data set is thus a rich and unique source of detailed information.

Although COMPS covers real estate transactions of many kinds, we restrict our analysis to land purchases—transactions in which the buyer is solely or primarily interested in the parcel of land rather than any structures on it. This set of transactions involves vacant plots or plots with unoccupied structures slated for demolition and replacement by new construction; we exclude any property with occupied structures. Our sample, for the period from 1999 to mid-2006, consists of more than 6,000 individual land transactions in the New York metropolitan area.

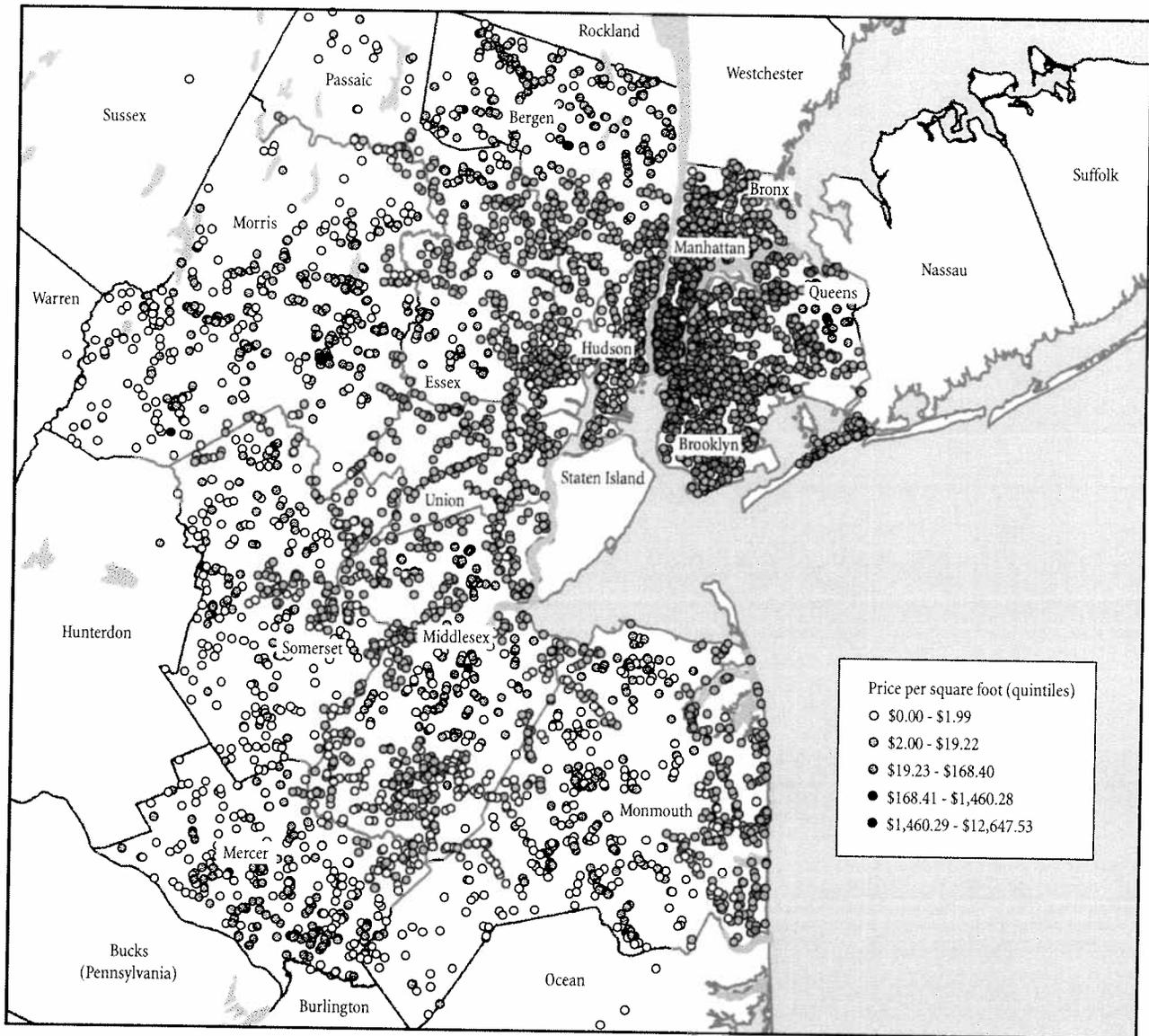
The characteristics of the land transactions that we obtain from the data set include the sales price and size of the property, the transaction date, and the exact location (latitude and longitude as well as political jurisdiction) of the property. These data allow us to calculate a price per square foot of land at a particular location at a particular date. In addition, for each transaction, the data set reveals whether the land has been graded, paved, finished, or improved in any way; and what use is planned for the land—for example, residential, commercial, or industrial development; investment; or open space. The data set also includes information on whether the transaction represents an exercise of eminent domain, a condemnation, or an estate or bankruptcy sale.

⁸The CoStar Group is a provider of information services to commercial real estate professionals in the United States and the United Kingdom (see <<http://www.costar.com/>>).

teristics of the land being sold, and thus should be interpreted with caution. For example, as we observe later, the value of land is influenced significantly by its level of preparation for building. If the earlier years of our sample were dominated by sales of raw land and the later ones by more finished parcels, then the figures would overstate the "true" growth in land values over the period by reflecting in part the value of site preparation.

A key feature of a parcel of land typically associated with its price per square foot is distance from the city center—parcels closer to the center are expected to command a higher price. To gauge whether this *distance gradient* is present in our data, we

Location and Price of Land Transactions in the New York Metro Area, 1999 through Mid-2006



Source: Federal Reserve Bank of New York, based on an analysis of CoStar Group data, April 2008.

Note: The New York metro area considered is the region defined in footnote 5.

plot the price per square foot of land and the distance, in kilometers, from the center of the New York metropolitan area (Chart 1). We designate the Empire State Building as the center because it is the site of the most intensive land use in the region, with 2.8 million square feet of office space on less than two acres, or 87,120 square feet, of land. The chart indeed shows a generally inverse, nonlinear relationship between price and distance from the city center, with prices highest very close to the Empire State Building. The chart also suggests a wide and growing variation in prices at any given distance

from the city center.⁸ While the chart, like the table, does not control for any characteristics of the transaction, the land, or the land's surroundings, it is interesting to note that the distance gradient is evident even when one does not account for any of these factors.

⁸ Because the area described at a given distance from a fixed point grows as distance grows, we would expect variation to increase with distance. Not surprisingly, local conditions, and thus prices per square foot, are also more variable at greater distances from the city center.

Average Price of Land in the New York Metro Area, 1999-2006

Year	Price (Dollars per Square Foot)
1999	46.65
2000	55.65
2001	88.94
2002	71.95
2003	103.71
2004	150.63
2005	248.30
2006	366.08

Source: Federal Reserve Bank of New York, based on an analysis of CoStar Group data, April 2008.

Notes: Data for 2006 are through June 30. The New York metro area considered is the region defined in footnote 5.

Determinants of Land Prices

Land brings with it a broad range of attributes, and purchasers of land make bids that reflect their evaluation of these attributes. The set of relevant attributes includes the characteristics of the land, such as its topography and acreage, as well as access to valuable nonland attributes such as jobs, schools, and consumption opportunities. The price of a parcel of land therefore measures not only demand for the land as an input into the production of residential or commercial buildings, but also demand for these nonland attributes. In addition, because land is very durable, its price at any time has a forward-looking component associated with expected future changes in both the supply of these attributes and their value to users.

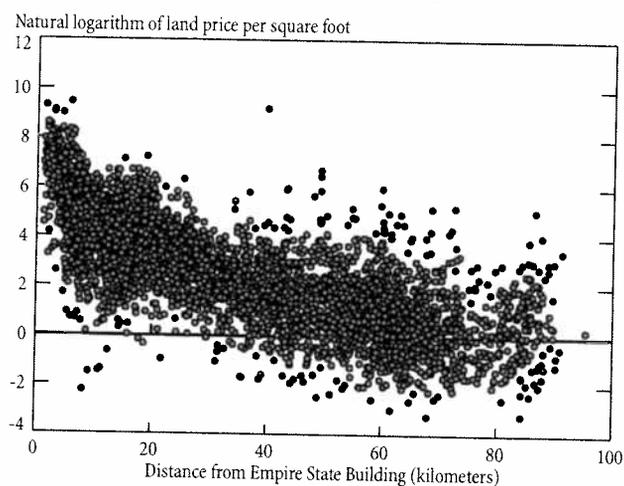
Vacant land is a unique commodity because, in addition to the attributes described, it offers its owner a low-cost option to build the optimal structure at the optimal time. The value of this option, reflected in the difference in price between developed and vacant land, will rise in times of uncertainty.⁹ Recent evidence of an increase in “teardowns”—the process by which developed land can be converted back to vacant land—suggests that the value of this option has also increased in recent years, an idea that we consider later.

An Empirical Model of Land Prices

To analyze the determinants of land prices, we rely on a regression framework that relates the sales price of a particular plot to the attributes of the land and to any special conditions of the sale (Box 2). This framework enables us to isolate changes in the price of raw land over space and time. Specifically, our data on land sales between 1999 and mid-2006 enable us to estimate how the price paid for the land is affected by the property's observable characteristics, including its condition and the county where it is located; details of the transaction, such as whether the land was sold as part of a foreclosure; the expected use of the land—industrial, commercial, or residential; and

⁹ See Titman (1985).

Chart 1
Land Prices and Distance of Property from Empire State Building



Source: Federal Reserve Bank of New York, based on an analysis of CoStar Group data, April 2008.

Note: Land prices in the data set range from \$.04 to more than \$12,000 per square foot.

whether the property had an existing structure.¹⁰ The presence of a structure that will be removed has complex effects on land prices. Because the structure will be costly to remove, its presence should serve to reduce prices. However, the fact that someone has already invested in a structure on a particular plot indicates a particularly good location, implying a higher price. Our location variables—county and distance from the Empire State Building—are imperfect measures of this locational effect. Because the differences among locations are largest near the fringe of the metro area, this locational effect should also grow in distance from the center. Accordingly, as a proxy for the unobserved quality of a location, we also separately estimate the distance effect for properties that have structures present at the time of sale.

To account for the fact that the transactions in our data set occurred in different time periods, we include variables in our regression for the year and quarter in which the transaction took place. Estimates of these time effects control for the characteristics of the properties being sold each quarter and thus capture the “pure” increases in the price of land over time. We also control for the distance of the plot from the center of the metro area, the Empire State Building. These estimates provide insight into the usefulness of the land-value data set we have constructed and enable us to isolate the way in which land prices evolve over time and space.

The findings derived from our model and estimates are consistent with conventional theory on land price determination. Residential property was found to sell for a slightly higher price

¹⁰ Approximately 10 percent of parcels are identified as having an existing structure at the time of sale.

Box 2

Land Price Model

We estimate the determinants of land prices in the New York metropolitan area by using a straightforward linear regression model of land prices:

$$P_{i,j,t} = c + \gamma_j + \alpha_t + \theta_{j,t} + \varphi_j d + \beta_k X_{i,k} + \varepsilon_{i,j,t},$$

where the dependent variable, $P_{i,j,t}$, is the natural logarithm of the price paid per square foot for property i of type j in time period t ; γ_j is the price effect for property type j (j = commercial, industrial, and residential); α_t is a separate price effect for each quarter (t) in our time period (t = 1999:1-2006:2; 1999:1 is the omitted quarter); $\theta_{j,t}$ is the combined price effect of property type and time (j, t combinations are, for example, residential property in 1999:2, residential property in 1999:3, commercial property in 1999:2); d is the distance in kilometers of the property from the Empire State Building and φ_j is the effect of distance on the price of type j property; $X_{i,k}$ is a set of k property characteristics

and β_k is a set of coefficients that summarize the relationship between the sales price and the k th property characteristic; and $\varepsilon_{i,j,t}$ is a random error term.

The coefficients on the time dummies, α_t , give the change in the average price of vacant land each quarter relative to 1999:1, controlling for the characteristics of the property. Because a potentially large number of property characteristics and interactions exist, we estimated a variety of specifications and used statistical tests to select among them. The variables (X_j) and the estimated coefficients (β) for this preferred specification are presented in the table below. Note that this specification includes time dummies for only the quarter and year of the transaction and does not include interactions of time with the property characteristics. The regression is weighted to control for the possibility that the variability of prices increases with distance from the city center, as explained above.

Model Estimates: Regression Results for Land Prices in the New York Metro Area

Dependent Variable: Natural Logarithm of Land Price per Square Foot

Constant	6.82 (0.19)	Characteristics of transaction	
Type of property ("commercial land" is omitted category)		Lot sold as part of expansion plans by buyer	0.17 (0.07)
Residential land	0.09 (0.25)	Foreclosure transaction	-0.38 (0.17)
Industrial land	-0.75 (0.23)	Eminent domain transaction	0.38 (0.18)
Condition of property ("unimproved" is omitted category)		Lot has significant environmental problems	-0.81 (0.14)
Lot is graded	0.45 (0.06)	Lot was not sold on the open market	0.04 (0.06)
Lot is paved	0.45 (0.09)	Intended use ("private development" is omitted category)	
Lot is "finished"	0.45 (0.05)	Buyer intends to hold lot for investment	-0.21 (0.07)
Lot is "fully improved"	0.38 (0.07)	Lot is intended for public use	-0.48 (0.08)
Lot was previously developed	0.55 (0.06)	Lot will be held as open space	-1.24 (0.08)
Lot is currently "partially developed"	0.55 (0.31)	Intended use unknown	-0.19 (0.07)
Lot is platted and engineered	0.23 (0.37)	Location	
Lot has a structure present	-0.11 (0.19)	Natural logarithm of distance from ESB	-0.95 (0.05)
Structure present * natural logarithm of distance from ESB	0.03 (0.07)	Natural logarithm of distance from ESB * residential land	-0.32 (0.04)
Improvements not available	0.23 (0.05)		

Source: Federal Reserve Bank of New York, based on an analysis of CoStar Group data, April 2008.

Notes: Standard errors are in parentheses. ESB is Empire State Building. The adjusted R^2 of the regression is 0.76. A regression replacing the quarterly dummy variables with separate time trends for commercial, industrial, and residential properties yields similar results, with quarterly appreciation rates of 3.4 percent for the commercial and industrial parcels and 5.5 percent for the residential parcels. All regressions also include county dummies. The estimated quarterly dummies are plotted in Chart 2. The New York metro area considered is the region defined in footnote 5.

than commercial property; industrial land commanded a significantly lower price than land designated commercial or residential. Land that was improved—graded, engineered, or finished—was worth more than unimproved land, with the price differential depending on the extent of the improvement. Land with an existing structure sold for less than unimproved land, although the effect was not statistically significant, while land with an existing structure further from the city core sold for more than unimproved land. Although this last finding suggests that the presence of a structure on parcels further from the core proxies for unobserved location quality, the effect is also statistically insignificant.

We also found that land that was known to have environmental problems, that was being purchased for public use or for open space, or that was expected to be held for investment purposes was significantly less valuable than land intended for immediate private development. More surprisingly perhaps, when we controlled for the land's intended use, our calculations showed that land purchased through exercise of the public sector's power of eminent domain sold for a somewhat higher price than land purchased on the open market.¹¹ Land that was the subject of a foreclosure sold at a discount. Moreover, after controlling for distance from the city center, we found that the county in which the parcel was located had a significant effect on price, suggesting that county-specific factors such as zoning, impact fees, and permit costs play an important role in determining land prices.

Significantly, even after we controlled for all of these features of the property and the transaction, vacant land prices in the New York metropolitan area were seen to decline with distance from the core, and the magnitude of the effect suggests a relatively rapid depreciation. In addition, the price of unimproved land increases sharply over our seven-and-a-half-year sample at all locations for which we have data. Our full analysis, however, suggests that the average price increases reported in the table indeed overstate the actual increases in raw land prices over the period. We now consider these results in more detail.

Factors Driving New York Metro Area Land Prices

Two factors affecting land prices merit special attention. The first is the strong declining distance gradient that we find. This distance effect is consistent with the conventional economic view that the value of proximity to a central business district is "capitalized" into the price of a parcel of land. The effect is very strong in New York. We estimate that a parcel located five miles from the Empire State Building commands a price that is about twice as high as the price of a parcel ten miles away, all else being equal. This steep distance gradient reflects the unique role that Manhattan plays in the region's economy. Proximity to the center of the region is very valuable, and firms and house-

holds are willing to pay a large premium to locate in or near Midtown. The unique features of the region's geography—namely, the city's Hudson River border with New Jersey—also suggest a sharp drop-off in price in the first few miles, as locations near the Empire State Building and within the city can access the core while avoiding a river crossing.¹² The proximity premium is especially high for land to be used for residential purposes, perhaps reflecting the fact that space for residences is relatively sparse in Manhattan and nearby.¹³

A second factor worth noting is that, even after we control for the changing characteristics of the property sold, the price of land rose sharply during our sample period. Commercial and industrial land began the period rather sluggishly, with growth slow or negative until about mid-2003 (Chart 2). As of 2003:1, the price of a square foot of raw land intended for commercial use in Midtown Manhattan was almost precisely the same as in 1999:1. Indeed, the only statistically and economically significant deviations from the 1999:1 price were declines in 2000:4 and 2001:1, quarters that coincide with the onset of a local recession (the shaded band in the chart), and in 2001:3 and 2001:4 in the wake of the September 11 attack on the World Trade Center.¹⁴ In both instances, prices bounced back relatively quickly, and by mid-2002 they had largely returned to their baseline level. Then, in 2003:3, as the local economy began to recover from the recession, commercial and industrial land prices began to rise fairly steadily, and by mid-2004 these differences were statistically and economically significant. Note that there were a number of zoning changes over this period that could have raised the value of commercial and industrial land.¹⁵ At the close of the period, vacant land designated for both commercial and industrial use had more than doubled in value from 1999:1 levels.

