
World Trade Center Job Impacts Take a Heavy Toll on Low-Wage Workers

**Occupational and Wage Implications of Job Losses Related to
the September 11 World Trade Center Attack**

Prepared for the
New York City Central Labor Council and
the Consortium for Worker Education

By the
Fiscal Policy Institute
275 Seventh Ave., 6th floor
New York, NY 10001
212-414-9001
www.fiscalpolicy.org

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Preface

The Fiscal Policy Institute is a nonprofit research and education organization that focuses on New York tax, budget and economic issues. This report was prepared under the direction of James Parrott, Ph.D., FPI's Chief Economist and Deputy Director. Zofia Nowakowski, M.C.R.P., was the principal analyst. FPI's Moshe Adler, Ph.D. and Oliver Cooke assisted on aspects of the research. Oliver Cooke prepared the Appendix.

This analysis was prepared to inform the emergency World Trade Center attack re-employment assistance provided by the New York City Central Labor Council and the Consortium for Worker Education. This is a follow-up to a September 29 preliminary report by the Fiscal Policy Institute and includes analysis of the implications of the job losses by occupation and wage level. In addition, this report re-visits all of the direct industry impacts and updates the assumptions based on more current and complete information.

The authors would like to thank the many union, industry and government experts who provided information and insight regarding industry-level effects.

This report is available on the Fiscal Policy Institute web site: www.fiscalpolicy.org.

I. Major Findings

- In a follow-up to its September 28 preliminary report, the Fiscal Policy Institute estimates that the New York City economy is expected to lose an estimated 105,200 jobs in the fourth quarter of 2001 as a direct result of the September 11th attack on the World Trade Center. This estimate is down slightly from the preliminary estimate of 108,500 jobs lost to New York City.
- The 105,200 number can be separated into two categories: jobs that moved out of New York City in the wake of the September 11 attack (25,500); and job impacts that likely involve lay-offs (79,700).

See Table 1

- Many of the industries where layoffs have been concentrated are predominantly low-wage industries. Using occupational wage data, sixty percent of the workers likely to be laid off have an average wage of only \$11.00 an hour. A worker making this wage who works full-time, year-round would have annual wage income of \$22,880.

See Table 2

- Slightly over half the likely 79,700 layoffs resulting from the attack and the spillover effects that were triggered by the attack have been concentrated in just five industries: restaurant, retail trade, hotel, air transport, and building services.
- The five occupational categories incurring the greatest layoffs related to the September 11th attack are: Waiters and waitresses, Janitors and cleaners, Retail salespersons, Food preparation workers, and Cashiers.

See Table 3

- In addition to these layoffs, the level of business activity has fallen off in a number of industries where workers have absorbed the impact primarily by working fewer hours. At least 76,000 workers have avoided layoffs by working fewer hours, with commensurate reductions in wage earnings. The apparel manufacturing and taxi and car service industries are the main industries where reduced work-weeks and earnings have become commonplace.
- The industry hardest hit by reduced work volume is apparel manufacturing, which has much of its production based in Chinatown. In addition to an estimated 2,600 layoffs in apparel manufacturing, it is estimated that fourth quarter business volume will be 15% lower than otherwise would have been the case in the absence of the WTC attack. In the apparel industry, many of the unionized workers are at risk losing health care coverage as well.

- Many of the industries and occupations that have been hardest hit in the wake of September 11 are industries that provide job opportunities for less-educated, lower-skilled workers. Many of these industries also tend to have a high degree of unionization, and as a result of that, offer higher pay and better benefits such as health insurance coverage than other less unionized industries employing less-educated workers. For example, the occupational category with the second highest estimated layoffs is Janitors and cleaners with a median wage of \$14.91 an hour. Maids and housekeeping cleaners is the occupation with the sixth greatest number of layoffs; it has a median wage of \$13.42 an hour.
- The total *annual* labor compensation associated with the 105,200 lost jobs is \$9.3 billion. Labor compensation includes total payroll costs (wages and salaries, fringe benefits, and payroll taxes). This amount represents 3.7% of the estimated total employee compensation in New York City in 2000. Among industries, the very high-wage securities industry had by far the greatest impact on total labor compensation, with most of that associated with the relocation outside of the City of 22,000 jobs. The industry with the second greatest impact on employee compensation was the apparel manufacturing industry with an annualized impact of \$366 million. Apparel manufacturing shows a substantial effect largely as a result of the projected reduced business volume and shorter work-weeks rather than outright layoffs.

See Table 4

- The total lost output to the New York City economy from the World Trade Center attack is estimated at \$21.2 billion on an annual basis.

See Table 5

- With the economy almost certainly in the midst of a recession, this is an extremely difficult time for laid-off workers to be looking for work. For the four-week period following the September 11 attack, initial claims for unemployment insurance (UI) were 154% higher than the same four-week period a year ago. But even before September 11, initial UI claims were running well ahead of the last two years.
- The State Labor Department reports that, as of October 30, 24,789 UI claims have been filed by people losing their jobs as a result of the September 11 event. An additional 2,350 individuals had filed for benefits under the Disaster Unemployment Assistance program as of October 29.
- The City's unemployment rate started to rise sharply in the middle of this year and jumped up from 5.8% in August to 6.3% (seasonally adjusted) in September. The September report did not reflect any of the WTC-related

impact. The City's unemployment rate will likely rise further in the remaining months of 2001.

- The loss of 105,200 jobs represents approximately 2.4 % of total local employment (including full-time, part-time and self-employment), and amounts to about one year's worth of growth as experienced during the four prior years, 1997 through 2000. This was a period of the fastest NYC job growth since the 1950s. This employment estimate encompasses direct, indirect and induced effects to estimate the total economic impact.
- The major industry in the WTC vicinity is the securities industry, which accounted for about two-thirds of the estimated 100,000 jobs in buildings destroyed or damaged as a result of the attack. Most of these jobs have been transferred to other locations in New York City, but an estimated 22,000 have been relocated outside of the City, principally to New Jersey. Lay-offs in the securities industry directly related to the September 11 attack total about 2,300.

Table 1

**New York City Employment Effects
Resulting from the World Trade Center Attack**

Industry	Jobs Located Out of New York City	Jobs Lost Due to Layoffs in New York City	Jobs Lost Due to Relocations and Layoffs
TOTAL	25,500	79,700	105,200
Industries with major relocations outside of New York City			
Securities	22,000	2,300	24,300
Computer/Data Processing	1,500	2,900	4,400
Insurance Carriers	2,000	500	2,500
Major industries where job impacts likely involve layoffs			
Restaurants	0	15,500	15,500
Retail Trade	0	9,600	9,600
Hotels	0	7,400	7,400
Air Transportation	0	5,800	5,800
Building Services	0	3,300	3,300
Apparel Manufacturing	0	2,600	2,600
Wholesale Trade	0	2,300	2,300
Temporary Services	0	1,600	1,600
Theatrical Producers	0	1,500	1,500
Advertising	0	1,500	1,500
Accounting	0	1,500	1,500
Other Business Services	0	1,300	1,300
Commercial Printing	0	1,100	1,100
Additional employment losses by major sectors			
Construction	0	1,000	1,000
Other Manufacturing	0	2,400	2,400
Other Transport, Communications, Utilities	0	2,400	2,400
Other FIRE Industries	0	2,600	2,600
Other Services	0	9,000	9,000
Other	0	1,500	1,500

Source: Estimates by the Fiscal Policy Institute, Nov. 2, 2001.