According to our estimates, vacant land intended for residential use increased even more sharply in value, rising more than five-fold in the New York metropolitan area between 1999:1 and 2006:2. This increase far exceeds the roughly 130 percent jump in residential property prices over the period.¹⁶ The rise in

¹² Technically, we measure the effect of increasing distance within each county, which partially controls for the effect of river crossings.

¹³ Our finding that land prices decline as distance from the center increases is not a direct test of the validity of the monocentricity of the New York metropolitan area. Indeed, such a test would also involve looking for local peaks in land prices. See Anas, Arnott, and Small (1998).

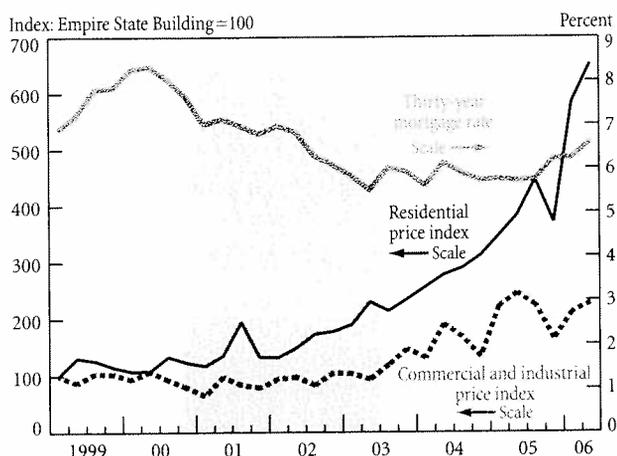
¹⁴ An index of coincident economic indicators developed by economists at the Federal Reserve Bank of New York shows that a cyclical peak in activity occurred in November 2000 in New Jersey and in January 2001 in New York City; the recovery began in February 2003 in New Jersey and in June 2003 in New York City. The index is available at <http://www.newyorkfed.org/research/regional_economy/coincident_summary.html>.

¹⁵ For a discussion of the shortage of residential space in New York City, see Glaeser, Gyourko, and Saks (2005).

¹⁶ The figure is based on the repeat home sales data reported by OFHEO.

¹¹ Note, however, that land purchased through eminent domain and intended for public use is less valuable than land bought for private development.

Chart 2
Index of Land Prices in the New York Metro Area



Sources: Federal Reserve Bank of New York, based on an analysis of CoStar Group data, April 2008; Moody's economy.com.

Notes: The New York metro area considered is the region defined in footnote 5. The shaded band indicates the downturn in the New York City economy, which began in 2000:4 and ended in 2003:2.

residential land values began in 2001, somewhat earlier than the increase in commercial and industrial land values, and was more consistent over the period. Rising residential land prices throughout the local recession are consistent with the expected effects of the roughly 150 basis point decline in residential mortgage rates over the period (the thirty-year mortgage rate in Chart 2). Indeed, the only major departure from this steadily rising trend occurred in 2005:4, and was quickly reversed. The relatively flat prices for commercial and industrial land that held until the local economy rebounded in 2003, however, suggest that improved economic growth contributed importantly to the rise in the value of these parcels.

Conclusion

Our analysis of vacant land transactions in the New York metropolitan area between 1999 and mid-2006 finds that about

10 percent of sales occurred in Manhattan and more than 25 percent took place within New York City. The detailed characteristics of each transaction enabled us to obtain a relatively pure measure of the price of land for residential, industrial, and commercial use, and to demonstrate how the price of land varies over space and time. In particular, we observe a relatively sharp decline in land prices with distance from the Empire State Building, our assumed center of the metropolitan area, and an upward movement in prices over time.

We interpret the rising price of sites for constructing businesses and residences as a key indicator of the strength of the area's economy and the increasing value of the productivity and amenities of a location in the region. Our estimated price trends suggest that the area's desirability for all types of activities increased sharply beginning in mid-2002, as the region emerged from a recession and the disruptions of the September 11 attack on the World Trade Center. The region's increasing land prices also indicate a rise in the perceived value of owning vacant parcels as potential building sites to meet future property demands. The numerous ongoing conversions of existing property throughout New York City suggest that the value of this option may be particularly high in the city.

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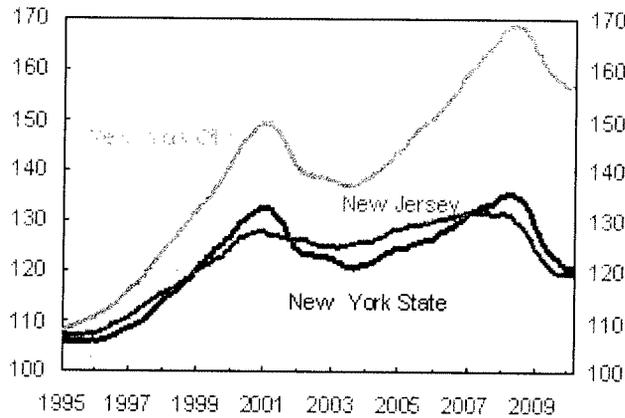
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Indexes of Coincident Economic Indicators (CEI) for the New York-New Jersey Region

1995 to present

July 1992 = 100



Our Indexes of Coincident Economic Indicators (CEI) for February show a slight uptick in economic activity in New York State and New York City, but a modest decline in activity in New Jersey.

Background

A coincident index is a single summary statistic that tracks the current state of the economy. The index is computed from a number of data series that move systematically with overall economic conditions. A rise in the index indicates an expansion of economic activity and a decline in the index indicates a contraction in economic activity. Each of the regional indexes is computed using data on employment, real earnings, the unemployment rate and average weekly hours worked in manufacturing. The estimated New York State, New York City, and New Jersey Coincident Indexes are then calibrated to match the mean and standard deviation of their respective real earnings series.

For more information, see:

Two New Indexes Offer a Broad View of Economic Activity in the New York-New Jersey Region [PDF](#)

By James Orr, Robert Rich and Rae Rosen, Current Issues in Economics and Finance 5 (14), Oct 1999, 6 pages ; 322 kb

Is the Worst Over? Economic Indexes and the Course of the Recession in New York and New Jersey [PDF](#)

By Jason Bram, James Orr, Robert Rich, Rae Rosen, and Joseph Song, Current Issues in Economics and Finance Second District Highlights (L5) 5, September 2009, 7 pages / 371 kb

For further questions, contact James Orr, (212) 720-5491, or Rae Rosen, (212) 720-1935.

Other Regional Economic Activity Indexes

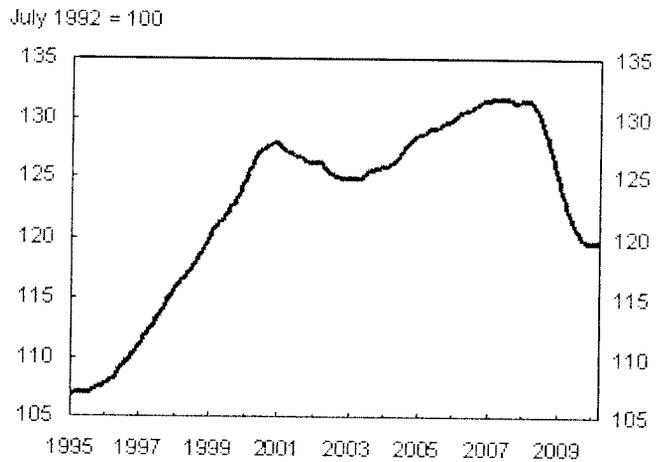
Economic Activity Indexes for PA, NJ, and DE [OFFSITE](#)

Philadelphia Federal Reserve Bank

Coincident and Leading Economic Indicators for Texas [OFFSITE](#)

Dallas Federal Reserve Bank

New Jersey Coincident Economic Index 1995 to present



In February, the New Jersey Index of Coincident Economic Indicators (CEI) decreased at an annual rate of 0.4%, following a 0.3% increase in January. The index is down 3.5% over the past year.

Historical Data

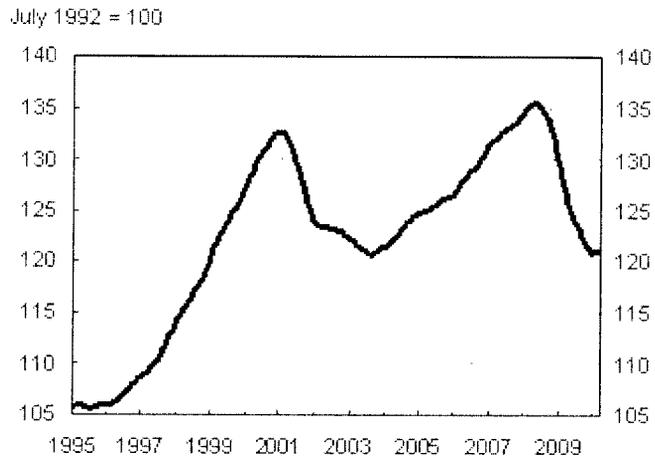
View chart:

[From 1965 to present >>](#)

[From 1965 to present with recession shading >>](#)

[Download data \(1965 to present\): Excel | text](#)

New York State Coincident Economic Index 1995 to present



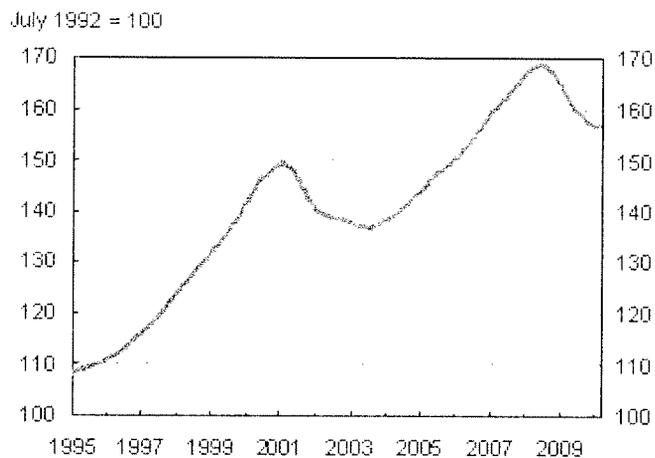
In February, the New York State Index of Coincident Economic Indicators (CEI) increased at an annual rate of 0.8% following a 0.3% increase in January. The index is down 5.4% over the past year.

Historical Data

[From 1965 to present >>](#)

[From 1965 to present with recession shading >>](#) [Download data \(1965 to present\): Excel | text](#)

New York City Coincident Economic Index 1995 to present



In February, the New York City Index of Coincident Economic Indicators (CEI) increased at an annual rate of 0.3%, following a similar increase in January. The index is down 3.9% over the past year.

Historical Data

View chart:

[From 1965 to present >>](#)

[From 1965 to present with recession shading >>](#)

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FACTS & TRENDS

FEDERAL RESERVE BANK OF NEW YORK

Vol. 2, No. 1 ▶ April 2009

www.newyorkfed.org/regional

Subprime mortgage conditions remain a concern upstate, where six counties with large urban centers account for half of the loans in foreclosure. When foreclosure levels are scaled to housing density, however, the relative severity of these concentrations declines. Moreover, the loan characteristics of mortgages in foreclosure reveal striking similarities in underwriting patterns across the region.

A Look at Upstate New York's Subprime Mortgages in Foreclosure

In upstate New York, the number of home mortgages in foreclosure continues to be a concern.¹ Homeowners who are struggling to make or have fallen behind on their mortgage payments may require mortgage counseling, loan modifications, or other forms of assistance in order to avoid foreclosure. Yet the challenges of how best to plan, scale, and prioritize such assistance are complicated by the sheer size and diversity of upstate. The lack of timely and complete loan data is another complicating factor.

This issue of *Facts & Trends* attempts to put upstate New York's foreclosure conditions in perspective by examining a segment of the region's subprime mortgages for patterns of relative distress and providing information on the characteristics of the loans.^{2,3} A key goal is to help local housing service providers identify the upstate counties with higher levels of subprime mortgages in foreclosure. In addition, by presenting current information on these mortgages, our analysis strives to broaden the understanding of the characteristics of loans in foreclosure and of the factors that distinguish these loans from others.

We find the highest concentrations of subprime mortgages in foreclosure (Tier 1) in upstate counties with large urban centers.⁴ However, when we scale foreclosure levels to different housing densities, the relative severity of the Tier 1 subprime mortgages diminishes. Our examination of the loan characteristics of these mortgages uncovers striking similarities in underwriting characteristics among subprime mortgages across the entire region. Even when we disaggregate the loans by their foreclosure status—revealing slightly more rigorous underwriting characteristics among loans not in foreclosure—the pattern is consistent across the region.

An Overview of Upstate's Subprime Mortgage Portfolio

The extent of upstate's mortgage foreclosure problem is difficult to evaluate because there is no single complete and accurate data source. To address this shortcoming, we use a data set that collects consistent and timely information for securitized subprime mortgages on owner-occupied properties across the nation (see "About the Numbers"). As a result, our analysis is based on a snapshot of a subset of upstate home mortgages—approximately 30,000, of which about 2,000 were in foreclosure on December 31, 2008.



Insofar as our data accurately reflect the larger reality of upstate New York's mortgages, we can identify patterns of relative subprime mortgage concentration.

- Upstate New York has fewer subprime mortgages than New York State as a whole or the nation. The forty-eight upstate counties have a ratio of 11 subprime mortgages per 1,000 housing units, compared with 15 for the state and 18 for the nation.
- In terms of foreclosures, the subprime loans we analyzed in upstate New York are performing better than those we examined in the state and the country. The share of subprime mortgages in foreclosure is 7 percent—considerably less than 14 percent for New York State and 12 percent for the nation.

Upstate Counties with the Most Subprime Mortgages in Foreclosure

Bearing in mind the size and diversity of upstate New York, we assess the relative severity of subprime mortgages in foreclosure using two measures. The first measure is the absolute number of such mortgages, which, while incomplete, can be useful in gauging the scale of potential homeowner assistance; the second is the ratio of subprime

mortgages in foreclosure per 1,000 housing units (the "foreclosure-to-housing-units ratio"), a preferred measure for comparing areas with different housing densities.

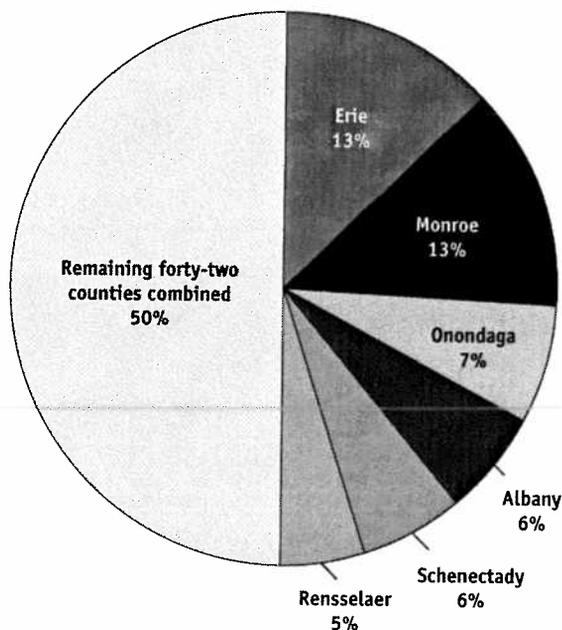
Measuring Severity by Level of Subprime Mortgages in Foreclosure

Ranking upstate counties by the absolute number of subprime mortgages in foreclosure, we find that half of the loans are located in just six of upstate New York's forty-eight counties (see chart).

When we plot these data by county, we find pockets of relatively high concentrations of subprime mortgages in foreclosure (see map, page 3).

- Monroe and Erie counties account for about a quarter of upstate's subprime mortgages in foreclosure, with more than 200 each.
- Another quarter of upstate's subprime mortgages in foreclosure is represented by Onondaga, Albany, Schenectady, and Rensselaer counties, with between 100 and 199 each.
- The remaining half of upstate's subprime mortgages in foreclosure is spread across forty-two counties, with each having fewer than 100.

Percentage of Upstate New York's Subprime Mortgages in Foreclosure, by County
December 31, 2008



Source: First American CoreLogic, LoanPerformance data.

Adjusting Severity for Different Housing Densities

The higher concentration of subprime mortgages in foreclosure found in a small number of counties reflects in part their higher housing densities. Using a foreclosure-to-housing-units ratio to control for such differences, we find that the severity of subprime mortgages for Tier 1 counties is less pronounced (Table 1).

Table 1
Upstate New York's Ratio of Subprime Mortgages in Foreclosure per 1,000 Housing Units, by County
December 31, 2008

Tier	County	Ratio
1	Erie	0.7
	Monroe	0.9
2	Onondaga	0.7
	Albany	1.0
	Schenectady	1.8
	Rensselaer	1.7
3	Remaining forty-two counties combined	0.7

Source: First American CoreLogic, LoanPerformance data.

Note: Subprime mortgages are defined in endnote 3; tiers are described in endnote 4.