Table 2

Impacts from the World Trade Center Attack

Estimated layoffs	79,680
Average wage of 60% of workers	\$11.00
Annual salary for these workers if working full-time, year-round	\$22,880
Self-sufficiency annual budget for a 2-parent, 2-child family in Brooklyn*	\$45,852
An estimated additional 76,000 workers are working reduced hours, based on information from 3 industries:	
Garment industry workers	15,000
Taxi, livery and black car workers	53,000
Graphic designers	8,000

*Diana Pearce, Ph.D. with Jennifer Brooks, *The Self-Sufficiency Standard for the City of New York*,
September 2000, Women's Center for Education and Career Advancement.

Source: Fiscal Policy Institute.

Table 3**September 11 World Trade Center-Related Layoffs
Twenty-Five Hardest Hit Occupations**

Rank	Occupational Title	Sum	Median Wage	Mean Wage
1	Waiters & waitresses	4,200	\$7.08	\$8.87
2	Janitors & cleaners	3,400	\$14.91	\$14.18
3	Salespersons, retail	2,800	\$9.15	\$11.45
4	Food preparation workers	2,300	\$8.90	\$9.69
5	Cashiers	2,300	\$7.36	\$8.58
6	Maids & housekeeping cleaners	1,800	\$13.42	\$13.00
7	Food preparation & fast-food servers	1,700	\$7.09	\$8.14
8	Cooks, restaurant	1,600	\$11.58	\$12.97
9	General managers & top executives	1,400	\$51.34	\$47.10
10	Sales supervisors	1,200	\$22.42	\$27.26
11	Service supervisors, n.e.c.	1,100	\$16.46	\$18.98
12	Cooks, fast-food	1,100	\$7.05	\$7.38
13	Sewing machine operators	1,000	\$8.02	\$9.10
14	Flight attendants	1,000	\$18.91	\$23.95
15	Stock clerks, sales floor	1,000	\$7.80	\$9.20
16	Clerks, general office	900	\$12.96	\$13.56
17	Accountants & auditors	800	\$25.22	\$27.95
18	Reservation & transportation ticket agents	800	\$13.07	\$14.99
19	Secretaries, except legal & medical	800	\$17.54	\$18.26
20	Truck drivers, light	800	\$13.22	\$14.27
21	Helpers, laborers, movers, n.e.c.	700	\$11.32	\$14.18
22	Bartenders	700	\$7.55	\$9.37
23	Bookkeeping, accounting, auditing clerks	700	\$16.43	\$17.50
24	Counter attendants	700	\$7.08	\$7.87
25	Dining room & bartender helpers	600	\$7.02	\$8.36
Total, These 25 Occupations		35,500		

Source: Fiscal Policy Institute's estimates using New York State Dept. of Labor' Occupational-Industry Employment Matrix. Wages estimated for 2001.

Table 4

**New York City Labor Compensation Effects
Resulting from the World Trade Center Attack
(annual, in \$ millions)**

Industry	Jobs Located Out of New York City	Jobs Lost Due to Layoffs in New York City	Jobs Lost Due to Layoffs and Relocations
TOTAL	\$4,980.8	\$4,315.1	\$9,295.9
Industries with major relocations outside of New York City			
Securities	\$4,655.2	\$984.4	\$5,639.5
Computer/Data Processing	\$102.5	\$195.0	\$297.5
Insurance Carriers	\$223.1	\$53.5	\$276.6
Major industries where job impacts likely involve layoffs			
Restaurants	-	\$316.0	\$316.0
Retail Trade	-	\$252.7	\$252.7
Hotels	-	\$303.4	\$303.4
Air Transportation	-	\$289.7	\$289.7
Building Services	-	\$91.9	\$91.9
Apparel Manufacturing	-	\$366.0	\$366.0
Wholesale Trade	-	\$146.8	\$146.8
Temporary Services	-	\$48.9	\$48.9
Theatrical Producers	-	\$49.9	\$49.9
Advertising	-	\$110.9	\$110.9
Accounting	-	\$77.4	\$77.4
Other Business Services	-	\$58.5	\$58.5
Commercial Printing	-	\$61.1	\$61.1
Additional employment losses by major sectors			
Construction	-	\$39.5	\$39.5
Other manufacturing	-	\$106.8	\$106.8
Other transport, communications, utilities	-	\$189.4	\$189.4
Other FIRE industries	-	\$157.7	\$157.7
Other services	-	\$353.3	\$353.3
Other	-	\$62.3	\$62.3

Source: Estimates by the Fiscal Policy Institute, Nov. 2, 2001.

Table 5

**New York City Output Effects
Resulting from the World Trade Center Attack
(annual, in \$ millions)**

Industry	Jobs Located Out of New York City	Jobs Lost Due to Layoffs in New York City	Jobs Lost Due to Layoffs and Relocations
TOTAL	\$8,668.1	\$12,414.3	\$21,082.4
Industries with major relocations outside of New York City			
Securities	\$7,916.1	\$1,673.9	\$9,590.1
Computer/Data Processing	\$196.3	\$373.5	\$569.8
Insurance Carriers	\$555.6	\$133.3	\$689.0
Major industries where job impacts likely involve layoffs			
Restaurants	-	\$760.7	\$760.7
Retail Trade	-	\$562.6	\$562.6
Hotels	-	\$772.2	\$772.2
Air Transportation	-	\$695.1	\$695.1
Building Services	-	\$213.2	\$213.2
Apparel Manufacturing	-	\$1,178.7	\$1,178.7
Wholesale Trade	-	\$386.7	\$386.7
Temporary Services	-	\$65.4	\$65.4
Theatrical Producers	-	\$165.6	\$165.6
Advertising	-	\$240.5	\$240.5
Accounting	-	\$116.4	\$116.4
Other Business Services	-	\$172.5	\$172.5
Commercial Printing	-	\$153.5	\$153.5
Additional employment losses by major sectors			
Construction	-	\$78.2	\$78.2
Other manufacturing	-	\$480.9	\$480.9
Other transport, communications, utilities	-	\$680.0	\$680.0
Other FIRE industries	-	\$923.4	\$923.4
Other services	-	\$875.9	\$875.9
Other	-	\$1,712.1	\$1,712.1

Source: Estimates by the Fiscal Policy Institute, Nov. 2, 2001.

II. Methodology

This report presents estimates of the total economic and employment effect of the September 11 event and its aftermath. These estimates are based on the best available information regarding the direct impacts, supplemented by FPI's economic analyses. The employment and output estimates are considered to be those that would occur in the fourth quarter of 2001 following the event. The anticipated direct employment effects were used to estimate total economic and employment effects using the IMPLAN input-output model for New York. The total job loss estimate represents jobs lost to the New York City economy, and includes jobs relocated outside of the city, whether on a temporary or permanent basis, and job losses that are likely to involve layoffs.

While the New York City economy was slowing prior to September 11, the World Trade Center (WTC) attack and its implications for the nation's financial sector and consumer confidence apparently pushed the local and the national economies into recession. The analysis in this report attempts to capture the economic effects that can be directly attributed to the World Trade Center attack and does not incorporate broader recession-related employment and output losses. Of course, the war following the attack has its own independent economic impact, primarily through effects on consumer and business confidence. FPI did not attempt to separate the impact of the war from the impact of the attack.

A. Occupational Estimates for Positions Likely Involving Layoffs

Projected occupational losses were developed from two primary sources: industry-level job loss estimates for the fourth quarter of 2001, developed by Fiscal Policy Institute; and New York City Occupational Employment Statistics (OES) from the New York State Department of Labor. The OES data provides a ratio of occupation by industry for each 3-digit level industry category for New York City in 1998, according to the Standard Industrial Classification (SIC) system. The OES industry-occupational matrix, which NYS DOL created based on a survey sample, allows for the translation of industrial change into occupational change for about 780 detailed occupational categories. Note should be taken that the occupational counts are based on the assumption that the current layoffs affect jobs according to their distribution within the industry overall.