Concentration of Upstate New York's Subprime Mortgages in Foreclosure
December 31, 2008

- Tier 1 (200 or more)
- Tier 2 (100 to 199)
- Tier 3 (Fewer than 100)



Source: First American CoreLogic, LoanPerformance data.

Note: Tiers are described in endnote 4.

Loan Characteristics of Upstate New York's Subprime Mortgages

We now examine several loan characteristics of upstate's subprime mortgages and consider how these characteristics vary geographically. These characteristics, available in the data set we analyzed, have been examined by other researchers as indicators of the future riskiness of loans.⁵

Our comparison of the Tier 1 portfolio with Tier 2 and Tier 3 portfolios shows that the loan characteristics of each tier are strikingly similar, regardless of the concentration of subprime loans in foreclosure. Additionally, when we disaggregate the loans according to their foreclosure status, we find differences between loans that are in foreclosure and those that are not; however, these differences are consistent across tiers. Accordingly, we combine the data values for all three tiers and present a single set of loan characteristics for upstate New York (Table 2, page 4).

Placing upstate New York in a broader geographic context, we also compare the loan characteristics of subprime mortgages upstate with those of New York State and the nation. We again find striking similarities—and a few notable differences:

- Properties in upstate New York have considerably lower loan values than those in New York State or the United States, reflecting the lower property values in the region.
- Certain loan characteristics—such as the combined loan-to-value ratio at origination, including junior liens, and borrower credit score at origination—are fairly similar across upstate New York, New York State, and the country. However, they are consistently weaker for loans in foreclosure than for those not in foreclosure.
- In the three regions, the share of loans lacking complete documentation is consistently higher for mortgages in foreclosure than for other mortgages. However, upstate's share of no-doc/low-doc loans is noticeably lower than that of the state or the nation.

Table 2

**Subprime Mortgage Characteristics
December 31, 2008**

	Upstate New York		New York State		United States	
	In Foreclosure	Not in Foreclosure	In Foreclosure	Not in Foreclosure	In Foreclosure	Not in Foreclosure
Mean appraised value of collateral property (thousands of dollars)	134	125	443	368	280	231
Mean loan amount (thousands of dollars)	111	101	356	270	227	177
Mean combined loan-to-value (CLTV) ratios at origination ^a	87	85	88	79	88	83
Mean FICO score at origination	599	614	629	631	615	618
Percentage with no/low documentation	30	26	64	41	44	30
Loans in data set (thousands)	2	28	18	105	280	2,000

Source: First American CoreLogic, LoanPerformance data.

Notes: Subprime mortgages are defined in endnote 3. FICO scores are used by lenders to assess the credit risk of prospective borrowers. Means and percentages were calculated using all available data; however, in some cases, missing data caused the number of loans used in the calculation to differ from the actual number.

^aCLTV ratios capture only the information reported by the first lender on second, or “piggyback,” loans made at the time of origination. In our upstate sample, 11 percent of the loans included multiple-lien data. Home equity lines of credit are not captured in our CLTV ratios.

About the Numbers

The loan data source is First American CoreLogic (for more information, see <<http://www.newyorkfed.org/regional/subprime.html>>). The loan figures are based on December 31, 2008, data for active, first-lien, owner-occupied mortgages placed into a security assigned a grade of subprime. The underlying data do not represent every subprime mortgage, whether in a portfolio or security. We estimate that as of year-end 2007, there were 7 million subprime loans in the United States. The underlying data contained 3.3 million active subprime loans, suggesting a coverage ratio of 47 percent. Total housing units data are 2008 estimates prepared by GeoLytics (<<http://www.geolytics.com>>). The map was created using ESRI software (<<http://esri.com>>).

Notes

1. Upstate New York refers to forty-eight counties in New York State. It does not include New York City; Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester counties; and Nassau and Suffolk counties on Long Island.
2. The mortgages we examine are active, securitized, first-lien, owner-occupied subprime mortgages (hereafter “subprime mortgages”). Occupancy status is self-reported.
3. Subprime mortgages, also referred to as subprime loans, are typically given to borrowers with a blemished credit history or with

only limited documentation of income or assets. For the purposes of this analysis, we do not include Alt-A mortgages, which are also associated with limited documentation of income or assets, but are usually given to borrowers with a stronger credit history and represent higher dollar amounts than do subprime mortgages.

Subprime mortgages in foreclosure include subprime mortgage loans on owner-occupied properties (which could be multi-unit) in which the lender has initiated the foreclosure process but has not completed it. The length of the process varies by state, so two otherwise similar areas in different states could record different foreclosure densities if the process takes longer in one state. The foreclosure process does not always end with the lender taking possession of the property—for example, if the property is pre-sold by the owner or retained through a work-out plan, payment of arrears, or other resolution. Thus, we measure the stock of loans at some stage in the foreclosure process at a particular time, not the rate of completed foreclosures.

4. There are three levels of severity for subprime mortgage concentration, ranging from Tier 1 (highest) to Tier 3 (lowest).
5. For a discussion of loan characteristics and risk of default, see Yuliya Demyanyk, “Changes in Mortgage Underwriting Standards,” in *Synopses of Selected Research on Housing, Mortgages, and Foreclosures* (September 2008), 53-7. Available at <<http://www.newyorkfed.org/regional/synopses.pdf>>.

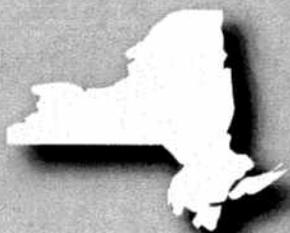


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**Second District
Highlights**

Bypassing the Bust: The Stability of Upstate New York's Housing Markets during the Recession

Jaison R. Abel and Richard Deitz

Over the past decade, the United States has seen real estate activity swing from boom to bust. But upstate New York has been largely insulated from this volatility, with metropolitan areas such as Buffalo, Rochester, and Syracuse even registering home price increases during the recession. An analysis of upstate housing markets over the most recent residential real estate cycle indicates that the region's relatively low incidence of nonprime mortgages and the better-than-average performance of these loans contributed to this stability.

The United States experienced a sizable boom in real estate activity between 1998 and 2006, followed by a sharp contraction. Home prices rose on average more than 8 percent per year between 2000 and 2006—but have been falling more recently at an average annual rate of 4 percent.¹ In states such as California, Arizona, and Florida, the collapse in home prices has been particularly severe. Somewhat surprisingly, however, many parts of the country have not experienced dramatic declines in housing prices, with some regions even registering price increases since the recession began. Upstate New York is one such region. Despite upstate's long-term weak economic growth and population loss, Buffalo, Rochester, and Syracuse all ranked in the top 10 percent of metro areas in terms of home price appreciation in 2009, with Buffalo ranking sixth overall.

In this edition of *Second District Highlights*, we assess the performance of upstate New York's housing markets during the most recent residential real estate cycle. We analyze the extent to which the region has been insulated from the boom-bust pattern in housing prices seen in many parts of the country since 2000 and compare the pattern of real estate activity for the region with patterns for U.S. metropolitan areas. We also examine the extent of lending activity in the riskiest segment of the residential mortgage market—"nonprime" mortgages—and compare the regional and national penetration and performance of these loans.

¹ Figures reflect the four-quarter price change in the Federal Housing Finance Agency (FHFA) All Transactions house price index as of second-quarter 2009. The index is based on conventional and conforming loans and includes both repeat purchases and refinances; it is available for 383 metropolitan areas/divisions. We rely on the FHFA index rather than the more volatile S&P/Case-Shiller house price index because of its broader geographic coverage. See Calhoun (1996) and Leventis (2008) for more details on the construction of the FHFA house price index and how it differs from the S&P/Case-Shiller index.

We find that upstate New York's housing markets have been relatively stable during the U.S. recession, with many metro areas outperforming the nation. Moreover, fewer nonprime loans originated in the region than was typical across the country, and upstate's nonprime loan performance was better than the U.S. average, with lower rates of delinquency and foreclosure. These mortgage dynamics, together with upstate's relatively steady economic performance during the recession, help explain the recent stability of the region's housing markets.

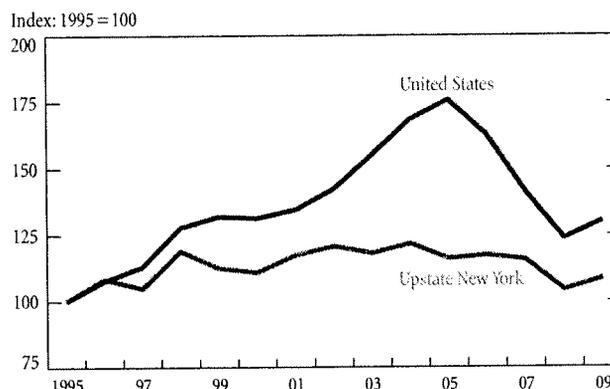
The Housing Boom in the United States and the Trend in Upstate New York

The United States experienced a housing boom in the mid-1990s that lasted until 2006. Sales of existing homes rose significantly between 1995 and 2000, followed by an even sharper increase in activity into 2005 (Chart 1). After sales peaked in 2005, activity declined sharply into 2008, then turned up modestly in 2009. In contrast, residential real estate activity across upstate New York was relatively flat throughout the period. Indeed, while existing home sales increased more than 75 percent between 1995 and 2005 in the United States, sales rose only 15 percent in upstate New York. Although sales activity in the region trended well below that of the nation during this period, the subsequent decline in home sales was less pronounced upstate. Between 2005 and 2008, home sales fell only 10 percent there, compared with an approximately 30 percent decline nationwide. Other indicators of housing activity, such as residential building permits, display similar patterns for the relative performance of upstate New York and the country.

Just as the boom in home sales was subdued upstate, home price appreciation was limited (Chart 2). The rate of appreciation in the region was well below that of the nation until early 2007, with home price declines registered occasionally during the 1995-2000 period.² From 2004 to 2006—the period of most rapid appreciation in the United States—the pace of appreciation in upstate New York also rose significantly, although it remained consistently below the country's. The rate of U.S. home price appreciation declined dramatically beginning in 2006. In 2007 and 2008, upstate's rate of price growth outpaced the nation's, and prices continued to climb into 2009—despite a nearly 4 percent decline in home values nationwide in the first half of 2009.

² Our aggregate upstate New York house price index is calculated using data on existing single-family home sales in the nine major metropolitan areas in the region: Albany, Binghamton, Buffalo, Elmira, Glens Falls, Ithaca, Rochester, Syracuse, and Utica. Our data sources are the National Association of Realtors and Moody's Economy.com. To construct the index, we follow the same methodology used by the FHFA to compile its national house price index. Specifically, we set our index to equal 100 in first-quarter 1995 and adjust it each successive quarter based on the weighted average quarterly price change for the nine upstate metropolitan areas, with the weights based on the contemporary share of one-unit detached properties in each metropolitan area. For more detail, see <http://www.fhfa.gov/>.

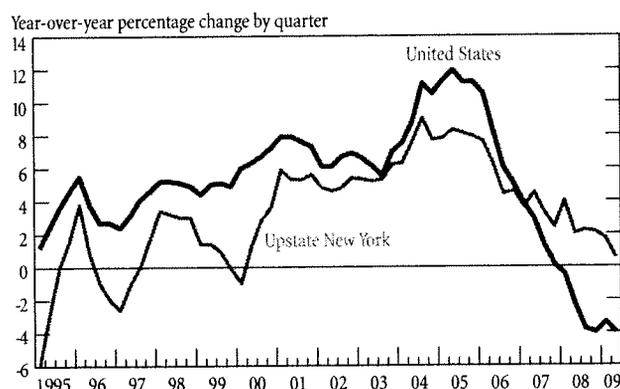
Chart 1
Existing Single-Family Home Sales



Sources: National Association of Realtors; Moody's Economy.com estimates.

Note: Upstate New York is an aggregate of the Albany, Binghamton, Buffalo, Elmira, Glens Falls, Ithaca, Rochester, Syracuse, and Utica metropolitan statistical areas.

Chart 2
Change in Home Prices



Sources: Federal Housing Finance Agency (FHFA), All Transactions index; U.S. Census Bureau; Moody's Economy.com; authors' calculations.

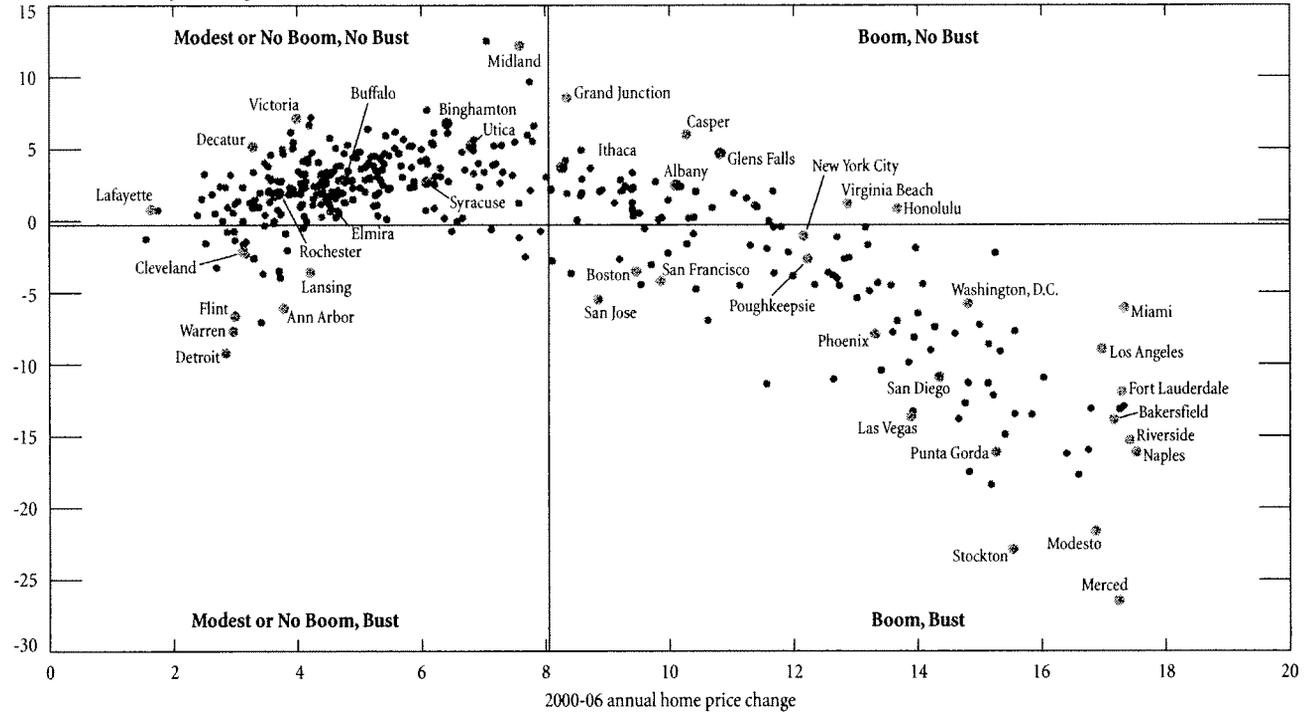
Notes: Upstate New York is an aggregate of the Albany, Binghamton, Buffalo, Elmira, Glens Falls, Ithaca, Rochester, Syracuse, and Utica metropolitan statistical areas. Upstate was aggregated using housing unit weights in a process similar to that employed by the FHFA to create its U.S. index.

Differences in the patterns of home price appreciation in part reflect upstate's relatively poor economic performance leading up to the housing peak and better-than-average performance during the recession. Between 2000 and 2007, for example, employment in upstate New York declined at an average rate of 0.1 percent per year, compared with a national increase of 0.6 percent. By contrast, between the December 2007 start of the recession and October 2009, upstate shed 2.1 percent of its jobs, compared with 5.2 percent in the nation. Note, however, that the upstate economy tended to outperform many of its peer economies in the Great

Chart 3

Metro Area Home Price Appreciation, 2000-08

2006-08 annual home price change



Sources: Federal Housing Finance Agency, All Transactions index; Moody's Economy.com.

Lakes region during both periods. For example, Cleveland and Detroit experienced employment declines of 0.8 percent and 2.2 percent in the period leading up to the recession, but from the onset of the recession through October 2009, they lost 6.7 percent and 8.2 percent of their jobs, respectively.³

To illustrate the pattern of upstate New York's home prices relative to the rest of the country, we examine in more detail the regional dimension of house price dynamics.

House Price Appreciation across Metropolitan Areas
One often hears that "all real estate is local." Consistent with this idea, the patterns of house price appreciation and decline over the most recent real estate cycle varied considerably among U.S. metropolitan areas. In general, however, regions that experienced the most significant house price increases tended to suffer the most significant declines. This negative correlation is presented in Chart 3.⁴ The chart classifies metropolitan areas into one of

four categories based on where rates of appreciation fell relative to the national average. In the "boom, bust" metro areas (lower right quadrant), home prices increased faster than the average U.S. annual rate of 8.1 percent between 2000 and 2006, then fell at a more rapid pace than the U.S. rate of -0.3 percent between 2006 and 2008. In "modest or no boom, no bust" areas (upper left quadrant), prices increased less rapidly than the national average between 2000 and 2006 and declined less rapidly than the average (or increased) between 2006 and 2008. "Boom, no bust" metro areas (upper right quadrant) saw prices rise more rapidly than the national average during both periods. And in areas designated "modest or no boom, bust" (lower left quadrant), prices increased more slowly than the U.S. average (or decreased) during both periods.