Occupational estimates were developed for the 16 industries with the greatest employment effects. These 16 industries accounted for three-fourths (60,000 out of 80,000) of the job losses that likely involved layoffs. The remaining 20,000 layoffs are spread among dozens of industries with no individual industry accounting for more than 1,000 layoffs.

B. Wage Estimates for Positions Likely Involving Layoffs

Occupational wage information including median, mean, 25th and 75th percentiles were derived from the 1998 OES estimates for New York City. In some cases where this data was not available, OES state-level data was utilized, and in a small number of cases the occupational wage values were derived from the 1998 New York-New Jersey-Long Island, NY-NJ-CT-PA National Compensation Survey. In order to adjust for wage change between 1998 and 2001, these wage values were inflated by 16.1%, the growth in average wages for New York City for a recent three-year period (1997-2000). The January-through-September change in the New York-New Jersey Consumer Price Index from 1998 to 2001 was 9.3%.

C. Assumptions about Direct Effects

Three types of direct effects were considered:

1. **WTC Area** The displacement of businesses in the World Trade Center area and the disruption of retail activities in Lower Manhattan;
2. **Spillover Effects** The effects on industries such as air transport and tourism immediately affected in the aftermath; and
3. **WTC-Related Weaker Consumer Demand** The effects from weakened consumer demand in the local economy.

1. WTC Area

Businesses in the securities, insurance carrier, legal, and computer and data processing services occupied a substantial majority of the space in the WTC and surrounding buildings destroyed or damaged. For the major tenants in these industries displaced by the September 11 WTC attack, TenantWise.com, a commercial real estate clearinghouse, maintains a database that tracks their relocation. This information was augmented by research by FPI. The employment for businesses that relocated outside of New York City was considered to be lost to the city, at least for the remainder of 2001. However, in these cases, the household consumption of New York City residents whose jobs moved outside the city was assumed to remain in the city. It was assumed that the jobs of most of the missing workers would not be filled in the remainder of the year.

Based on industry and newspaper accounts, estimates were made of layoffs related to the WTC attack for the securities, insurance, and computer and data processing services industries. In addition, job reductions resulting from indirect and induced effects related to direct effects in other industries were modeled for these industries.

2. Spillover Effects

Several industries in New York City were immediately hit by adverse spillover effects. Air travel throughout the nation plummeted. With two major airports and numerous air transportation-related businesses, the city has over 54,000 air transport jobs.

The tourism and business travel industry more generally was also immediately hit. Hotel occupancy rates in New York City and other major tourist destinations in the U.S. dropped sharply. While there is no explicit "tourism" industry category in the official employment data, one can see tourism-related effects in hotels, restaurants, local transportation, and in New York City, in attendance at performing arts events and museums. FPI has collected information directly from the trade organizations and the labor unions that represent these workers about job losses in their industries.

Advertising, another significant and high value-added industry in New York City, was also immediately affected, and this effect has continued into the fourth quarter. As a result of the impacts on advertising, the financial sector and other industries, FPI estimated a loss of 1,000 jobs in the printing industry and a 20% decline in the output of the graphics art industry.

Apparel manufacturing is New York City's largest manufacturing employer. A large share of the city's apparel production takes place in the Chinatown area that is not far from the WTC site. As a consequence of severely restricted delivery truck access to Chinatown shops for the first two weeks, several shops reported lost orders. In the wake of September 11, retail apparel sales have fallen off more sharply than at any other time for several years and new orders were projected by industry sources to be reduced up to 50% for some shops. The extent of layoffs among apparel workers has been limited by the practice of work-sharing common in Chinatown shops. The apparel industry is projected to suffer the second greatest loss in output and compensation (on an annualized basis) among all major industries in New York City as a result of the September 11 attack.