As we observed, metropolitan areas with the fastest price appreciation in the earlier period tended to experience the sharpest declines over the later period (lower right quadrant). Geographic clustering is also apparent, with fourteen of the twenty-five most rapidly growing markets in the "boom, bust" areas located in California and ten found in Florida. Each of these areas saw about a 15 to 20 percent price appreciation per year on average during the boom. Once prices began to fall in 2006, the metro areas experienced very large price decreases between 2006

³ For more on upstate New York's economic performance relative to the nation and to the Great Lakes region leading up to the recession, see Abel and Deitz (2008).

⁴ A correlation is a statistic that measures how closely two variables move together. A positive correlation indicates movement in the same direction, while a negative correlation points to movement in opposite directions.

Table 1
Annual Percentage Change in Home Prices

Area	2000-06	2006-08	2008:H1-2009:H1
United States	8.1	-0.3	-3.7
Upstate metropolitan areas			
Glens Falls	10.8	4.7	-1.3
Albany	10.1	2.5	-1.0
Ithaca	8.3	3.7	-0.4
Utica	6.9	5.2	0.7
Binghamton	6.5	6.8	1.8
Syracuse	6.2	2.7	1.0
Buffalo	4.8	2.8	2.3
Elmira	4.5	2.0	6.0
Rochester	3.8	1.9	1.4

Sources: Federal Housing Finance Agency, All Transactions index; Moody's Economy.com.

Note: 2008:H1 and 2009:H1 refer to an average of the first two quarters of the year.

and 2008, averaging around 15 to 20 percent per year, with prices in Merced, Stockton, and Modesto, California, all declining at an average annual rate exceeding 20 percent.

Perhaps somewhat surprisingly, most U.S. metro areas actually experienced more moderate increases in house prices than the nation between 2000 and 2006. In fact, 249 of the 383 metropolitan areas tracked by the Federal Housing Finance Agency saw price increases below the national rate of 8.1 percent during the boom. Outsized increases, by contrast, tended to occur in large, highly populated metro areas; the average rate for the nation as a whole strongly reflects the experience of these places. Most areas also outperformed the nation, which had a 0.3 percent rate of decline, over the 2006-08 period.⁵ Indeed, 220 metropolitan areas experienced below-average house price appreciation between 2000 and 2006, and then performed better than the nation between 2006 and 2008—and thus fall into the “modest or no boom, no bust” category. Most upstate metro areas—including Binghamton, Buffalo, Elmira, Rochester, Syracuse, and Utica—are in this group (Table 1).

The twenty-nine worst-performing metropolitan areas had lower rates of appreciation than the nation during both periods (lower left quadrant). Ten of the eleven largest home price declines over the 2006-08 period occurred in Michigan. The best-performing metropolitan areas had faster-than-average house price appreciation in both periods (upper right quadrant). These areas include Honolulu and Virginia Beach, together with Albany,

⁵ Across all 383 metropolitan areas, the median annual price change was 5.8 percent between 2000 and 2006 and 1.9 percent between 2006 and 2008, compared with the national price change (roughly equivalent to a weighted mean of the metropolitan areas) of 8.1 percent and -0.3 percent, respectively, as measured by the national FHFA house price index.

Glens Falls, and Ithaca. In fact, based on home price appreciation in each period, Glens Falls and Ithaca were among the top-performing metropolitan areas in this quadrant.

The map shows the geographic concentration of these different groups. “Boom, bust” metropolitan areas appear in three regions of the country: along the west coast, in Florida, and along the northeast corridor. Areas classified as “modest or no boom, bust” cluster along the Great Lakes and dot Colorado and Arkansas. Metro areas in the “modest or no boom, no bust” category populate much of the country, while “boom, no bust” areas appear in parts of upstate New York, along the eastern coastline, in the Northwest (including areas surrounding Seattle and Portland), and in several other states.

These home price dynamics in part reflect relative differences in economic performance among regions, although lending activity likely played a role as well. To provide a deeper understanding of the relative performance of upstate New York's housing markets, we examine the prevalence and performance of more risky, nonprime loans.

Regional Penetration and Performance of Nonprime Loans

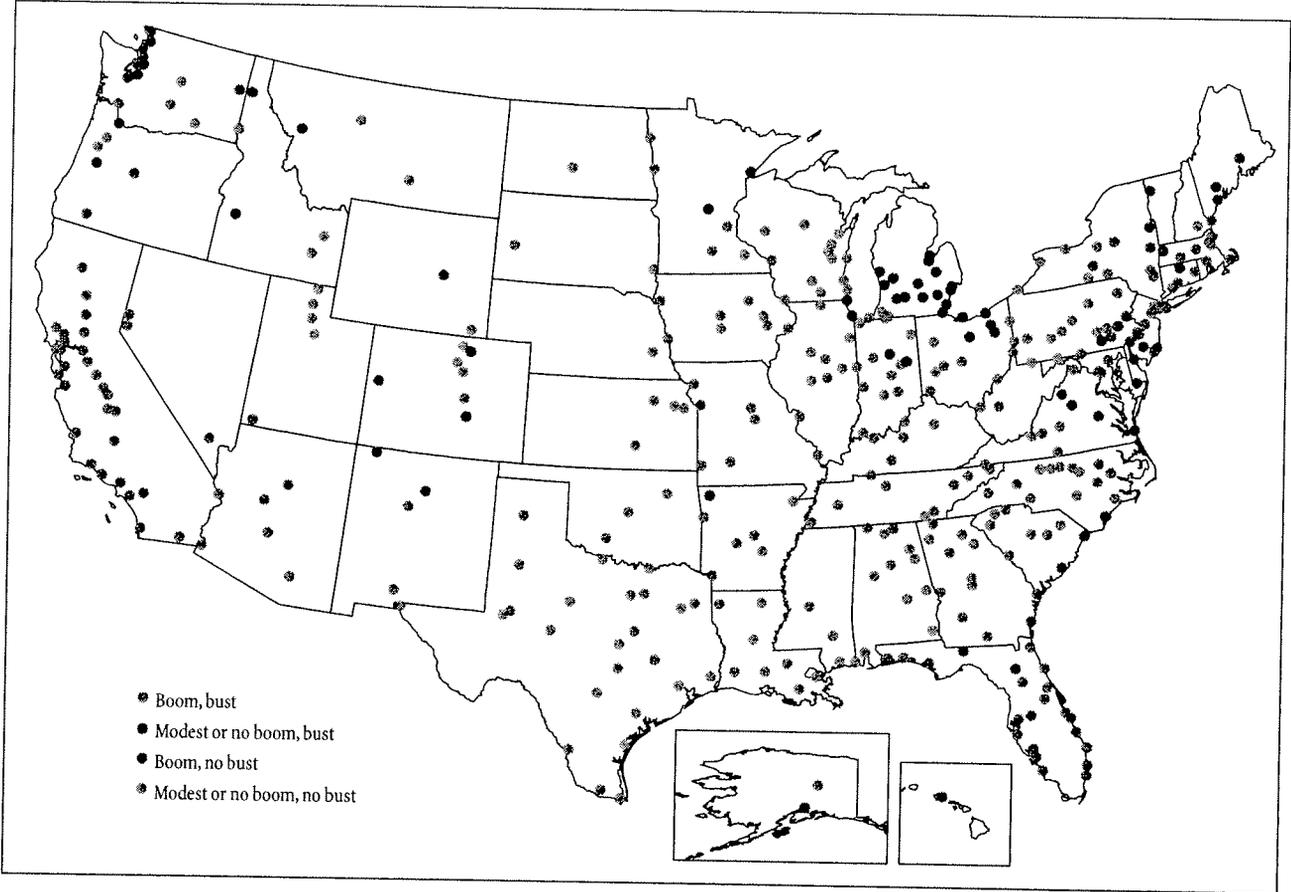
The proliferation of nonprime mortgages has been a significant feature of the recent housing cycle. Nonprime mortgages are loans that are considered more risky than traditional loans, for a number of reasons.⁶ This increased risk may stem from the loan's large size or nontraditional structure, or from borrowers who have a poor credit rating, have a higher ratio of debt to income, do not provide full documentation of income or assets, or borrow close to (or more than) the value of the property on which the loan is based.

As the economy and the housing market weakened at the start of the recession, a significant share of nonprime mortgages began to perform relatively poorly, particularly those originated between 2005 and 2007, a pattern that resulted in rising delinquencies and foreclosures (Haughwout, Peach, and Tracy 2008). The relationship between nonprime lending activity, loan performance, and housing market dynamics at the regional level is critically important when assessing regional housing market performance during the recent cycle. Accordingly, we examine the prevalence and performance of nonprime loans across metropolitan areas, including upstate New York, and the extent to which these factors were associated with regional housing market dynamics.

Our data source is First American CoreLogic's LoanPerformance data set (LP Data). As of mid-2009, these data include

⁶ Nonprime loans consist of subprime and alt-A loans. Subprime loans are typically of smaller value than prime loans and are made to borrowers with an imperfect credit history, while alt-A loans are typically larger value loans made to borrowers who may choose not to provide the full documentation of income or assets usually required to obtain prime mortgages.

Geographic Distribution of Boom/Bust Metropolitan Areas



Sources: Federal Housing Finance Agency, All Transactions index; Moody's Economy.com.

monthly loan-level information for nearly 5 million active, securitized nonprime loans with total balances of more than \$1 trillion. While the LP Data capture more than 90 percent of securitized nonprime loans after 1999 and nearly all such loans beginning in 2003, they exclude all loans held in bank portfolios (Mayer and Pence 2008). Such exclusions necessarily omit some of the nonprime loans made during our study period, so our estimates of the penetration of these loans may be understated. Furthermore, the performance of loans in bank portfolios may differ from the performance of loans that we can observe from the LP Data. Nonetheless, these data capture the majority of nonprime lending activity and offer valuable insight into the pattern of nonprime lending activity and loan performance across the country.

Penetration of Nonprime Loans

To measure the prevalence of nonprime lending across metropolitan areas, we calculate the number of nonprime loans per 1,000 housing units, using data from 2006—when activity

peaked.⁷ This metric captures the extent of nonprime lending activity in the overall housing market. Table 2 shows the penetration of nonprime loans in the United States by the four boom-bust groupings assigned earlier and for the individual metropolitan areas in upstate New York. It reveals that nonprime lending activity was much lower upstate than it was nationwide. Nationally, there were 55.5 such loans per 1,000 housing units—more than double the number for most of upstate New York's metro areas. Within upstate New York, nonprime penetration was highest in Albany and Glens Falls and lowest in Ithaca. With a penetration rate of 81.6 loans per 1,000 households, nonprime lending activity was strongest in the “boom, bust” regions. In contrast, with a penetration rate of 47.0, nonprime lending

⁷ To avoid double counting multiple loans on the same property, we report the number of first-lien loans only. While LP Data include information on subordinate-lien loans, it is not possible to match these loans to their corresponding first-lien loans. To assess nonprime penetration, we use information on total housing units published by the U.S. Census Bureau's population estimates program (<http://www.census.gov/popest/estimates.html>).

Table 2

Nonprime Loan Penetration and Performance

Area	2006		2009		
	Nonprime Loan Penetration	Delinquency Rate (Percent)	Foreclosure Rate (Percent)	Delinquency Penetration	Foreclosure Penetration
United States	55.5	13.2	12.6	5.2	5.0
Modest or no boom, bust	58.3	15.1	11.3	5.7	4.3
Modest or no boom, no bust	47.0	11.9	6.8	3.7	2.1
Boom, no bust	52.1	11.5	8.9	4.2	3.2
Boom, bust	81.6	14.3	17.1	8.8	10.5
Upstate metropolitan areas					
Albany	31.3	12.5	12.0	2.8	2.7
Glens Falls	28.6	12.5	10.1	2.8	2.2
Elmira	24.7	9.4	7.1	1.9	1.4
Rochester	24.6	10.7	8.1	2.0	1.5
Buffalo	21.2	10.3	6.5	1.7	1.1
Syracuse	20.0	11.0	9.7	1.7	1.5
Binghamton	19.7	10.5	7.1	1.7	1.1
Utica	17.5	11.2	7.0	1.6	1.0
Ithaca	9.4	11.5	6.5	0.8	0.4

Sources: First American CoreLogic, LoanPerformance data; U.S. Census Bureau.

Notes: *Penetration* measures the number of loans in each category per 1,000 housing units. *Rate* measures the number of loans in each category as a percentage of total nonprime loans. A loan is considered delinquent if it is ninety or more days past due. A loan is considered in foreclosure once it has entered the foreclosure process.

activity was lowest in metropolitan areas classified as “modest or no boom, no bust.”

These penetration patterns suggest that areas with more nonprime lending activity would have had stronger home price appreciation through the housing peak, along with more significant price declines during the subsequent period. To assess this correlation more formally, we plot nonprime loan penetration relative to the increase in home prices between 2000 and 2006 for every metropolitan area (Chart 4, top panel). The chart confirms a strong positive correlation between nonprime lending activity and house price appreciation during this period.

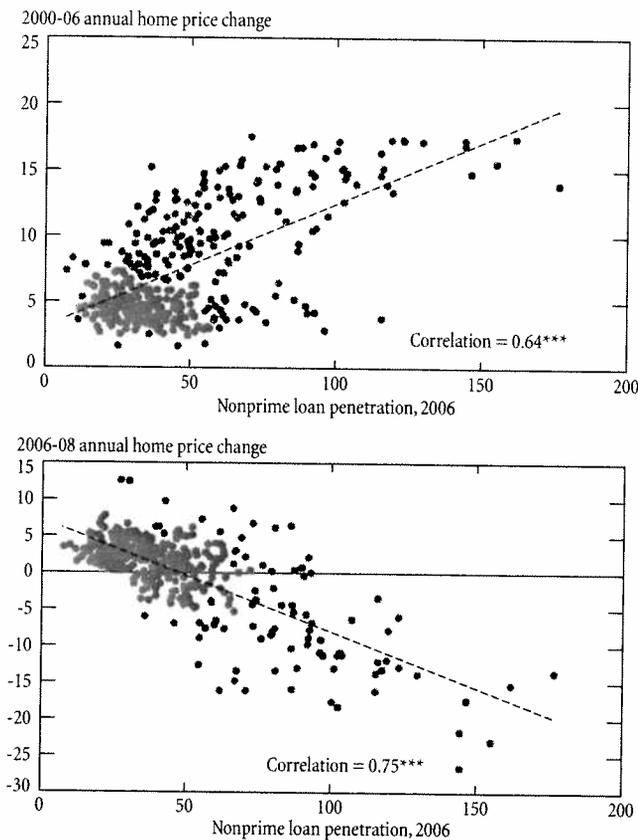
Why might this correlation hold? It is likely that causation runs in both directions—an increase in nonprime lending led to more significant home price appreciation, and more rapid home price appreciation led to a rise in nonprime lending. As for the first relationship, the availability of nonprime loans would have expanded the supply of credit by providing financing opportunities to those unable to obtain prime mortgages. This trend in turn would have brought more buyers into the housing market, driving up the demand for housing and, all else equal,

increasing home prices.⁸ However, home price appreciation itself may have contributed to the spike in nonprime lending. Lenders may have been more willing to make loans on properties whose value was increasing and expected to continue to rise, especially when the price increases were rapid. Under these circumstances, loans on properties with rising values would appear less risky. One primary determinant of risk from the lender's perspective is the balance of the loan relative to the value of the property, often referred to as the loan-to-value ratio, or LTV. As the value of a home rises, the LTV falls, and a low LTV loan is considered less risky than a high LTV loan. The reason is that borrowers are less likely to default on a low LTV loan, primarily because they have more to lose, as their equity would be potentially surrendered upon default. Even if a default were to occur, a rising home value provides a valuable cushion to mitigate any potential losses the lender may incur when taking possession of a property after a loan fails. Moreover, homeowners experiencing rapid house price appreciation may be more likely to refinance their mortgages to gain access to their home equity.

⁸ To some extent, an increase in home prices may have led to more new home construction, which would dampen any rise in prices.

Chart 4

Nonprime Loan Penetration and Home Price Changes



Sources: First American CoreLogic, LoanPerformance data; Federal Housing Finance Agency, All Transactions index; U.S. Census Bureau; Moody's Economy.com.

Notes: Loan penetration is the number of nonprime loans per 1,000 housing units. The dashed line represents a linear trend line.

*** Statistically significant at the 1 percent level.

Indeed, recent empirical research confirms that the relationship between nonprime lending and house price appreciation runs in both directions. Mian and Sufi (2009) show that the expansion of credit through nonprime lending resulted in more rapid home price appreciation at the Zip code level, while Wheaton and Nechayev (2008) and Goetzmann, Peng, and Yen (2009) show that metropolitan areas with faster home price growth saw greater demand for nonprime mortgages. However, because these relationships are self-reinforcing, it is difficult to determine the extent to which these different dynamics were at work or the relative importance of each dynamic in contributing to the pattern of house prices observed during the current cycle. In upstate New York, the relatively low penetration of nonprime mortgages likely contributed to the region's more modest home price appreciation, but it may also reflect the response of lenders

to the region's relatively slow home price appreciation leading up to and during the boom years.

Despite this outcome, it is clear that nonprime lending activity was positively correlated with home price appreciation through the peak in housing activity, and it is apparent that areas with a higher penetration of nonprime loans in 2006 had more significant price declines in the 2006-08 period (Chart 4, bottom panel). This correlation is not surprising given that price appreciation in the 2000-06 period is negatively correlated with price appreciation in the 2006-08 period. The relatively poor performance of nonprime loans during the recession was a likely contributor to this dynamic. To study these relationships in more detail, we examine the performance of nonprime loans across U.S. metropolitan areas and in the upstate New York region and analyze the connection between nonprime loan performance and the pattern of home price changes.

Performance of Nonprime Loans

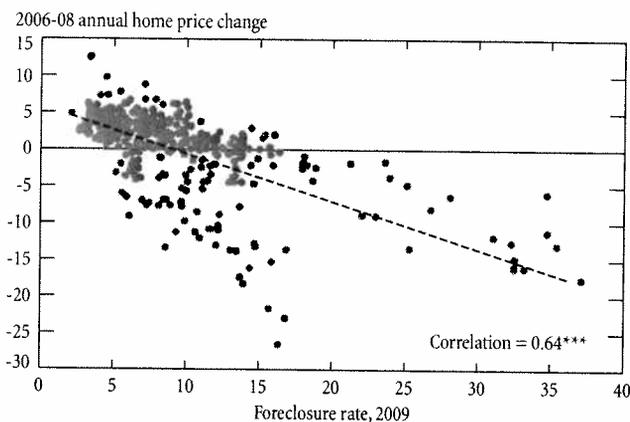
By calculating current delinquency and foreclosure rates, we can assess the performance of nonprime loans at the metropolitan area level.⁹ We measure delinquencies as loans that are ninety or more days past due and foreclosures as loans that have entered the foreclosure process. As expected, the performance of nonprime loans systematically differs across metropolitan areas (Table 2). The highest delinquency and foreclosure rates are in the "boom, bust" and "modest or no boom, bust" areas, and the lowest delinquency and foreclosure rates are in the areas that did not undergo a housing bust.

In general, metropolitan areas with more significant home price declines tended to have relatively poor nonprime loan performance (Chart 5). A strong negative correlation is apparent between nonprime foreclosure rates and the average annual change in home prices in the 2006-08 period.¹⁰ There are several reasons for this correlation. First, homeowner equity tended to decrease in areas where home prices fell. As previously outlined for the case when prices are increasing, declining house prices in areas that experienced a housing bust raised LTVs and increased the risk of default and foreclosure. In extreme cases, home prices declined so much that homeowners fell into a negative equity position, where the balance on a mortgage exceeded the value of the home, providing a strong incentive for borrowers to abandon mortgages rather than continue to make payments. Indeed, recent estimates suggest that as many as 29 percent of all nonprime mortgages were in a negative equity position by the end

⁹ Here we use LP Data as of August 2009.

¹⁰ Policy actions at the regional level designed to mitigate foreclosures, such as foreclosure moratoriums, may reduce foreclosure rates in some metropolitan areas. Thus, such actions could understate the "true" relationship between home price declines and the amount of foreclosure activity.

Chart 5

Foreclosure Rates and Home Price Changes

Sources: First American CoreLogic, LoanPerformance data; Federal Housing Finance Agency, All Transactions index; U.S. Census Bureau; Moody's Economy.com.

Notes: Loan penetration is the number of nonprime loans per 1,000 housing units. The dashed line represents a linear trend line.

*** Statistically significant at the 1 percent level.

of 2008 (Haughwout and Okah 2009). This dynamic was probably most visible in “boom, bust” metropolitan areas in states such as California, where price declines were among the most severe. Further, the poor loan performance in these areas may be the result of households’ reduced ability to repay their debt in states such as Michigan, where unemployment rates are high. Poor loan performance, especially when leading to foreclosure sales, along with recessionary pressures tends to dampen housing prices. This dynamic most likely played a role in “modest or no boom, bust” metropolitan areas such as Detroit. In any case, these mechanisms tend to reinforce one another.

As one might expect, upstate New York’s rate of delinquencies and foreclosures on nonprime loans was lower than the national average, and in many instances noticeably lower (Table 2). The delinquency rate for the nation was 13.2 percent, compared with a high among upstate metropolitan areas of 12.5 percent in Albany and a low of 9.4 percent in Elmira. Similarly, the nation’s foreclosure rate was 12.6 percent, while rates in upstate metro areas ranged from 12.0 percent in Albany to 6.5 percent in both Buffalo and Ithaca. Again, Albany and Glens Falls stand out among upstate New York’s metropolitan areas as being closer to U.S. figures. Delinquency and foreclosure rates there were near the national averages, suggesting that nonprime loans were riskier in these two areas than across upstate.

The combination of lower nonprime loan penetration and lower delinquency and foreclosure rates suggests that upstate New York has been less affected than other parts of the country by the more distressing aspects of the nonprime mortgage market. To measure the extent to which the region has been affected by foreclosures, we calculate the number of foreclosures per 1,000 housing units (Table 2). This metric measures the degree to which nonprime loan delinquencies and foreclosures penetrate the region’s housing markets. We find that nonprime delinquencies and foreclosures have affected a smaller share of the housing market in upstate New York than in the nation. Delinquency and foreclosure penetration rates upstate are less than half of those observed nationally and less than a third of those observed in the “boom, bust” metropolitan areas. This pattern of relatively low nonprime loan penetration and relatively strong nonprime loan performance helps explain the stability of the region’s housing markets during the recession.

Conclusion

During the past decade, the United States has experienced a significant boom and bust in residential real estate activity. In contrast, the housing markets in upstate New York have remained relatively stable. Indeed, since the U.S. housing market began to decline in 2006, residential real estate activity upstate has remained relatively flat, and home prices continued to rise through 2009. During the housing boom of 2000-06, home prices in Binghamton, Buffalo, Elmira, Rochester, Syracuse, and Utica did not appreciate as rapidly as the national average, although prices in Albany, Glens Falls, and Ithaca outpaced it. Since then, home prices in every upstate metro area have risen faster, or fallen more slowly, than the national average.

One factor that likely contributed to the stability of upstate New York’s housing markets in the last decade is its low incidence of nonprime mortgages. The penetration of these relatively risky loans in upstate New York was far less significant than the penetration in other parts of the country, particularly when compared with metropolitan areas that experienced a housing bust. Moreover, the loans have performed better upstate than they have nationally. In contrast, metropolitan areas with a higher penetration of these loans by 2006—when activity peaked—experienced faster home price appreciation, but also saw a relatively rapid decline in values once the reversal began. Accordingly, a larger number of the nonprime loans that originated in these areas have entered delinquency or foreclosure. These patterns of nonprime lending activity help explain why housing markets in upstate New York fared better than those in other parts of the country during the most recent recession.

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FEDERAL RESERVE BANK *of* NEW YORK

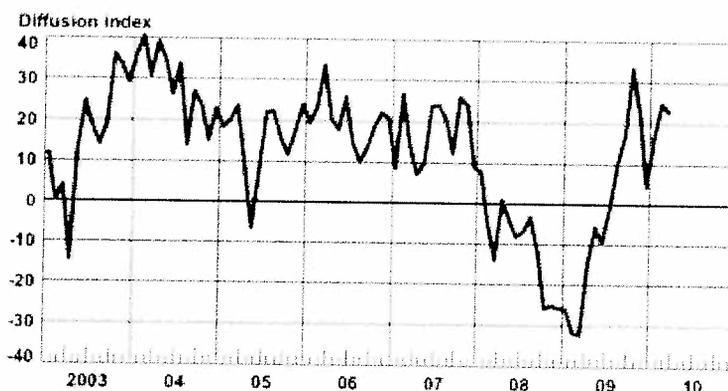
Empire State Manufacturing Survey

The monthly survey of manufacturers in New York State conducted by the Federal Reserve Bank of New York.

March 2010 Report

Survey Indicators Seasonally Adjusted

General Business Conditions
Seasonally adjusted



The *Empire State Manufacturing Survey* indicates that conditions for New York manufacturers continued to improve at a steady pace in March. The general business conditions index remained near its February level, at 22.9. The new orders index rose sharply, and the shipments index climbed as well. The inventories index rose above zero for the first time in considerably more than a year. The indexes for both prices paid and prices received were positive and close to last month's levels. Employment indexes climbed further into positive territory, suggesting that employment levels are on the rise. Future indexes conveyed continued optimism about the six-month outlook, with manufacturers expecting business conditions to improve further in the months ahead.

In a series of supplementary questions, firms were asked about recent changes in their borrowing needs, perceived changes in credit availability, and the causes and effects of such changes (see Supplemental Reports tab). Manufacturers generally reported steady to declining borrowing needs over the past year: 28 percent said their borrowing needs had decreased in the past year, while 19 percent said they had decreased over the past three months. In response to questions on recent changes in credit availability, 24 percent of firms reported some tightening over the

past year—down noticeably from 39 percent in a similar survey conducted last October—while just 11 percent noted some easing, about the same percentage as in October's survey. A related question about such changes over the past three months showed 17 percent of firms noting tighter credit standards and 13 percent noting easier credit. Respondents also reported rising borrowing costs and steady to declining limits on existing lines of credit.

Business Activity Continues to Pick Up; Inventories Grow

Business activity remained strong in March as the general business conditions index posted its eighth consecutive positive reading. The index, at 22.9, remained close to its February level, with 43 percent of respondents reporting that conditions had improved over the month and 20 percent reporting that conditions had worsened. The new orders index shot up 17 points to 25.4, indicating that the pace at which orders were being placed had quickened significantly over the month. The shipments index advanced 10 points to 25.6, and the unfilled orders index held steady at 4.9. The delivery time index increased to 2.5. The inventories index climbed above zero for the first time in considerably more than a year, reaching 4.9—a sign that inventory levels are now rising slightly for New York State manufacturers.

Employment Expands

Price indexes were little changed from last month. The prices paid index had climbed in December and January, and subsequently hovered around 30. In March, the index was 29.6, with 32 percent of respondents reporting higher prices and just 2 percent reporting lower prices. After rising above zero in January and edging up to 4 in February, the prices received index increased 4 points more to 8.6, with 17 percent of firms reporting higher selling prices and 9 percent reporting lower selling prices. Employment indexes climbed, suggesting that employment is continuing to expand. The index for number of employees advanced 7 points to 12.4, its highest level in more than two years, with 20 percent of respondents indicating that employment levels had risen in March and just 7 percent indicating that employment had fallen. The average workweek index climbed to 12.4.

Six-Month Outlook Continues to Be Upbeat

Future indexes strongly suggested that New York manufacturers expect conditions to improve further in the months ahead. The future general business conditions index rose to 54.3, with 64 percent of respondents anticipating better conditions over the next six months. The future new orders index held at a similar level. Although the future shipments index dipped 12 points, it remained at a fairly high level. Prices were expected to climb—the future prices paid index was relatively high at 42.0, and the future prices received index was 17.3. Future employment indexes were positive, suggesting that employment levels are expected to climb, but both the future number of employees and future average workweek indexes fell roughly 10 points. The capital expenditures index held steady at 27.2, and the technology spending index rose inched up to 13.6.

Empire State Manufacturing Survey: Supplemental Report

March 2010

For release March 15, 2010

Manufacturers Report a Leveling Off in Credit Availability but Higher Borrowing Costs

Supplementary questions in the March 2010 *Empire State Manufacturing Survey* focused on recent changes in firms' borrowing needs, perceived changes in credit availability, and the causes and effects of such changes. Parallel questions had previously been asked in the October 2009, March 2009, October 2008, and March 2008 surveys.

As in last October's survey, manufacturers generally reported steady to declining borrowing needs over the past year: in the current survey, 28 percent said their borrowing needs had decreased in the past year, while 19 percent said they had decreased over the past three months. Roughly 16 percent of respondents indicated that their borrowing needs had increased—both over the past year and over the past three months. Those respondents reporting increased borrowing needs since December most commonly attributed the rise to declines in business revenue, the management of existing debt, and a need to invest in capital equipment. A number of respondents added written comments attributing the increase to positive developments at their firms, including the pursuit of new opportunities and a need to keep up with growing demand. Among those reporting declines in borrowing needs, the most widely cited reasons were a reduced need to replace or expand capital equipment, vendor tolerance for delayed payments, and customers' more timely payment of their bills.

In response to questions on recent changes in credit availability, 24 percent of firms reported some tightening over the past year—down noticeably from 39 percent in last October's survey—while just 11 percent noted some easing, about the same percentage as in October's survey. A related question about such changes over the past three months showed 17 percent noting tighter credit standards and 13 percent noting easier credit. When those firms reporting tighter credit were asked to identify its effects on their behavior, respondents most commonly cited reduced capital investment, followed by cuts in employee hours, workforce reductions, and delays in paying vendors.

Firms also reported rising borrowing costs on net: 28 percent of respondents reported increases in borrowing costs, while just 5 percent indicated declines. When asked about recent changes in limits (ceilings) on existing lines of credit, 72 percent of respondents reported no change, 17 percent reported decreases in limits on existing lines of credit, and just 7 percent reported increases.

1) How do your current borrowing needs compare with those one year earlier? Three months earlier?

	March 2010 Survey			October 2009 Survey		
	Percentage of Firms Responding . . .			Percentage of Firms Responding . . .		
	Lower Now	Same	Higher Now	Lower Now	Same	Higher Now
One year earlier	27.8	55.7	16.5	36.0	46.7	17.3
Three months earlier	19.2	65.4	15.4	23.7	59.2	17.1

(Continued)

Empire State Manufacturing Survey: Supplemental Report

March 2010

For release March 15, 2010

**Manufacturers Report a Leveling Off in Credit Availability
but Higher Borrowing Costs (Continued)**

2) How has credit availability changed over the past twelve months? Past three months?

	March 2010 Survey			October 2009 Survey		
	Percentage of Firms Responding . . .			Percentage of Firms Responding . . .		
	Easier	Same	Tighter	Easier	Same	Tighter
Over the past twelve months	11.4	64.6	24.1	12.0	49.3	38.7
Over the past three months	12.7	70.9	16.5	12.0	68.0	20.0

3) In your experience, how have banks' requirements to extend business loans and/or credit lines changed over the past three months?

	Percentage of Firms Responding . . .		
	March 2010	October 2009	March 2009
Much easier now	1.3	0.0	0.0
Somewhat easier now	8.0	8.2	0.0
Same	61.3	65.8	53.0
Somewhat tighter now	17.3	19.2	20.5
Much tighter now	12.0	6.8	26.5

4) Also in your experience, how has the cost of borrowing funds changed over the past three months?

	Percentage of Firms Responding . . .		
	March 2010	October 2009	March 2009
Much lower now	0.0	1.3	1.2
Lower now	5.3	10.7	19.3
Same	66.7	54.7	34.9
Higher now	25.3	30.7	30.1
Much higher now	2.7	2.7	14.5

5) Again in your experience, how have the limits on existing business lines of credit changed over the past three months? Credit limits (ceilings) have become:

	Percentage of Firms Responding . . .		
	March 2010	October 2009	March 2009
Much lower now	3.9	5.3	7.2
Lower now	13.2	13.3	10.8
Same	72.4	70.7	69.9
Higher now	5.3	9.3	7.2
Much higher now	1.3	1.3	4.8

Current Issues

IN ECONOMICS AND FINANCE

SECOND DISTRICT HIGHLIGHTS

Trends and Developments in the Economy of Puerto Rico

Jason Bram, Francisco E. Martínez, and Charles Steindel

A two-year-long economic downturn and a persistent income gap with the U.S. mainland contribute to an uncertain outlook for Puerto Rico. Still, the commonwealth possesses a skilled and educated workforce, a favorable business climate, and the benefits of U.S. legal and financial structures—advantages that could encourage the development of new industries and create the potential for sustained growth.

Readers of this publication who are accustomed to thinking of the Federal Reserve System's Second District as New York State and nearby counties in New Jersey and Connecticut may be surprised to learn that the District includes the Commonwealth of Puerto Rico.¹ In this issue of *Second District Highlights*, we present an overview of Puerto Rico's economy, examining its basic characteristics, long-term industry and labor trends, and prospects for growth.

In our analysis, we apply many of the tools used to examine the economy of a U.S. state. After all, Puerto Rico's population of nearly 3.9 million exceeds that of twenty-four states, and its area of about 3,500 square miles, while small, roughly matches that of Connecticut. However, our analysis also recognizes that Puerto Rico possesses unique institutional and structural features—its location, status as a commonwealth, and large public sector—that set it apart from the fifty states. Its economy is unusual too in having

been directly influenced by federal legislation—most notably, section 936 of the Internal Revenue Code, which until its recent repeal provided incentives for the capital-intensive production of chemicals and pharmaceuticals.

Our look at the economy of Puerto Rico highlights some dramatic changes over the last half century: a shift away from agriculture, a large out-migration of people to the mainland United States, and the growth of certain sophisticated manufacturing industries. Despite economic advances, however, Puerto Rico remains considerably less affluent than any U.S. state. Indeed, while the United States as a whole and other parts of the Second District continued to grow through 2007, recent economic data suggest that the commonwealth's economy has contracted over the last two years.

Puerto Rico and Its Economy: Some Background

Commonwealth Status and Location

The institutional framework in which the Puerto Rican economy operates bears significant similarities to that of a state, but it also has some unique characteristics. Like a state, Puerto Rico is part of the U.S. banking and financial system and adheres to all U.S. international trade

¹ This assignment may seem more understandable if we consider that San Juan, the capital of Puerto Rico, lies nearly equidistant from the three Reserve Bank cities of Atlanta, Philadelphia, and New York, and is only modestly closer to a fourth, Richmond. The Second District also includes the U.S. Virgin Islands.

regulations and tariffs; labor and capital move freely between the island and the mainland, just as they do across state borders. Puerto Rico differs from the states, however, in that federal taxes are generally not levied on personal and corporate income earned on the island.