3. WTC-Related Weaker Consumer Demand

The tremendous human, emotional and psychological impact of the events of September 11 and the ensuing war in Afghanistan has had an adverse effect on household spending in New York City, especially on non-essential items. Total consumption spending in New York City is over \$200 billion annually. FPI assumed a 7.5% reduction in consumer spending for the last quarter of 2001 for items other than food, housing, medical care, education and childcare. This estimate incorporates the most recent information about sales tax receipts in New York City.

The IMPLAN Model

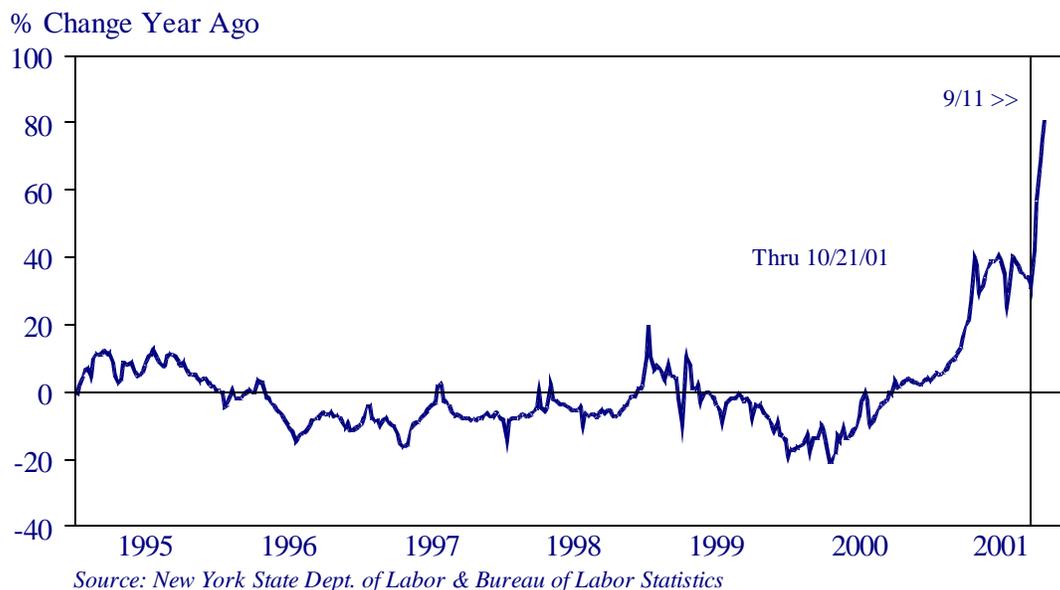
FPI used the IMPLAN model to estimate the indirect and induced effects throughout the city economy of the impacts of the WTC attack on 12 industries. The IMPLAN model, originally developed for the Federal government, utilizes detailed data on national and local inter-industry economic transactions to model the effects of regional economic changes. Indirect effects are effects on the businesses supplying industries directly affected. Induced effects result from the change in household expenditures (consumption) caused by the lost earnings in industries directly affected.

Appendix: New York City's Mounting Unemployment Problem

Initial unemployment insurance claims in New York City rose dramatically in the aftermath of the attacks on the World Trade Center, as claims jumped above 15,800 for the week ending September 22nd, up from 7,000 the prior week. Though initial claims have declined somewhat over the past two weeks, as the initial shock of the attacks has begun to dissipate, they nevertheless remain significantly above year-ago levels. Based on the latest four-week moving average (*week ending October 20th*), initial claims in the city are up 154% from a year ago. This compares to an increase of 115% on the state level. On a twelve-week moving average basis, claims in the city are up 80% from their year-ago level, while statewide claims are up 66%. (See *Chart 1*.) It should also be noted, as Chart 1 clearly shows, that initial claims had been trending upward long before September 11th, a clear indication of the weakening economic environment facing the city since mid 2000.

Chart 1

Initial Unemployment Insurance Claims New York City 12-week moving average

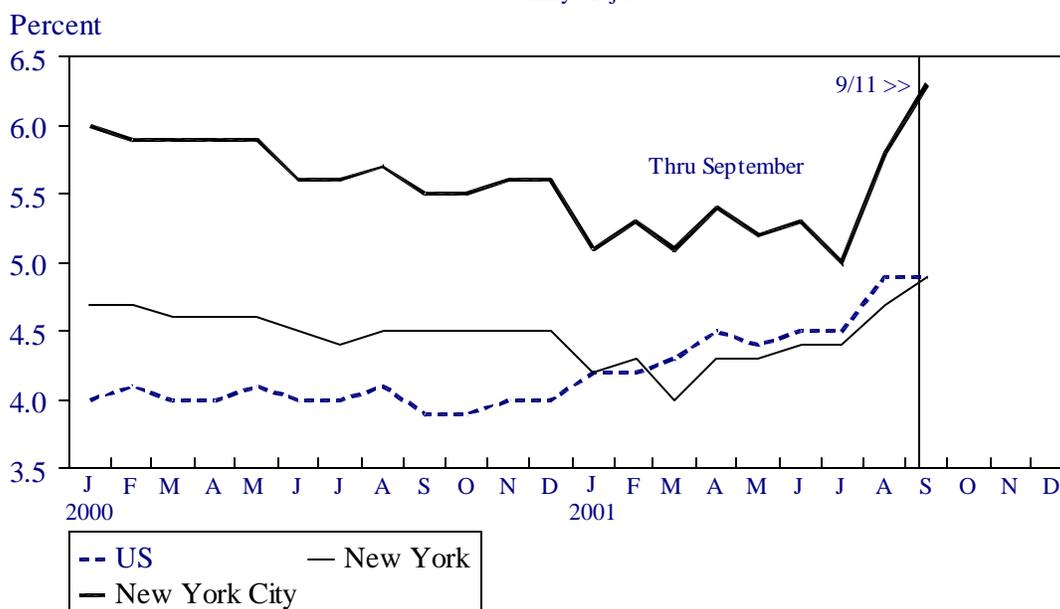


Through October 30th, the state has flagged 24,789 unemployment insurance claims as directly tied to the World Trade Center incident. In addition, as of October 29th, the state had mailed out 6,286 Disaster Unemployment Assistance (DUA) applications, which insure those not covered under traditional unemployment insurance programs. The number of DUA applications received by the state through October 29th totaled 2,350.

Data through September on midweek beneficiaries of the state's unemployment programs allow an assessment from an industry perspective. For example, the total number of midweek beneficiaries in hotel services in the city jumped to 1,328 in September, a 253% increase over the year-ago level. The number of beneficiaries in the city's FIRE sector rose 79%, to 7,971, from last September. Other industries in the city experiencing large increases in beneficiaries in September include: printing and publishing (113%), other services that includes business and computer services (141%), and retail trade (78%). In fact, these five sectors – hotels, FIRE, printing & publishing, other services and retail trade – account for 74% of the total increase in midweek beneficiaries from the year-ago level (26,228/35,305).

Chart 2

Unemployment Rate
New York City, New York State & US
 Seasonally Adjusted



The monthly survey used to calculate the unemployment rate was taken during the week of Sept. 11, and as a result, probably does not reflect the effect of the WTC attack. Still, New York City's unemployment rate rose significantly in September, to a seasonally adjusted 6.3%. (See Chart 2.) This represented a one-half percentage point increase on August's 5.8%. The city's increase in September was significantly larger than that recorded by the state, which saw its unemployment rate edge up 0.2 percentage points to 4.9%, or the nation which saw its rate remain at 4.9%. In line with the deteriorating economic environment, the city's unemployment rate has risen 0.8 percentage points since September 2000, less than the one percentage point rise in unemployment nationwide, but twice the 0.4 percentage point rise in unemployment statewide. The re-employment prospects of New York's newly unemployed will be complicated the worsening employment situation.