A key characteristic of Puerto Rico is its relative isolation from the U.S. mainland. San Juan is approximately 1,000 miles from Miami, the closest major U.S. city. The remoteness of Puerto Rico from the mainland has likely lessened its attractiveness as a location for firms siting operations to serve the broad U.S. market. Still, the bulk of Puerto Rico's trade is with the United States: for instance, more than 80 percent of the commonwealth's exports are to the states. Moreover, it is interesting to note that Puerto Rico is less isolated than either Hawaii or Alaska: Honolulu is about 2,500 miles from Los Angeles, and Anchorage, the center of Alaska's population, is roughly 1,400 miles from Seattle.

Migration and Current Human Resources

Midway through the twentieth century, Puerto Rico underwent a major transition from an agricultural to an industrial economy. This turnover in the economy prompted much of the island's population to migrate to the mainland United States, and especially to New York City. The heaviest out-migration occurred between 1950 and 1975, and the 1980s witnessed some return migration (Martínez, Máttar, and Rivera 2005). Nevertheless, on net, about one million people (equal to 45 percent of the island's 1950 population) moved from Puerto Rico to the mainland between 1950 and 2000. The effects of this large population outflow are widely debated in Puerto Rico. Some conventional wisdom holds that the island has suffered a "brain drain"—a loss of skilled workers—to the mainland. The economic literature on the topic, however, generally does not support this conclusion. In fact, studies suggest that in the 1950-70 period, those who left Puerto Rico for the mainland were largely rural residents, unable to find work in the industrial sector.

Other evidence that undercuts the notion of a brain drain is the steady growth in college-educated residents after 1970—a development seen as placing "substantial downward pressure on the relative wages of college-educated workers" (Ladd and Rivera-Batiz 2006). If the out-migration had drawn away a significant share of Puerto Rico's highly skilled workers, the relative wages of the more educated workers who remained on the island would have been under upward, not downward, pressure. Still, it is conceivable that emigration may have deprived Puerto Rico of people with skills that could have contributed to the island's development.

Fortunately, the displacement of the agricultural population did not result in a surge in the urban population, as it did in other developing regions, where the influx of rural residents put a severe strain on city infrastructure. The

Table 1
Educational Attainment, 2005

	Percentage of Population Aged 25 to 44	
	United States	Puerto Rico
Less than high school degree	13.2	17.9
High school degree	27.7	25.5
Some college	20.9	16.4
Associate's or bachelor's degree or higher	38.3	40.1

Source: U.S. Census Bureau, 2005 American Community Survey.

population of the San Juan metropolitan area grew 18 percent from 1950 to 2000²—a much more modest expansion than the 87 percent increase observed in the United States population as a whole. Moreover, the migration of the population has had some favorable consequences for the island economy: Puerto Ricans continue to receive remittances from relatives residing elsewhere in the United States, though as a share of personal income these payments have dropped from about 3½ percent in the 1950s and 1960s to a little more than 1 percent in 2006 (Puerto Rico Planning Board 2006). In addition, the large population on the mainland with close ties to Puerto Rico has likely helped create markets for goods and services produced on the island—for example, one major bank in Puerto Rico has an extensive mainland branch network.³

As for the current state of the workforce, we have already noted the increase in college-educated workers. The younger portion of the working-age population of Puerto Rico now has, on average, a level of educational attainment close to that of mainland residents (Table 1). While it is hard to generalize from such statistics, these characteristics suggest that the workforce may be comparable to that of much of the developed world.

Industry Profile

Agriculture now plays a small role in the commonwealth's economy. Employment data indicate that goods-producing industries such as construction and manufacturing are significant relative to U.S. norms (Table 2). Government also figures importantly: many utilities, educational services and, to a lesser extent, health services are supplied by government entities. In fact, the public sector's share of total employment is so large that it reduces industries like construction or manufacturing to a share of total employment that is little more

² See the U.S. Census of Population and Housing for 1950 and 2000.

³ Banco Popular maintains 144 branches in six states, including New York and New Jersey. Other Puerto Rican banks also have networks (although less extensive) in the United States and the U.S. Virgin Islands. Goya Foods, the principal producer of Hispanic food products in the United States, has a large processing plant in Puerto Rico, geared to the local and U.S. markets.

Table 2
Private Sector Employment, by Industry
Percentage of Total

	United States	Puerto Rico
Agriculture, forestry, fishing, and hunting	1.0	1.5
Mining	0.5	0.2
Construction	6.8	8.3
Manufacturing	12.5	14.9
Pharmaceutical manufacturing	0.3	3.7
Wholesale trade	5.2	4.4
Retail trade	13.7	18.4
Transportation and warehousing	3.7	2.3
Utilities	0.5	0.0
Information	2.7	3.1
Finance, insurance, and real estate	7.3	6.7
Professional and technical services	6.6	4.0
Management of companies and enterprises	1.6	1.5
Administrative and waste services	7.4	9.0
Educational services	2.0	3.3
Health care and social assistance	13.1	9.9
Arts, entertainment, and recreation	1.7	0.5
Accommodation and food services	9.9	9.4
Other private services	3.9	2.5

Source: U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Notes: Industries in boldface type account for an above-average share of private sector employment in Puerto Rico. Data are as of May 2006.

than the U.S. average, even though these industries claim a notably high share of private employment. Within manufacturing, employment in pharmaceutical production is unusually high: nearly 4 percent of all private sector workers on the island are employed in this industry—more than ten times the mainland average. Educational services account for a substantial share of private sector jobs on the island. By contrast, employment in professional and technical service industries is relatively low, and even financial services' share is somewhat below average.

The high concentration of pharmaceutical employment appears to reflect incentives created by section 936 of the Internal Revenue Code, in force from 1976 to 2006. This rule exempted corporations from paying U.S. corporate income taxes on profits earned from sales of items produced in Puerto Rico.⁴ In practice, the provision appeared to encourage the siting in Puerto Rico of plants producing high-profit,

⁴ With the repeal of the section 936 provision, U.S. corporations operating in Puerto Rico have tended to alter their charters to take advantage of the provisions of section 901. Under this rule, U.S. corporate taxes on profits earned in Puerto Rico are deferred until the income is repatriated to the mainland parent.

easily transportable items such as pharmaceuticals and electronic components. To get the maximum benefit from section 936, manufacturing facilities in Puerto Rico tended to have relatively small and lower-wage workforces; other, higher-value-added components of the enterprises (such as management or research and development) generally remained elsewhere.

The share of employment in tourism-related industries—accommodation and food services, the arts, entertainment, and recreation—is below the mainland average, even though Puerto Rico can be viewed as an important tourist destination. Certainly, the deep connections between Puerto Rico and the mainland United States create considerable potential for travel and tourism to become a leading growth sector.

Economic Development and Income Profile

The current level of development in Puerto Rico is high by the standards of much of the world, but not relative to the United States as a whole. In 2005, median wage and salary income for full-time workers was barely one-third of the U.S. average and a bit less than two-thirds of the figure for Mississippi, the state with the lowest median income. By a different economic metric, output (or GDP), Puerto Rico appears somewhat more prosperous, with a per capita figure just short of half that for the United States as a whole. Output has performed better than labor income primarily because of the robust production of the capital-intensive “section 936 plants.” However, while the profits and other capital income earned by these establishments may be taxed by the commonwealth—and thus can contribute indirectly to the well-being of Puerto Rico—the income itself for the most part accrues to mainland U.S. owners. Thus, the wage and salary numbers, reflecting income directly earned by Puerto Ricans, likely give a better sense of the island's economic performance.⁵ Still, while wages are relatively low, home ownership rates are quite high: as of 2006, three-fourths of Puerto Rican households owned their homes, compared with two-thirds of households on the mainland. Moreover, an exceptionally large share of these homes—more than 60 percent, almost double the share on the mainland—had no mortgage debt.⁶

⁵ The FIRE (finance, insurance, and real estate) sector offers an especially pronounced contrast between employment and output, accounting for only 4 percent of employment in Puerto Rico but 17 percent of GDP (Puerto Rico Planning Board 2006); however, the output of this sector includes the imputed services supplied by owner-occupied housing.

⁶ See U.S. Census Bureau, 2006 American Community Survey, available at <http://factfinder.census.gov/servlet/ADPTable?_bm=y&-geo_id=04000US72&-qr_name=ACS_2006_EST_G00_DP4&-ds_name=ACS_2006_EST_G00_&-_lang=en&-redol og=false&-_sse=on>.

Over the last thirty years, average weekly earnings of Puerto Rico's private sector workers have grown less rapidly than the earnings of their mainland counterparts, slipping from 63 percent of the U.S. average in 1977 to 55 percent in 2003 (Burtless and Sotomayor 2006). Thus, while the island has become substantially more prosperous, there has been no reduction of the large income gap with the United States. With the expiration of section 936 and the income inducements this provision created for corporations to locate in Puerto Rico, the persistence of the income gap has led to some rethinking of growth prospects for Puerto Rico.

On the institutional side, the prominence of government activity also has implications for the island's growth. Government or government enterprises account for nearly 30 percent of employment in Puerto Rico, nearly twice the mainland average of 16 percent. The large role of government in part reflects efforts to relieve poverty and to provide services such as medical care and utilities at a lower cost to groups unable to afford them otherwise.⁷ However, it also leaves Puerto Rico with a relatively high tax burden, despite the general exemption from federal income taxes.⁸ Indeed, even with this exemption, Puerto Rico collects about one-quarter of its gross product in taxes, a share that slightly exceeds the U.S. norm. Thus, a major issue for the commonwealth is balancing the burden that these high taxes may place on development against the benefits that government interventions provide to distressed groups.

Business Climate

Despite the tax burden, Puerto Rico's general business climate appears to be relatively favorable. In the World Bank's most recent poll of the "ease of doing business" in countries worldwide, Puerto Rico (considered separately from the United States) ranked nineteenth, higher than any Caribbean or Central American nation (World Bank 2006).⁹ The commonwealth scored particularly high on "starting a business," "protecting investors," and "paying taxes." It received relatively low marks, however, on "dealing with licenses" and "enforcing contracts."

On balance, Puerto Rico has a well-educated labor force and, despite the relatively large size of the government, a

more favorable climate for business than its Caribbean neighbors. Before discussing the potential growth sectors for Puerto Rico, we consider some current trends.

Recent Developments

Puerto Rico's business cycles have generally tracked those of the nation as a whole—a correspondence that may well reflect the close trade linkages between the island and the mainland. Private sector employment growth on the island fell sharply in each of the last three U.S. recessions, and bottomed out at roughly the end of the downturn on the mainland (Chart 1).

Given the close cultural and family links between Puerto Rico and New York City, one might also expect to find some parallels in the employment patterns of the island and the city. However, monthly employment numbers indicate that private sector job growth in Puerto Rico is somewhat more volatile than in the United States or New York City.¹⁰ And if we look beyond the monthly swings to the broad movements shown in Chart 1, we see that business cycle fluctuations in Puerto Rico tend to resemble those of the nation more than they do those of New York City.¹¹ For example, the 1982 recession was deep and prolonged in Puerto Rico and in the United States—but not in New York City. In addition, the 1990-91 recession was relatively deep in New York City but mild in Puerto Rico and the nation as a whole. The 2001 recession was also somewhat less severe in Puerto Rico than in New York City but more severe than in the nation. The ensuing recovery in Puerto Rico came sooner and was stronger than the U.S. recovery and markedly stronger than the city's recovery. Puerto Rico's substantial concentration in manufacturing, as well as its relatively light concentration in the financial sector so important to New York City, could help to explain why its cycle may have been more like the nation's than the city's over much of the past twenty-five years.¹²

Beginning in 2006 and continuing through the end of 2007, however, Puerto Rico's employment growth patterns diverged markedly from those of both New York City and the nation, showing considerably more weakness (Chart 1). As of January 2008, private sector employment on the island was down 1.1 percent from a year earlier and down 3.5 percent

⁷ Over the last decade, Puerto Rico has completely restructured its health care system. Primary patient care is now administered through publicly funded plans managed by private insurers, while tertiary and catastrophic health care continues to be provided through the public health service.

⁸ See Alm (2006) for a discussion of Puerto Rican fiscal issues.

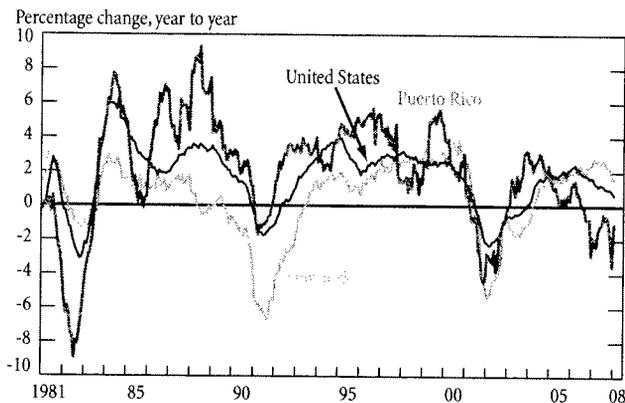
⁹ The United States ranks third in the poll. The World Bank samples data from the largest city of each nation. Thus, the U.S. data are taken from New York City and the Puerto Rican data from San Juan. It is certainly conceivable that the business climate is more favorable in Puerto Rico than in some other parts of the United States.

¹⁰ In the 1981-2007 period, the standard deviation of twelve-month growth is 3.3 percentage points for Puerto Rico, compared with 1.8 percentage points for the nation and 2.2 percentage points for New York City.

¹¹ The correlation between growth in Puerto Rico and the United States is 0.75 in the 1981-2007 period, compared with just 0.35 between Puerto Rico and New York City.

¹² These similarities and differences merit further investigation; to date, however, there seems to have been little systematic study of the business cycle in Puerto Rico and its relationship to the U.S. cycle and the commonwealth's own industry structure.

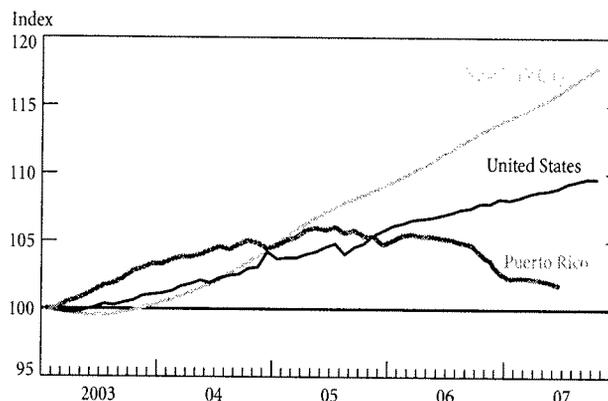
Chart 1
Private Sector Employment Growth



Source: U.S. Department of Labor, Bureau of Labor Statistics.

Note: Shaded areas indicate periods designated national recessions by the National Bureau of Economic Research.

Chart 2
Coincident Economic Indexes



Sources: Office of the Governor of Puerto Rico; Conference Board; Federal Reserve Bank of New York.

from its end-year 2005 cyclical peak. This observation is supported by a standard measure of high-frequency activity on the island, the coincident economic index (CEI). Like similar indexes used to gauge the performance of the U.S. and state economies, Puerto Rico's index combines the employment numbers with other series.¹³ As Chart 2 shows, Puerto Rico's CEI has been substantially weaker than the roughly comparable U.S. index compiled by the Conference Board and the index for New York City computed by the Federal Reserve Bank of New York. Commentators have suggested that Puerto Rico entered a recession near the beginning of 2006,¹⁴ by contrast, in the nation as a whole, payroll employment and overall output continued to grow throughout 2007, albeit more slowly than earlier in the expansion.

The decline in Puerto Rico's CEI has been driven primarily by the drop in reported private employment. Moreover, jobs lost in the private sector have compounded earlier job losses stemming from a public sector downsizing that reduced government employment by more than 5 percent between mid-2004 and mid-2006.¹⁵ Recent job numbers for Puerto Rico should be viewed with some caution, however:

payroll employment data tend to be revised substantially (see box). For example, the 2005 decline in employment emerged in the reported statistics only after the employment growth numbers for that year were revised downward a full 7 percentage points. Thus, given the uncertainty surrounding the data, a pattern of continuing job loss cannot be definitively established at this time. In fact, some contrary evidence comes from household survey data, which indicate that the unemployment rate remained steady at a little more than 11 percent through the end of 2007—up from earlier in the year but still low when compared with readings prior to 2000 (Chart 3). Still, the numbers as they stand point to deterioration in the Puerto Rican economy's recent performance, both in absolute terms and relative to the United States, and there is some contention that the island's business cycle has become disengaged from that of the mainland (Alameda 2007).

Moreover, other developments appear consistent with an economic downturn in Puerto Rico: as of second-quarter 2007 (the latest numbers available), growth in total wage and salary earnings was sluggish, up by just 3.0 percent from a year earlier, or well below the inflation rate. Housing markets have weakened noticeably; housing permits hit a seven-year low in 2006. Reports indicate that office vacancy rates have also risen.¹⁶

¹³ A full discussion of Puerto Rico's coincident index and its methodology can be found at <<http://www.jp.gobierno.pr/>>. Explanations of the methodology underlying the U.S. index and the New York City index can be found at <http://www.conference-board.org/pdf_free/economics/bci/BCI-Handbook.pdf> and <http://www.ny.frb.org/research/regional_economy/coincident_summary.html>, respectively.

¹⁴ See, for example, "Puerto Rico's Economic Slump Weighs Hard on Consumers—Cost of Living Surges As Inflation Helps Tip Island into Recession," *Wall Street Journal*, August 14, 2007.

¹⁵ Puerto Rico Department of Labor and Human Resources, Establishment Survey.

¹⁶ See <<http://www.puertoricowow.com/html/Archives/ArchDetail2.php?archID=22114>>.

Data on the Puerto Rican Economy

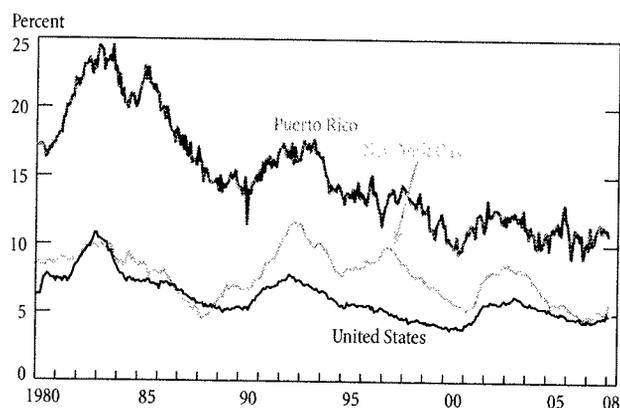
The economic statistics for Puerto Rico combine the qualities of state and national data. Fairly comprehensive data on Puerto Rico's household employment, payroll employment, and building permits correspond closely to the data gathered for the states. In addition, the commonwealth compiles numbers on inflation, manufacturing production, and gross product that are similar to those compiled for countries. (The gross product figures for Puerto Rico are, however, based on expenditure data, while the U.S. gross state product numbers are derived from income data.) Puerto Rico also produces figures on foreign trade, which—intriguingly—treat the United States as a foreign nation.

Although the dual nature of the Puerto Rican data might lead us to expect a richer set of information than that available for a state, the data pose some problems. Certain numbers are released with a considerable lag, are subject to substantial revision, or may be questioned on other grounds. For instance, the exact amount of exports from Puerto Rico to the United States—as well as the computation of the island's gross product and income—is dependent on the valuation of products and services imported for use as inputs in section 936 facilities. During the time this rule was in force, incentives existed to undervalue these imports so as to boost the product and aggregate income numbers. Price data are also subject to question: according to official estimates, consumer prices in Puerto Rico have risen at a double-digit rate since 2004, a dramatically faster pace than in the nation as a whole. One reason to view this assessment of price trends as inaccurate is that, until recently, Puerto Rican consumer prices were computed using a "basket" of goods and services surveyed in 1977. The use of this old basket would, according to the usual arguments on the construction of price indexes, lead to an upward bias in the estimate of price growth. Given the concerns about the quality of some numbers and the lags in reporting much of the data,³ analysts have tended to focus on the coincident economic index to track ongoing developments.

³Another problem is that the gross product figures are only computed on an annual basis.

What accounts for the apparent contraction of Puerto Rico's economy? Spillovers from the slowdown in sectors of the mainland U.S. economy such as manufacturing and homebuilding may have played a role, but factors specific to Puerto Rico have likely contributed as well:

Chart 3
Unemployment Rate



Source: U.S. Department of Labor, Bureau of Labor Statistics.

Note: Shaded areas indicate periods designated national recessions by the National Bureau of Economic Research.

- The repeal of the section 936 tax provision may be prompting some relocation of manufacturing from Puerto Rico. A portion of the drop-off in economic activity could thus reflect this one-time adjustment rather than a true cyclical decline or more fundamental long-term weakness.
- The shrinkage in the government sector could also be having some near-term negative effect on aggregate activity. As noted earlier, government employment was cut by more than 5 percent over 2004-06, a consolidation of the sector designed to ease the commonwealth's fiscal problems. Although some might argue that a smaller government would ultimately facilitate higher trend growth in the private sector, the job cuts in the short term could adversely affect growth by contributing to a reduction in government spending on goods and services.¹⁷

Growth Prospects for Puerto Rico

The longer term outlook for Puerto Rico is uncertain. Given the commonwealth's link to the United States, output in Puerto Rico is likely to grow at least in tandem with output on the mainland. However, the more substantive issue is whether, after the disappointing performance of the last generation, the income gap with the United States will narrow.

¹⁷Constant dollar spending on goods and services by the commonwealth government fell nearly 2 percent in 2006 (Puerto Rico Planning Board 2006). Since such spending in current dollars represents about 15 percent of Puerto Rico's GDP, the 2 percent decline lowered the island's real growth about 0.3 percentage point in 2007, from 1 percent to 0.7 percent.

In the near term, Puerto Rico seems to be experiencing a recession, and the repeal of section 936 of the Internal Revenue Code could be putting some further drag on the island's economy. The hope that Puerto Rico could overcome such problems and become the next Ireland—an island nation that, though long impoverished, has emerged as one of Europe's wealthiest countries—may not be realistic.¹⁸ One reason for skepticism is that in seeking a position in the Americas comparable to Ireland's in Europe, Puerto Rico could face strong competition from its Caribbean neighbors in the coming decades.¹⁹

A number of factors could, however, contribute to a more favorable outlook for Puerto Rico. The concentration of manufacturing in pharmaceuticals and electronics—a legacy of section 936—could be an impetus for further growth in these sectors since industry clusters are thought to increase productivity through the sharing of product and market information. Growth could also be achieved through the emergence of new industries. Indeed, some commentators have speculated that Puerto Rico, by virtue of its location, size, and association with the United States, may have significant comparative advantages as a premier tourist destination, regional center for financial and business services, and shipping and distribution

¹⁸ Puerto Rico is comparable in size and population to Ireland and shares with Ireland a history of out-migration and long-standing linkages to a much larger and wealthier entity (Bosworth and Collins 2006). Ireland's success has been attributed in part to low business taxes (OECD 2007). Interestingly, the structure of Puerto Rico's taxes is currently under review. In 2006, Puerto Rico replaced its excise tax on products made on or imported to the island with a sales tax; more recently, the governor proposed returning to a commonwealth-wide excise tax while retaining the municipal portion of the sales tax.

¹⁹ Haiti and the Dominican Republic are potential rivals, although at present they are substantially less developed than Puerto Rico. Jamaica may be a bit more comparable to Puerto Rico. And Cuba—were it to undergo a major shift in policy or regime—could become a significant competitor, with its well-educated population, appreciable resources, and familial connections with the United States.

²⁰ However, by some accounts, Puerto Rico's development as a shipping center will be hindered by the 1920 Jones Act, which requires that goods transported between U.S. ports—including shipments between Puerto Rico and the mainland—be carried in U.S. flag vessels. Nonetheless, a deep-water port facility now under construction in Ponce will be capable of handling very large "post-Panamax" ships.

center for the Caribbean and Latin America.²⁰ Finally, the island possesses certain fundamental advantages that create the potential for sustained growth: an increasingly skilled and educated workforce, a favorable business climate, deep familial connections to the mainland United States, and the benefits of U.S. legal, contractual, and financial structures. The challenge for Puerto Rico going forward will be to devise an appropriate set of policies and incentives to build on its many strengths.

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FEDERAL RESERVE BANK *of* NEW YORK

Community Conditions in the Second District

Overview

Community Conditions—a new Community Affairs project—focuses on low- and moderate-income communities in the Second District. We use Census Bureau and other data to describe economic conditions and policy responses in select communities in the district. Our goal is to give our constituents—community-based organizations, financial institutions, government agencies, academics and policymakers—a deeper understanding of communities in the Second District. Community Conditions for 2006 focuses on poverty.

Poverty in the Second District Summary

Provides a demographic and spatial description of poverty in the Second District. Includes detailed maps of areas of concentrated poverty.

Communities in Focus

Describes program efforts being made to address poverty in several Second District communities. The communities were selected based on their levels of poverty and geographic diversity.

- Bridgeport, Connecticut
- Bronx County, New York City
- Puerto Rico
- Rochester, New York



FEDERAL RESERVE BANK *of* NEW YORK

Communities in Focus: Bridgeport, Connecticut

Workforce development initiatives and job training can help link low-income workers to higher paying jobs. In this section, we highlight one such initiative, The Academy for Career Advancement Program in Bridgeport, Connecticut. The Academy Program was developed by The Workplace, a non-profit workforce development organization based in Bridgeport.

Poverty

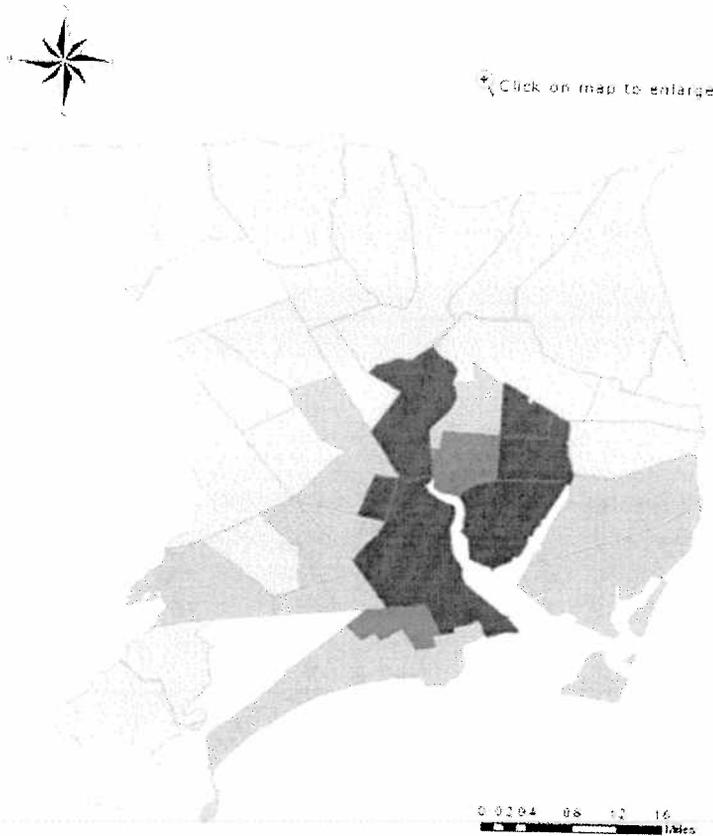
- Bridgeport has a higher concentration of individuals living below the poverty threshold and lower educational attainment levels than Fairfield County as a whole. The region also has one of the most expensive housing markets nationwide.
- A family must earn about \$38,640 to afford the \$966 fair market rent for a two-bedroom apartment in the Bridgeport area.¹ This translates into wages of about \$18.60 an hour—more than double Connecticut’s minimum wage of \$7.40.²
- In 2005, 17.9 percent of Bridgeport residents had incomes below the poverty threshold—more than 10 percentage points higher than the county rate of 7.3 percent.³ Figure 1 shows the density of poverty in the Bridgeport area.
- Median household income for Fairfield County was \$71,633—roughly double Bridgeport’s median household income of \$36,976.⁴ Bridgeport’s level of unemployment in 2005 was 7.7 percent, compared with 4.4 percent for Fairfield County.⁵
- In the neighborhood of East Side, in central eastern section of Bridgeport, the median income was \$15,625 in 2000. In this neighborhood, 42 percent of the population lived below the poverty line and more than 57 percent of the adults age 25 and older lacked a high school diploma or GED.⁶

The Academy Program: A Workforce Development Initiative

- After the passage of federal welfare reform legislation in 1996, Connecticut implemented its Jobs First program. This program required Connecticut residents receiving cash welfare benefits from the newly created Temporary Assistance for Needy Families (TANF) program to move toward self-sufficiency within 21 months. To help low-wage workers acquire skills needed to get higher paying jobs necessary for economic self-sufficiency, The Workplace launched The Academy for Career Advancement, a program that offers services such as basic reading and math instruction, resume development, occupational skills training, career exploration and access to information on high growth occupations. Since its inception in 2004, the Academy Program has served 239 clients.⁷

- Between July 2004 and June 2006, nearly 70 percent of The Academy's clients were residents of Bridgeport, according to data provided by The Workplace. Figure 2 illustrates the places of residence for Academy clients who live in Bridgeport.
- Almost two-thirds of the Academy's clients were African-American and 27 percent were Hispanic. The median age was 34.⁵ Only 6 percent did not have a high school degree and more than one-third had some education at enrollment.
- About 87 percent of all clients' wages rose after completing the Academy program, with increases as high as \$7.50 per hour for some. The overall average wage for Academy graduates increased from \$11.34 to \$13.32 per hour. Most clients were placed in high-demand medical sector jobs, including nursing aides and medical billing workers.

Figure 1
Percentage of Bridgeport Population in Poverty by Census Tract, 2000

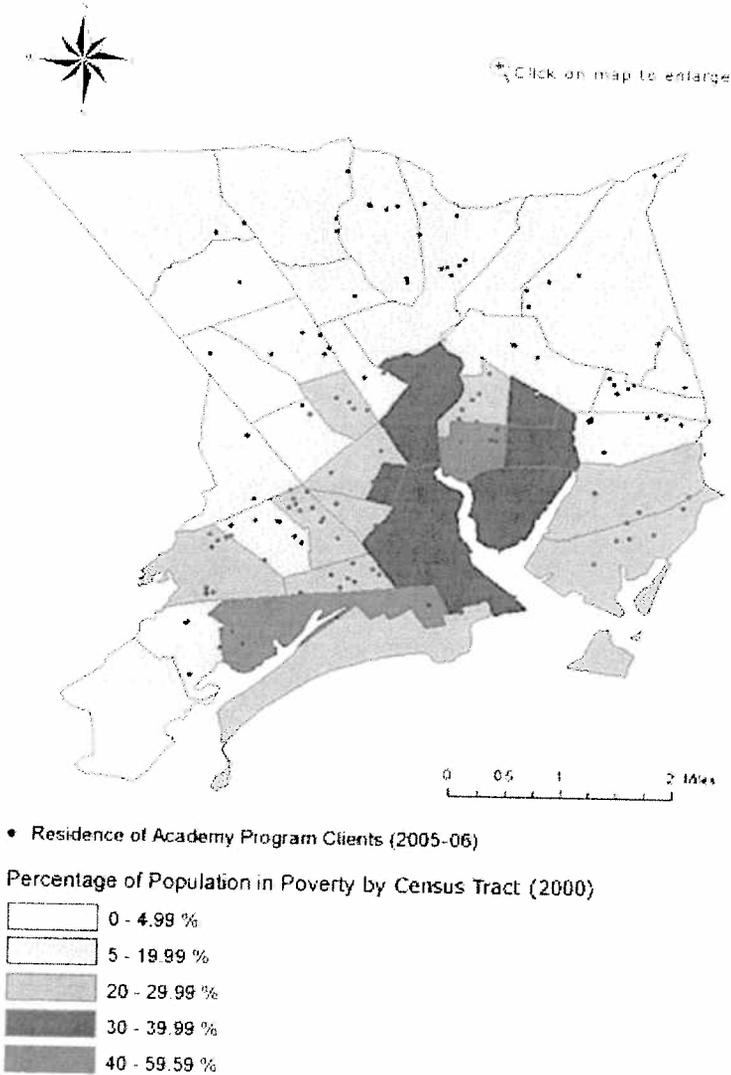


Percent of Population in Poverty by Census Tract

4.0 - 4.9
5.0 - 19.9
20.0 - 29.9
30.0 - 39.9
40.0 - 59.7

Source: Census 2000, U.S. Census Bureau, U.S. Department of Commerce, Economic and Statistics Administration

Figure 2
Percentage of Bridgeport Population in Poverty and Residence of Academy Program Clients in Bridgeport



Source: Census 2000, U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration; The Workplace, Bridgeport, Connecticut.

Contact: Carolyn Lee at (212) 720-5349 or carolyn.lee@ny.frb.org

Endnotes

¹Fiscal year 2006 Fair Market Rents (FMRs) for Bridgeport, CT HUD Metro FMR Area, The U.S. Department of Housing and Urban Development's (HUD's) Office of Policy Development and Research (PD&R)

²Fiscal year 2006 Fair Market Rents (FMRs) for Bridgeport, CT HUD Metro FMR Area, The U.S. Department of Housing and Urban Development's (HUD's) Office of Policy Development and Research (PD&R)

³U.S. Census Bureau, 2005 American Community Survey

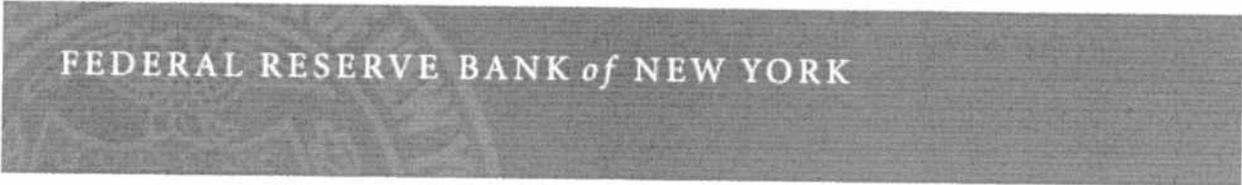
⁴U.S. Census Bureau, 2005 American Community Survey

⁵2005 Annual Averages, Benchmarked 2005, Connecticut Department of Labor

⁶Draft Neighborhood Profiles, City of Bridgeport Department of City Planning, based on U.S. Census Bureau 2000

⁷The data reflect information for the Academy program period between July 1, 2004 and June 30, 2006, Source: The Workplace

December 2006



FEDERAL RESERVE BANK *of* NEW YORK

Communities in Focus: **Bronx County, New York City**

Microenterprise involves the provision of small business loans to low-income entrepreneurs seeking to start their own businesses. The model has been used to help the poor increase their incomes, build financial assets and create employment for themselves and others.

Empirical work by Morduch and Haley (2001), Robinson (2001) and Barnes and Keogh (1999) have found that microenterprise can improve employment opportunities and help to reduce household poverty.

In this section, we highlight one such initiative, Project Enterprise, a non-profit organization that operates a loan program for low-income entrepreneurs in the Bronx.

Poverty

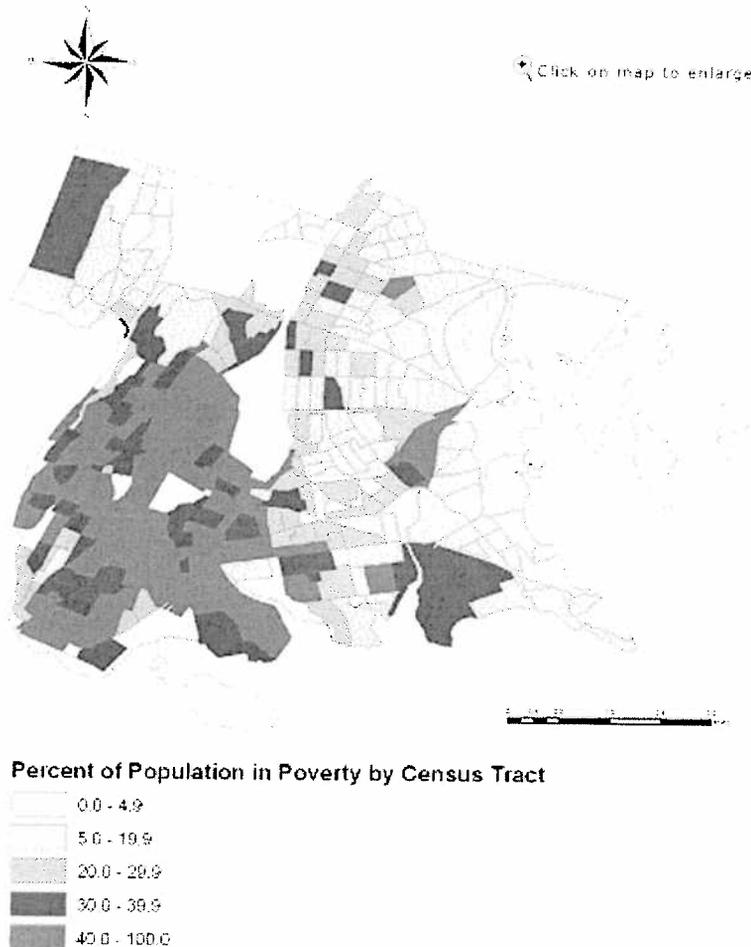
- About 30 percent of Bronx County residents live below the poverty threshold, compared with 19.1 percent of New York City residents.
- Median household income for Bronx County is \$29,228—roughly two-thirds of New York City's median household income of \$43,434. Unemployment in 2005 was 11 percent, compared with 8 percent for the city.
- The areas of concentrated poverty in Bronx County are in the southwest (See Figure 1). These communities have more than 40 percent of the population living below the poverty threshold.

Project Enterprise: A Small-Business Initiative

- Loans from Project Enterprise are intended to foster increases in income through self-employment opportunities.
- Project Enterprise's model is patterned on the lending model introduced by the Grameen Bank of Bangladesh in 1976. The Grameen Bank targeted their products to poor women who existed "outside the banking orbit." As of May 2006, the Grameen Bank had lent to a total of 6.39 million individuals, 96 percent of whom were women, in 26,140 communities throughout Bangladesh.¹
- Project Enterprise's products are targeted to borrowers who have not been able to secure traditional financing due to poor credit or no prior credit history. Project Enterprise relies on a peer lending model to help manage risk. Peer lending programs manage portfolio risk by working closely with individuals, providing peer support and actively following a borrower's progress.

- As of 2005, Project Enterprise had trained more than 1,300 entrepreneurs and lent over \$730,000 in funds for microenterprises. Typical loans ranged from \$750 to \$1,500 with terms from 6 to 24 months.² The lending is targeted to both men and women, but the majority of borrowers are women.

Figure 1
Percentage of Bronx Population in Poverty by Census Tract, 2000



Source: Census 2000, U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration.

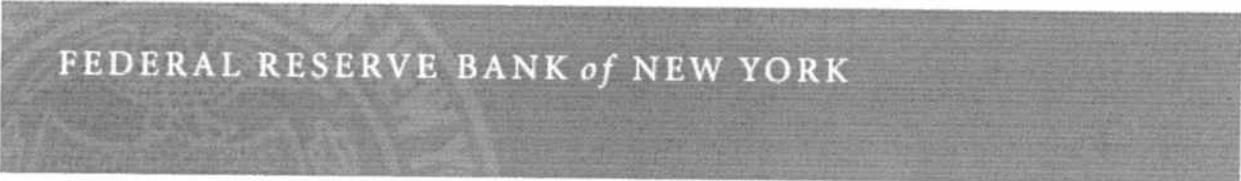
Contact: Susan Wieler at (212) 720-2882 or susan.wieler@ny.frb.org

Endnotes

¹See Grameen Bank. [OFFSITE](#)

²See Project Enterprise. [OFFSITE](#)

December 2006



FEDERAL RESERVE BANK *of* NEW YORK

Communities in Focus: **Puerto Rico**

As policymakers at the national level grapple with the cycle of intergenerational poverty, Puerto Rico is implementing innovative asset-building strategies designed to help low-income individuals build wealth. In this section, we highlight the SEED (Savings for Education, Entrepreneurship, and Downpayment) program, an initiative that promotes child savings accounts (CSAs).

Although CSAs are relatively new, the United Kingdom has implemented its own version of CSAs known as Baby Bonds. The Puerto Rico partnership includes financial institutions, community-based organizations and a local public school.

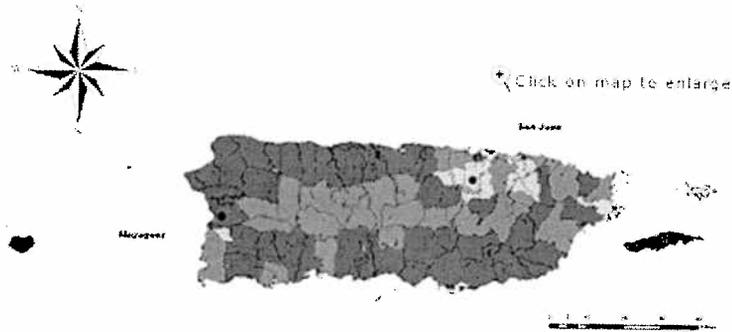
Poverty

- In 2005, nearly 60 percent of Puerto Rico's children lived below the poverty threshold.
- Puerto Rico's per capita personal income in 2005 was \$12,502. Per capita income for the rest of the nation was \$34,586.
- About 45 percent of Puerto Rico's residents live below the poverty threshold. More than 10 municipalities have poverty rates greater than 60 percent (see map). The major metropolitan area, San Juan, has a poverty rate of more than 30 percent.

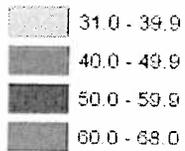
The SEED Program: An Asset-building Initiative

- Saving for Education, Entrepreneurship, and Downpayment (SEED) is a program targeted at increasing child savings rates in Puerto Rico. SEED is a collaborative initiative between the community-based organization Chana Goldstein y Samuel Levis, the Center for the New Economy of Puerto Rico and Doral Bank.
- The program is a demonstration project. Each child enrolled in the program receives an initial deposit of \$250 and is eligible to receive a total match of \$1,200 over a four-year savings period.
- The accounts are intended to help children save for future endeavors such as educational attainment. Children in the program typically save between \$10 and \$25 per month from money they receive in allowance or earn by doing chores. As of June 30, 2006, children participating in SEED had saved an average of \$14 per month.¹
- The program also emphasizes financial education for both children and parents. As part of the program, children and parents each attend six financial counseling sessions.

Percentage of Puerto Rico Population in Poverty by Municipio, 2000



Percent of Population in Poverty by Municipio



Source: Census 2000, U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration.

Contact: Javier Silva at (212) 720-2789 or javier.silva@ny.frb.org

Endnotes

¹ Figure provided by Iris A. Medina-Torres, SEED Initiative Coordinator, Chana y Samuel Levis Foundation, San Juan.

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Communities in Focus: **Rochester, New York**

In times of crisis, social service agencies can help poor individuals and families meet basic needs for food, shelter and clothing. In this section, we highlight one such initiative, The Emergency Services and Family Stabilization Network (known locally as The Network) in Rochester, New York. A consortium of local social service providers developed this innovative network to ensure the effective use of emergency resources and to move beyond crisis intervention to promote greater economic independence among clients.

Poverty

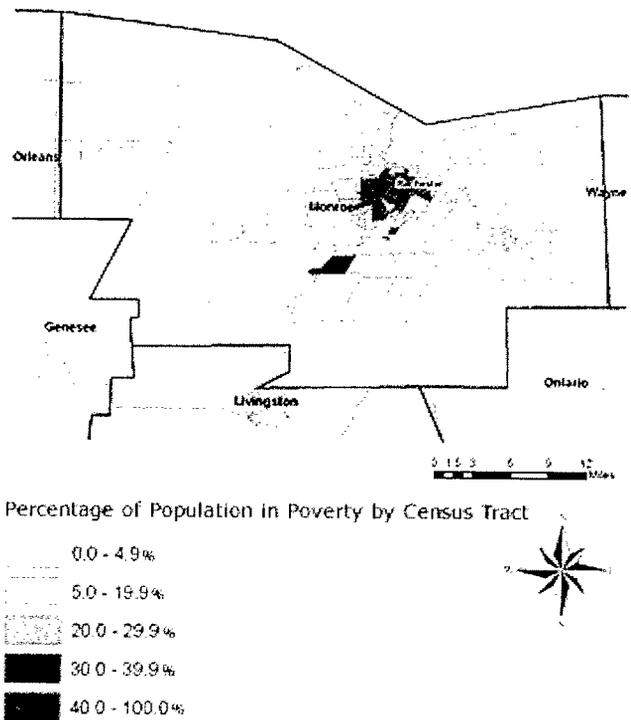
- In 2005, 30 percent of the population in Rochester had incomes below the poverty threshold. This rate is substantially higher than that of the county (12.6 percent) and state (13.8 percent).
- The maps below detail the concentration of poverty by Census tract in Monroe County (Figure 1) and Rochester (Figure 2) in 2000.¹
- The 2005 median household income in Rochester was \$26,650, substantially lower than the county median of \$45,748 and the state median of \$49,480.
- In 2005, the city's unemployment rate was 9.3 percent, compared with 5.8 percent for the county and 7 percent for the state.
- Food stamp assistance cases in Monroe County increased from 26,200 in 1999 to 37,325 in 2005.²

The Emergency Services and Family Stabilization Network: A Social Services Initiative

- The Network was established in 1997 to provide emergency services and to help clients avoid future crises by encouraging greater economic independence. The Network membership represents communities throughout Rochester and includes The Salvation Army, Baden Street Settlement, Catholic Family Center, Charles Settlement House, Community Place of Greater Rochester, Ibero American Action League, SWAN (South West Area Neighborhood) and Monroe County Legal Assistance Corporation. Member organizations receive funding from the United Way of Greater Rochester and support from Foodlink, the regional food bank.
- In October 2005, a survey of 1087 clients found that 80 percent presented with an immediate need for food. The main contributing factors to client emergencies, as reported by the clients themselves, were job loss (21 percent) and benefit loss (38 percent).³

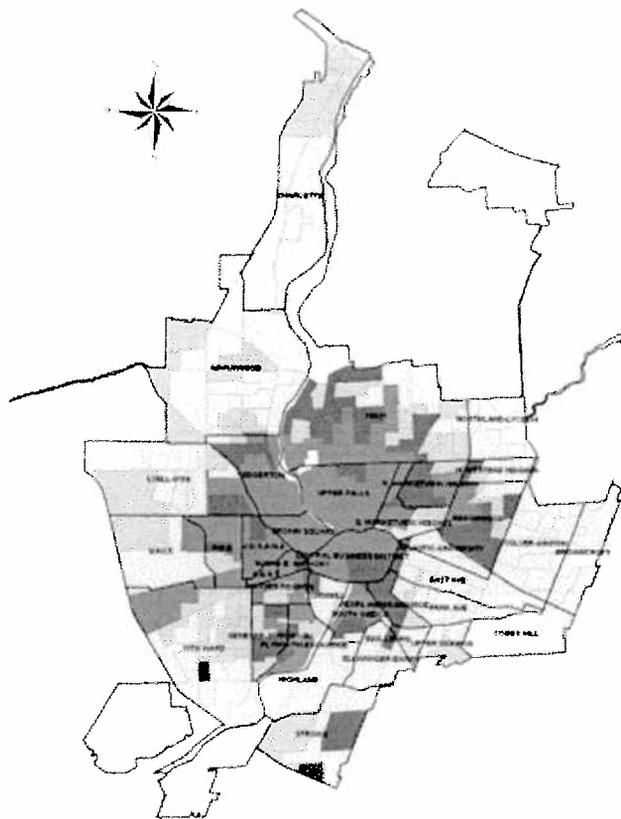
- In order to better regulate the provision of services, member organizations have established uniform procedures for addressing and documenting each client's immediate need for food, clothing or shelter.
- Case workers meet with clients to identify an "action plan" for economic independence that includes access to all programs offered by Network members. This leverages network resources by providing each client with access to a greater spectrum of programs than any one member organization has the capacity to provide.
- In 2005, 23,265 households were served by The Network. Nearly three quarters of all households receiving basic provisions also engaged in the action plan process to identify steps that could prevent future financial crises. Of these, 57 percent improved their status by entering job training, becoming employed, gaining improved employment, finding subsidized housing or obtaining health insurance.⁴

Figure 1
Percentage of Monroe County Population in Poverty by Census Tract, 2000

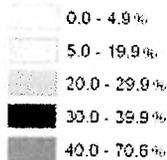


Source: Census 2000, U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration.

Figure 2
Percentage of Rochester Population in Poverty by Census Tract, 2000



Percentage of Population in Poverty by Census Tract



Source: Census 2000, U.S. Census Bureau, U.S. Department of Commerce, Economics and Statistics Administration.

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Endnotes

¹The maps are based on Census 2000 data, the latest poverty data available at the Census tract level.

²New York State Office of Temporary and Disability Assistance. 1999 and 2005 Caseload Statistics. Accessed at <http://www.otda.state.ny.us/bdma/default.htm>

³Emergency Services and Family Stabilization Network. Client Survey, October 2005.

⁴Emergency Services and Family Stabilization Network. Community Impact Performance Report to United Way of Greater Rochester, March 2005.

January 2006

New York Fed – Web Resources:

Beige Book: A compilation of anecdotal economic information, by region, issued eight times a year.
<http://www.federalreserve.gov/FOMC/BeigeBook/2010/>

Empire State Manufacturing Survey: Manufacturing establishments from across New York State are asked to report monthly on recent and expected changes in a variety of indicators.
http://www.newyorkfed.org/survey/empire/empiresurvey_overview.html

Index of Coincident Economic Indicators: Monthly indexes of current economic indicators for New York State, New Jersey and New York City, which represent a composite of various labor-market indicators, are used to track trends in economic activity and to identify turning points in the regional economy.
http://www.newyorkfed.org/research/regional_economy/coincident_summary.html

Regional Economic Indicators: Charts on a number of key state and local economic indicators are updated regularly by the Federal Reserve Bank of New York.
http://www.newyorkfed.org/research/regional_economy/regionalindicators.html

Second District Highlights Series: Concise studies on various topical economic and financial issues related to the regional economy of the Second District.
http://www.newyorkfed.org/research/current_issues/second_district.html

Economic Indicators Calendar: A regularly updated calendar showing dates and times of economic releases on both the US and regional economies.
http://www.newyorkfed.org/research/national_economy/nationalecon_cal.html

US Credit Conditions: Charts, tables and maps of various measures of credit conditions across the US by state and county. <http://data.newyorkfed.org/creditconditions/>

Regional press releases and email alerts: To receive press releases and notification of new material posted to the Regional Outreach and Regional Economy web pages, please sign up at
<http://www.newyorkfed.org/regional/index.html>
http://www.newyorkfed.org/research/regional_economy/index.html

Upcoming Regional Releases and Events

April 14 (2:00 PM)	April Beige Book report. (Federal Reserve Board of Governors)
April 14 (3:00 PM)	New Jersey March Employment Report (NJ Department of Labor)
April 15 (8:30 AM)	Empire State Manufacturing Survey (Federal Reserve Bank of New York)
April 15 (2:00 PM)	New York March Employment Report (NY State Department of Labor)
April 16 (10:00 AM)	Puerto Rico (& 50 state) March Employment Report (Bureau of Labor Statistics)
April 21	March Coincident Economic Indexes for NY, NJ, NYC (Federal Reserve Bank of New York)
April 26 (10:00 AM)	State & Local March Building Permits (U.S. Census Bureau)